



# MMWR<sup>TM</sup>

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### Decline in Breast Cancer Incidence — United States, 1999–2003

Breast cancer is the most commonly diagnosed cancer among females in the United States (1). The 2006 *Annual Report to the Nation on the Status of Cancer* (2) described a stabilization in female breast cancer incidence rates during 2001–2003, ending increases that began in the 1980s, and a decline in the number of breast cancer cases diagnosed in 2003. In addition, researchers who used 1990–2003 data from the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) program, representing approximately 14% of the U.S. population, reported a 7% decrease in invasive breast cancer rates from 2002 to 2003 (3). To further assess breast cancer annual incidence rates during 1999–2003, CDC analyzed data collected by CDC's National Program of Cancer Registries (NPCR) and the NCI SEER program. These combined data account for approximately 86% of the U.S. population (1). The results of this analysis indicated that age-adjusted incidence rates for invasive breast cancer decreased each year during 1999–2003, with the greatest decrease (6.1%) occurring from 2002 to 2003; women aged  $\geq 50$  years experienced a significant decrease during this period. Rates of in situ (i.e., noninvasive) breast cancer increased each year during 1999–2002 and then decreased from 2002 to 2003; women aged 50–79 years experienced a significant decrease during this period. Future studies should focus on determining potential causes for these decreases.

The most recent data available from population-based cancer registries affiliated with NPCR or the SEER program were used in this analysis; new cases of cancer were those reported to CDC (NPCR) as of January 31, 2006, or NCI (SEER) as of November 1, 2005\*; data from four statewide

NPCR/SEER registries are indicated as reported to CDC as of January 31, 2006. Data were evaluated according to *United States Cancer Statistics* eligibility criteria,<sup>†</sup> which require  $\geq 90\%$  case ascertainment and an unduplication procedure within each registry to ensure that each cancer case is counted only once. Thirty-six NPCR and five SEER statewide registries met these criteria, representing 86.4% of the U.S. population for the years 1999–2003 (1). Because of the 86.4% population coverage, cancer rates derived from these data are considered to approximate actual incidence rates. A total of 1,043,480 diagnosed cases of breast cancer (in situ and invasive) among females were reported by these registries for the years 1999 to 2003 and used in this analysis. Annual incidence rates with confidence intervals were calculated. In situ and invasive breast cancer incidence rates were categorized by age at diagnosis; invasive cancer incidence rates were categorized by stage at diagnosis, race/ethnicity, and state of residence at diagnosis. Invasive breast cancer cases diagnosed during 1999–2000 were staged as localized, regional, or distant<sup>§</sup> using the 1977 SEER summary staging system, and cases diagnosed during 2001–2003 were staged using the newer 2000 SEER summary staging system (2). Incidence rates, per 100,000 females, are age adjusted to the 2000 U.S. standard population. Population estimates used as denominators in the rate calculations are

<sup>†</sup> Available at [http://wonder.cdc.gov/wonder/help/cancer/uscs\\_2002\\_registry\\_eligibility\\_criteria.html](http://wonder.cdc.gov/wonder/help/cancer/uscs_2002_registry_eligibility_criteria.html).

<sup>§</sup> Localized: cancer that is confined to the primary site. Regional: cancer that has spread directly beyond the primary site or to regional lymph nodes. Distant: cancer that has spread to other organs.

\*Medical records are the primary source of cancer incidence data. Staff members at health-care facilities abstract cancer incidence data from patients' medical records, enter the data into the facility's own cancer registry, if it has one, and then send the data to the regional or state registry. Both NPCR and SEER registries collect data using uniform data items and codes as documented by the North American Association of Central Cancer Registries. Additional information on NPCR and SEER methodology is available at [http://www.cdc.gov/cancer/npcr/npcrpdfs/uscs\\_2003\\_technical\\_notes.pdf](http://www.cdc.gov/cancer/npcr/npcrpdfs/uscs_2003_technical_notes.pdf).

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from the U.S. Census Bureau and modified by SEER to increase the accuracy of rates for the Hawaiian population (1). Statistically significant differences in rates between the years 2002 and 2003 were determined by using the rate ratio test in SEER\*Stat (<http://seer.cancer.gov/seerstat/index.html>).

Age-adjusted annual incidence rates for invasive breast cancer decreased each year from 1999 to 2003, with the greatest decrease in rates occurring from 2002 to 2003 (Table). The rate from 2002 to 2003 decreased 6.1%, with a significant decrease occurring for all women aged  $\geq 50$  years. The largest decrease (9.1%) occurred among women aged 60–69 years. For in situ cancers, rates increased each year from 1999 to 2002 and then decreased from 2002 to 2003, although the percentage decrease (2.7%) was smaller than that for invasive cancers (6.1%). Women aged 50–79 years experienced a significant decrease in incidence rates of in situ breast cancer from 2002 to 2003.

Whites had the highest incidence rates of invasive female breast cancer among racial/ethnic populations during 1999–2003, and American Indians/Alaska Natives (AI/ANs) had the lowest rates (Figure 1). From 2002 to 2003, all racial/ethnic groups other than AI/ANs experienced a significant decrease in incidence rates (blacks, 2.7%; Hispanics, 5.8%; Asians/Pacific Islanders [A/PIs], 6.1%; and whites, 6.4%) (Figure 1).

Rates of invasive breast cancer by stage at diagnosis declined during 1999–2003, with the largest decline (6.9%) (excluding unstaged cancer) occurring for localized cancer diagnosed from 2002 to 2003 (Table). Incidence rates of localized, regional, and unstaged female breast cancer decreased from 2002 to 2003; no significant change occurred in incidence rates of distant female breast cancer from 2002 to 2003.

Twenty-four of the 41 states included in this analysis experienced a significant decrease in incidence rates from 2002 to 2003 (range: 3.5% in Pennsylvania to 12.1% in Indiana) (Figure 2). Rates decreased by  $\geq 6\%$  in 17 states, and no significant change occurred in 17 states. No significant increase occurred in any state included in the analysis, and no geographic pattern was observed.

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**Editorial Note:** The findings in this report suggest that invasive female breast cancer rates have been decreasing in recent years, with a sharper decline occurring from 2002 to 2003. Furthermore, both in situ and invasive female breast cancer rates decreased from 2002 to 2003 across several age and stage groups and across most racial/ethnic populations. Decreases in 2003 occurred primarily among women aged  $\geq 50$  years, a finding consistent with those of other studies (3). The overall decrease from 2002 to 2003 occurred in 24 states.

**TABLE. Incidence rates\* for in situ female breast cancer, by age group at diagnosis, and invasive female breast cancer, by age group and stage at diagnosis — United States,† 1999–2003**

Breast cancer type	1999		2000		2001		2002		2003		2002 to 2003 % change
	Rate	(95% CI)§	Rate	(95% CI)	Rate	(95% CI)	Rate	(95% CI)	Rate	(95% CI)	
<b>In situ</b>	<b>28.0</b>	<b>(27.7–28.3)</b>	<b>28.6</b>	<b>(28.3–28.9)</b>	<b>29.2</b>	<b>(28.9–29.5)</b>	<b>29.3</b>	<b>(29.0–29.6)</b>	<b>28.5</b>	<b>(28.2–28.8)</b>	<b>-2.7¶</b>
<i>Age group at diagnosis (yrs)</i>											
0–39	1.9	(1.8–2.0)	2.0	(1.9–2.1)	2.0	(1.9–2.1)	1.9	(1.8–2.1)	1.9	(1.8–2.0)	0
40–49	41.4	(40.5–42.3)	41.8	(40.9–42.8)	42.1	(41.2–43.0)	41.9	(41.0–42.8)	42.9	(42.0–43.9)	2.4
50–59	69.9	(68.5–71.4)	72.0	(70.6–73.4)	73.1	(71.7–74.5)	73.7	(72.3–75.1)	69.9	(68.6–71.2)	-5.2¶
60–69	84.4	(82.5–86.3)	87.5	(85.6–89.4)	90.4	(88.5–92.3)	91.9	(90.0–93.8)	88.3	(86.4–90.1)	-3.9¶
70–79	85.9	(83.9–88.0)	86.4	(84.4–88.5)	88.3	(86.2–90.3)	88.6	(86.6–90.7)	85.1	(83.1–87.2)	-4.0¶
≥80	46.2	(44.3–48.1)	47.9	(46.1–49.8)	50.5	(48.6–52.4)	48.2	(46.4–50.0)	48.1	(46.4–50.0)	-0.2
<b>Invasive</b>	<b>134.0</b>	<b>(133.3–134.6)</b>	<b>130.8</b>	<b>(130.2–131.4)</b>	<b>130.4</b>	<b>(129.8–131.0)</b>	<b>127.1</b>	<b>(126.5–127.7)</b>	<b>119.3</b>	<b>(118.7–119.9)</b>	<b>-6.1¶</b>
<i>Age group at diagnosis (yrs)</i>											
0–39	13.1	(12.8–13.4)	12.8	(12.5–13.1)	13.2	(12.9–13.5)	12.7	(12.4–12.9)	12.8	(12.6–13.1)	0.8
40–49	151.8	(150.0–153.6)	150.9	(149.1–152.7)	148.3	(146.6–150.0)	145.3	(143.6–147.0)	144.9	(143.2–146.5)	-0.3
50–59	284.3	(281.4–287.2)	278.5	(275.7–281.3)	278.5	(275.8–281.3)	269.1	(266.5–271.7)	249.1	(246.6–251.6)	-7.4¶
60–69	393.7	(389.7–397.7)	392.2	(388.2–396.2)	390.2	(386.2–394.2)	387.9	(384.0–391.9)	352.6	(348.9–356.4)	-9.1¶
70–79	478.4	(473.7–483.2)	454.1	(449.4–458.7)	452.8	(448.1–457.4)	441.5	(436.9–446.1)	406.8	(402.3–411.2)	-7.9¶
≥80	439.0	(433.4–444.7)	419.4	(413.9–424.9)	417.8	(412.4–423.2)	399.5	(394.3–404.8)	369.3	(364.3–374.3)	-7.6¶
<i>Stage at diagnosis**</i>											
Localized	82.1	(81.6–82.6)	79.4	(78.9–79.9)	79.1	(78.6–79.5)	77.2	(76.7–77.7)	71.9	(71.5–72.4)	-6.9¶
Regional	38.7	(38.3–39.0)	38.4	(38.1–38.8)	38.8	(38.5–39.2)	38.1	(37.7–38.4)	36.3	(36.0–36.6)	-4.7¶
Distant	5.9	(5.8–6.1)	5.8	(5.7–6.0)	5.7	(5.6–5.9)	5.5	(5.4–5.7)	5.4	(5.3–5.5)	-1.8
Unstaged	7.3	(7.1–7.4)	7.1	(7.0–7.3)	6.8	(6.6–6.9)	6.3	(6.2–6.5)	5.7	(5.5–5.8)	-9.5¶

\* New cases diagnosed per 100,000 females, age adjusted to the 2000 U.S. standard population.

† Data are from 36 National Program of Cancer Registries and five Surveillance, Epidemiology, and End Results (SEER) statewide registries that met data-quality criteria for all invasive cancer sites combined according to *United States Cancer Statistics (1)* for all years (1999–2003).

§ Confidence interval.

¶ Statistically significant ( $p < 0.05$ ) based on the rate ratio test in SEER\*Stat comparing the 2003 rate with the 2002 rate.

\*\* Stage at diagnosis according to SEER summary stage 1977 for cases diagnosed during 1999–2000 and SEER summary stage 2000 for cases diagnosed during 2001–2003. Localized: cancer that is confined to the primary site; regional: cancer that has spread directly beyond the primary site or to regional lymph nodes; distant: cancer that has spread to other organs.

Decreases in rates of invasive female breast cancer from 2002 to 2003 were detected for all racial/ethnic populations analyzed except AI/ANs, although this population had the lowest overall incidence rate throughout the 5 years examined. In addition, the decrease in rates for black females was smaller than the decreases for other populations. Additional study is needed to determine possible reasons for these differences.

From 2002 to 2003, significant decreases occurred in incidence rates for localized, regional, and unstaged breast cancer but not distant breast cancer; the reason for the absence of a decrease in distant breast cancer is unknown. The 9.5% decrease in unstaged breast cancer cases might have resulted, in part, from more complete data collection about stage of disease at diagnosis, resulting in fewer unstaged cases. This finding is consistent with a SEER data analysis that attributed improvements in tumor staging to the substantial decrease (13.5 per 100,000 in 1975 to 4.9 per 100,000 in 2003) in unknown staged cases observed over the duration of the SEER program (4).

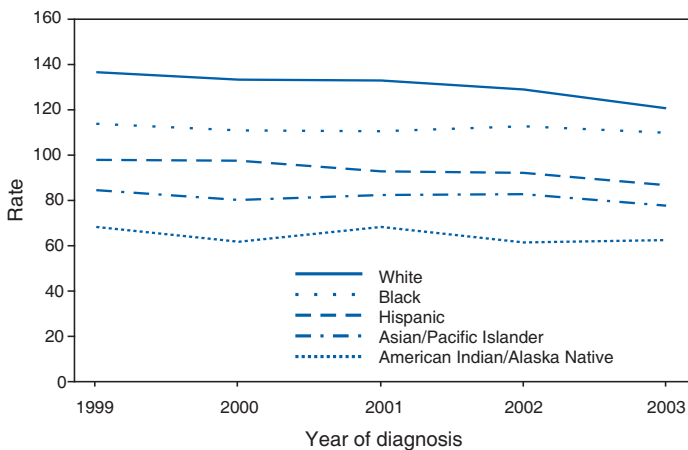
Several factors might affect breast cancer incidence and contribute to differences in rates over time and among populations. One such factor is hormone replacement therapy (HRT). Evidence collected, in part, through the National Institute of Health's Women's Health Initiative suggested an increased risk for invasive breast cancer among women who used HRT (5).

The same year, the United States Preventive Services Task Force began recommending against the routine use of HRT (primarily combined estrogen and progestin regimens) for the prevention of chronic conditions, such as cardiovascular disease, in postmenopausal women.¶ The mechanism by which HRT use might result in an increase in breast cancer incidence is unknown. One study suggested that hormones play a role in the promotion of breast carcinogenesis, increasing the rate at which certain preexisting but undetectable cancers grow (6). A population-based study in California of women aged 50–74 years who were members of a health-care plan determined that age-adjusted rates of hormone therapy decreased 68% from 2001 to 2003; during the same period, breast cancer incidence rates decreased 10% among the health-plan members and 11% among all women in California (7).

Because the breast cancer incidence rate began decreasing before 2002 (i.e., before the decrease in HRT use), other factors (e.g., differences in risk-factor prevalence, diet, and lifestyle) might be used to explain changes in breast cancer incidence rates. Mammography screening rates also might influence breast cancer incidence. A study in Connecticut that

¶ United States Preventive Services Task Force. Recommendations and rationale: hormone replacement therapy for primary prevention of chronic conditions. Available at <http://www.ahrq.gov/clinic/uspstf/uspstfpmho.htm>.

**FIGURE 1. Incidence rates\* for invasive female breast cancer, by race/ethnicity† and year of diagnosis — United States,‡ 1999–2003**

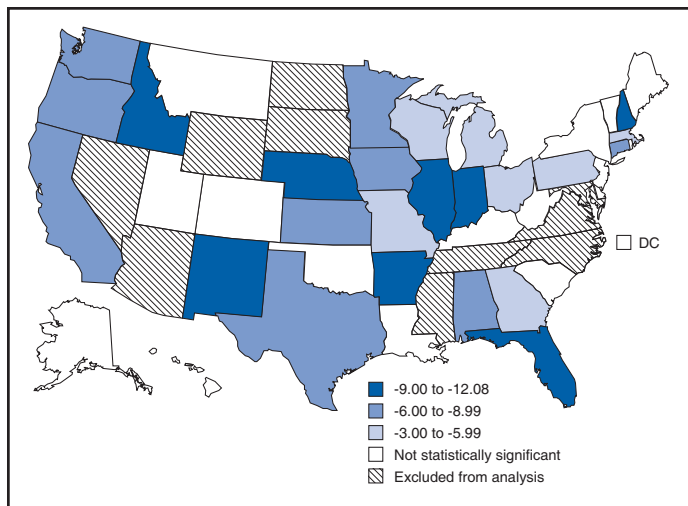


\*New cases diagnosed per 100,000 females age adjusted to the 2000 U.S. standard population.

†Data for specified racial/ethnic populations other than white and black should be interpreted with caution because of possible misclassification. Hispanic origin is not mutually exclusive from race categories (i.e., white, black, Asian/Pacific Islander, and American Indian/Alaska Native).

‡Data are from 36 National Program of Cancer Registries and five Surveillance, Epidemiology, and End Results statewide registries that meet data quality criteria for all invasive cancer sites combined according to *United States Cancer Statistics* (1) for all years (1999–2003).

**FIGURE 2. Percentage change in incidence rates\* for invasive female breast cancer, by state — United States,† 2002–2003**



\*New cases diagnosed per 100,000 females, age adjusted to the 2000 U.S. standard population. Only statistically significant changes in rates are shown. Statistically significant ( $p < 0.05$ ) based on the rate ratio test in SEER\*Stat comparing the 2003 rate with the 2002 rate.

†Data are from 36 National Program of Cancer Registries and five Surveillance, Epidemiology, and End Results statewide registries that meet data-quality criteria for all invasive cancer sites combined according to *United States Cancer Statistics* (1) for all years (1999–2003). States not meeting these criteria were excluded.

analyzed breast cancer incidence rates during 1943–2002 indicated that although incidence rates increased over time, they increased more quickly after initiation of mammography screening recommendations in the early 1980s, suggesting that more cases were being detected through screening (8). Data from another recent report indicate that the number of women aged  $\geq 40$  years who reported having received a mammogram within the preceding 2 years decreased significantly, by 2.4%, from 2000 to 2005 (9). Similar decreases were indicated by National Health Interview Survey data; in 2003, 69.5% of women aged  $\geq 40$  years had a mammogram within the preceding 2 years, compared with 70.4% in 2000.\*\* Moreover, similar decreases in mammography screening rates were reported among persons enrolled in several types of health plans (i.e., commercial, Medicare, and Medicaid).†† The extent to which the decreases in mammography screening rates might affect breast cancer incidence is unknown.

The findings in this report are subject to at least four limitations. First, although the data are the most geographically comprehensive data available, data are not included from all U.S. states; therefore, some populations might not be well represented. Second, data for A/Pis, AI/ANs, and Hispanic populations might be underestimated because of misclassification in medical records. Third, no additional information about tumor characteristics (e.g., estrogen receptor status), screening, and risk factors was available in the data set used in this analysis; therefore, the role of such factors in the observed changes cannot be assessed. Finally, reporting delays for cancers, such as breast cancer, that are commonly diagnosed in outpatient settings might result in numerous additional cases being added to totals from previous years. NPCR and SEER registries require 2–3 years to compile and report complete information about cancer cases in their respective CDC and NCI databases. Revised and updated information about cancer cases for previous years are submitted to CDC and NCI each year along with current statistics. However, a recent study demonstrated no statistically significant difference between breast cancer incidence in the delay-adjusted trend compared with the non-delay-adjusted trend (2). Therefore, the non-delay-adjusted rates and trends described in this report are not expected to vary significantly because of reporting delays.

Analyses of future breast cancer incidence rates are needed to confirm the findings in this report. Studies should focus on examining possible causes for this decrease and analyzing 2004 data, which will become available in 2007.

\*\* National Center for Health Statistics. Health, United States, 2005. Available at <http://www.cdc.gov/nchs/data/abus/abus05.pdf#086>.

†† National Committee for Quality Assurance. The state of health care quality: industry trends and analysis. 2006. Available at [http://www.ncqa.org/communications/sohc2006/sohc\\_2006.pdf](http://www.ncqa.org/communications/sohc2006/sohc_2006.pdf).

## References

1. US Cancer Statistics Working Group. United States cancer statistics: 2002 incidence and mortality. Atlanta, GA: US Department of Health and Human Services, CDC, and National Cancer Institute; 2005. Available at <http://apps.nccd.cdc.gov/uscs>.
2. Howe HL, Wu X, Ries LAG, et al. Annual report to the nation on the status of cancer, 1975–2003, featuring cancer among U.S. Hispanic/Latino populations. *Cancer* 2006;107:1711–42.
3. Ravdin PM, Cronin KA, Howlander N, Chlebowski RT, Berry DA, MD Anderson Cancer Center, National Cancer Institute, UCLA Medical Center. A decrease in breast cancer incidence in the United States in 2003. 29th Annual San Antonio Breast Cancer Symposium. December 2006. San Antonio, TX. Available at [http://www.abstracts2view.com/sabcs06/view.php?nu=SABCS06L\\_766](http://www.abstracts2view.com/sabcs06/view.php?nu=SABCS06L_766).
4. Jemal A, Ward E, Thun MJ. Recent trends in breast cancer incidence rates by age and tumor characteristics among U.S. women. *Breast Cancer Res* 2007;9:R28.
5. Writing Group for the Women's Health Initiative Investigators. Risks and benefits of estrogen plus progestin in healthy postmenopausal women. Principal results from the Women's Health Initiative randomized controlled trial. *JAMA* 2002;288:321–33.
6. Dietel M, Lewis MA, Shapiro S. Hormone replacement therapy: pathobiological aspects of hormone-sensitive cancers in women relevant to epidemiological studies on HRT: a mini-review. *Human Repro* 2005;20:2052–60.
7. Clarke CA, Glaser SL, Uratsu CS, Selby JV, Kushi LH, Herrinton LJ. Recent declines in hormone therapy utilization and breast cancer incidence: clinical and population-based evidence [Letter to the editor]. *J Clin Oncol* 2006;24:e49–50.
8. Anderson WF, Jatoi I, Devesa SS. Assessing the impact of screening mammography: breast cancer incidence and mortality rates in Connecticut (1943–2002). *Breast Cancer Res Treat* 2006;99:333–40.
9. CDC. Use of mammograms among women aged  $\geq 40$  years—United States, 2000–2005. *MMWR* 2007;56:49–51.

## Hazardous Substances Released During Rail Transit — 18 States, 2002–2007

In January 2007, two separate railroad incidents involving the unintentional release of hazardous substances occurred on consecutive days in Irvine and Brooks, two Kentucky communities approximately 125 miles apart (1). Although the incidents were not causally related, they both resulted in public health consequences (e.g., increased hospital visits, evacuations, and shelter-in-place orders (Kentucky Department for Public Health, unpublished data, 2007)). Subsequently, the Agency for Toxic Substances and Disease Registry (ATSDR) reviewed data from the Hazardous Substances Emergency Events Surveillance (HSEES) system to update a previous analysis involving rail events (2). The HSEES system is used to collect and analyze data regarding the public health consequences associated with hazardous-substance release events,\*

\* An HSEES event is defined as one that involves the release or threatened release of a hazardous substance or hazardous substances that meet minimum criteria. A hazardous substance is one that can be expected to cause an adverse health effect.

including those that occur during transportation. This report describes the two 2007 events in Kentucky (a non-HSEES state) and two other illustrative events in Minnesota in 2006 and in Utah in 2005, for which HSEES data were collected. In addition, this report summarizes all rail events reported to HSEES from 17 state health departments<sup>†</sup> during 2002–2006.<sup>§</sup>

Analysis of HSEES data was limited to the 78 rail events in which chemicals were released and the area of impact (i.e., the area where the plume extended) was  $\geq 200$  feet from the point of release. This definition was chosen because of the greater likelihood that nearby populations might be affected, compared with incidents in which chemicals did not migrate beyond the point of release. The following four event reports were selected to highlight the public health consequences that can result from hazardous-substance releases.

### Event Reports

**Irvine, Kentucky.** On January 15, 2007, four runaway train cars rolled approximately 20 miles before colliding with two unoccupied engines outside of Irvine, Kentucky (2000 population: 2,843). One of the four cars carried butyl acetate, a flammable solvent, which ignited on impact and resulted in an explosion. Butyl acetate can cause symptoms such as skin, eye, and upper respiratory system irritation; headache; drowsiness; and narcosis (3). After the crash, residents of 20 households were evacuated because of fumes and smoke produced by the burning butyl acetate, but they were allowed to return home later that day. Approximately 3,000 Irvine residents were advised to shelter in place (i.e., stay indoors and seal access to outside air). Approximately 320 employees of nearby businesses were evacuated for 2 days until air monitoring results confirmed conditions were no longer hazardous. No injuries were reported.

**Brooks, Kentucky.** On January 16, 2007, a train derailed in Brooks, Kentucky (2000 population: 2,678) (Figure). The derailment involved a total of 13 tank cars, 12 of which included hazardous materials or residue from hazardous materials. Tank cars containing 1,3-butadiene, cyclohexane, methyl ethyl ketone, and maleic anhydride were allowed to burn throughout the night to destroy the hazardous materials. These chemicals were detected in air and water samples from the area surrounding the incident site; soil and shallow groundwater also were assessed (4). The two-person train crew

<sup>†</sup> The analysis included events recorded in HSEES for 2002–2006. Twelve states participated in HSEES during the entire period: Colorado, Iowa, Louisiana, Minnesota, New Jersey, New York, North Carolina, Oregon, Texas, Utah, Washington, and Wisconsin. Five additional states participated during portions of the period: Alabama (2002–2003), Florida (2005–2006), Michigan (2005–2006), Mississippi (2002–2003), and Missouri (2002–2005).

<sup>§</sup> 2006 data are considered preliminary.

**FIGURE. Train derailment involving the release of hazardous substances — Brooks, Kentucky, January 2007**



Photo/Michael Clevenger/Courier-Journal via The Associated Press

escaped unhurt. Thirty-one persons, examined  $\leq 24$  hours after the incident, had symptoms that included headache, dizziness, upper and lower respiratory tract irritation, and eye irritation. Fifty-three persons in the vicinity eventually sought medical treatment at two local hospitals. A woman aged 61 years with a history of chronic obstructive pulmonary disease (COPD) was transferred to a metropolitan hospital with exacerbation of her COPD symptoms because of smoke inhalation. She was released after 2 weeks of supportive therapy.

After this incident occurred, approximately 350 persons from homes, schools, and businesses within a 1-mile radius of the release site were evacuated for 2 hours. Thirty-five residents of 15 homes were prohibited from returning home for approximately 6 weeks until contaminated plastic water lines (penetrable by released chemicals) were replaced. Approximately 300 persons from outside the evacuation area but within the path of the plume were ordered to shelter in place. In addition, an 8-mile stretch of an interstate highway approximately 0.5 mile from the release site and in the path of the plume was closed for 12 hours (5).

**St. Paul, Minnesota.** In May 2006, approximately 5,000 gallons of hydrochloric acid were released in St. Paul, Minnesota (2000 population: 287,151), from a stationary rail tanker at a chemical wholesaler. The rubber liner in the tanker had become displaced, allowing the acid to corrode and rupture the bottom of the tanker. A vapor cloud drifted from the site, and approximately 150 gallons of acid traveled through a storm sewer to a nearby river. Hydrochloric acid can cause skin, eye, and respiratory irritation; burns; and pulmonary edema (3). Seven persons were reported injured after contact with the vapor cloud: six members of the general public and one employee of the wholesaler. The most common injuries were respiratory and eye irritation. Six of the injured were treated at a hospital and released; the seventh person had symptoms but

was not treated. Approximately 100 persons downwind from the release and in the path of the subsequent vapor cloud were evacuated for 2 hours. A shelter-in-place order was issued for other sites near the 1-square-mile evacuation area.

**Salt Lake City, Utah.** In March 2005, a mixture of approximately 6,500 gallons of phosphoric, sulfuric, acetic, and hydrofluoric acids corroded the inside of a stationary rail-car and began leaking, causing an orange vapor cloud in Salt Lake City, Utah (2000 population: 181,743). The corrosion was attributed to improper combination of the acids because of human error. A member of the general public approximately 0.25 mile away experienced respiratory irritation and was treated on the scene. Approximately 8,000 persons downwind from the release were evacuated for 5 hours, and a shelter-in-place order was issued for a five-block area near the evacuation zone.

### HSEES Surveillance of Rail Events

State health departments participating in HSEES collect data on acute hazardous-substance events from various agencies, including the National Response Center, U.S. Department of Transportation, and state environmental and response agencies. The data are immediately entered into a secure Internet database, from which they can be accessed by ATSDR and the states. Of the 42,359 hazardous-substance releases reported to HSEES by 17 state health departments during 2002–2006, a total of 11,383 (26.9%) were transportation related, including 1,051 (9.2%) that involved rail transport. Among the rail transport events, 78 (7.4%) involved a chemical release and an area of impact that extended  $\geq 200$  feet from the point of release. The most common primary contributing factor in these 78 events was equipment failure (49 events [62.8%]); human error contributed to 24 (30.8%) events. A total of 103 different substances were released in the 78 rail transport events. The most common substances were diesel fuel (released along with a hazardous chemical substance) (seven events), chlorine (five), and hydrochloric acid (five); 61 (78.2%) events involved release of a single chemical.

Injuries were reported from 11 (14.1%) of the 78 rail events; a total of 144 persons were injured (Table). Among those injured, 101 (70.1%) were members of the general public, 27 (18.8%) were employees of the railroad or companies at the sites of releases, and 16 (11.1%) were responders. Of the 210 total injuries sustained by the 144 persons, the most commonly reported were respiratory irritation (104 [49.5%]) and eye irritation (33 [15.7%]). Among the 143 persons for whom medical outcome was known, 101 (70.6%) were treated at hospitals and released, and 23 (16.1%) were treated on the scene. Nine (6.3%) persons were admitted to a hospital, five (3.5%) were examined at a hospital but not treated, and two

**TABLE. Number of rail events (N = 78) in which chemicals were released and the area of impact (i.e., extension of plume) was  $\geq 200$  feet from the point of release, by selected characteristics—Hazardous Substances Emergency Events Surveillance system, 2002–2006\***

Characteristic	No.	%
<b>Sensitive sites within 0.25 mile</b>		
Residences	63	80.8
Day care centers	8	10.3
Schools	8	10.3
Nursing homes	3	3.8
<b>Responding groups†</b>		
Railroad response team	60	76.9
Law enforcement	33	42.3
Certified hazardous materials team	33	42.3
Fire department	31	39.7
<b>Response activities</b>		
Evacuation ordered	17	21.8
Shelter in place ordered	8	10.3
Decontamination conducted	9	11.5
No evacuation, shelter-in-place, or decontamination	58	74.4
<b>Types of injuries reported by persons§ (N = 144) from all events (N = 11) with injuries</b>		
Respiratory	104	49.5
Eye	33	15.7
Headache	23	11.0
Dizziness/Central nervous system	16	7.6
Gastrointestinal	16	7.6
Other injuries	18	8.5

\* Includes events from Alabama, Colorado, Florida, Iowa, Louisiana, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Oregon, Texas, Utah, Washington, and Wisconsin.

† For most events, more than one group responded; however, no group responded in three events.

§ Some persons reported more than one injury.

(1.4%) had symptoms but were not treated. Three persons died; a railroad employee died from trauma, and two members of the general public died from respiratory injuries.

In the 78 events, a total of 314,336 residents (range: zero to 25,480 persons; median: 2,765) lived within 1 mile of the release sites. In 63 (80.8%) of the events, residences were located within 0.25 mile of the release, affecting a total 16,074 residents (range: 0–1,820 persons; median: 123). Sensitive sites located within the 0.25-mile range included day care centers (eight), schools (eight), and nursing homes (three) (Table). Seventeen (21.8%) rail events were associated with mandatory evacuations. A total of 10,002 persons (range: seven to 8,000 persons; median: 48) were known to have been evacuated. Durations of evacuation ranged from <1 hour to 13 days (median: 5.8 hours). For 58 (74.4%) rail events, no orders were issued to evacuate or shelter in place.

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MPH, F Bove, ScD, M Orr, MS, V Kapil, DO, Div of Health Studies, Agency for Toxic Substances and Disease Registry.

**Editorial Note:** Approximately 1.8 million carloads of hazardous substances are shipped annually by rail in the United States, including through densely populated or environmentally sensitive areas (6–8). Of these carloads, approximately 105,000 contain toxic inhalation hazard substances such as chlorine, anhydrous ammonia, and hydrochloric acid (6,7). Although rail events constitute only 2% of total hazardous-substance releases in HSEES, releases during rail transit can cause severe public health consequences, as demonstrated by the event reports and surveillance data. Notably, approximately 81% of hazardous-substance releases from rail events occurred in areas with residences within 0.25 mile, and most of the injured were members of the general public.

Although the rate of all rail incidents has declined sharply since 1980, less improvement has been observed in recent years; the rail incident rate per million train miles actually increased from 3.76 in 2002 to 4.38 in 2004, before decreasing to 4.08 in 2005 (6). In recent years, concern over railroad safety has been elevated by major incidents such as the Graniteville, South Carolina, train collision in January 2005 that released 11,500 gallons of chlorine gas, caused nine deaths, and resulted in 529 persons seeking medical treatment (2,6). In response, the U.S. Department of Transportation (DOT) and the Federal Railroad Administration launched the National Rail Safety Action Plan in 2005 (9). This plan targets the most frequent, highest-risk causes of train incidents (e.g., equipment failure or human error) and is aimed at improving emergency preparedness and the safe handling of hazardous materials. In addition, in 2006, DOT proposed new rules requiring rail carriers to compile annual data on hazardous materials shipments and use these data to evaluate safety and security risks and alternative routing options (7).

The findings in this report are subject to at least four limitations. First, HSEES data were collected from only 17 states; therefore, the data represent only a proportion of hazardous-substance events that occur in the United States. Second, HSEES data do not fully integrate data on hazardous-substance releases that are collected by federal and state agencies. Moreover, acute release data are not effectively linked to other public health and environmental data (e.g., population, demographics, and locations of schools, nursing homes, and day care centers). Improved surveillance might place hazardous-substance incidents in community and industry contexts and enable more thorough analyses of the causes and effects of incidents. Third, reporting of events to HSEES is not mandatory, and participating state health departments are

not informed about every event. Finally, by law, petroleum-only releases are excluded from HSEES data collection.

Additional preparedness measures (e.g., planning and training of local response agencies and the public and establishment of notification mechanisms, escape routes, shelter-in-place protocols, and emergency shelters) are needed to respond to hazardous-substance rail incidents. In addition, new concerns have been raised since September 11, 2001, regarding the potential for terrorist attacks on railcars carrying large quantities of hazardous substances. Increased collaboration among railroad stakeholder organizations (e.g., environmental, transportation, industry, public health, public safety, and research) could result in better mechanisms to monitor rail substance-release events and use available data to identify vulnerabilities and promote safer technologies and practices.

#### Acknowledgments

The findings in this report are based, in part, on contributions by participating HSEES states; Kentucky Dept for Public Health; D Reeves, US Dept of Transportation; and B Lewis, Agency for Toxic Substances and Disease Registry.

#### References

1. US Environmental Protection Agency, Region 4. Train derailment in Brooks, Bullitt County, KY. Atlanta, GA: U.S. Environmental Protection Agency; 2007. Available at [http://www.epa.gov/region4/brooks\\_ky/updates.html](http://www.epa.gov/region4/brooks_ky/updates.html).
2. CDC. Public health consequences from hazardous substances acutely released during rail transit—South Carolina, 2005; selected states, 1999–2004. *MMWR* 2005;54:64–7.
3. National Institute for Occupational Safety and Health. NIOSH pocket guide to chemical hazards. Cincinnati, OH: US Department of Health and Human Services, CDC, National Institute for Occupational Safety and Health; 2004. Available at <http://www.cdc.gov/niosh/npg>.
4. US Environmental Protection Agency, Region 4: Southeast. Unified command—information update: CSX transportation derailment site—Brooks, Kentucky. Atlanta, GA: US Environmental Protection Agency; 2007. Available at [http://www.epa.gov/region4/brooks\\_ky/unified\\_command.html](http://www.epa.gov/region4/brooks_ky/unified_command.html).
5. US Environmental Protection Agency, Region IV. CSX derailment—Brooks, KY, pollution report. Atlanta, GA: US Environmental Protection Agency; 2007. Available at [http://www.epaossc.net/polrep\\_profile.asp?site\\_id=2749](http://www.epaossc.net/polrep_profile.asp?site_id=2749).
6. US Department of Transportation. Written statement of Michael T. Haley, deputy chief counsel, U.S. Department of Transportation, before the subcommittee on transportation security and infrastructure protection, committee on homeland security, US House of Representatives. Hearing on update on federal rail and public transportation security efforts, 2007. Available at <http://homeland.house.gov/SiteDocuments/20070206172402-34557.pdf>.
7. US Department of Transportation. *Federal Register* 2006;245:76834–6.
8. Horton DK, Berkowitz Z, Haugh GS, Orr MF, Kaye WE. Acute public health consequences associated with hazardous substances released during transit, 1993–2000. *J Hazard Mater* 2003;98:161–75.
9. Federal Railroad Administration. National rail safety action plan. Washington, DC: US Department of Transportation, Federal Railroad Administration; 2005. Available at <http://www.fra.dot.gov/us/content/1554>.

## West Nile Virus Activity — United States, 2006

West Nile virus (WNV) is the leading cause of arboviral encephalitis in the United States. Originally discovered in Africa in 1937, WNV was first detected in the western hemisphere in 1999 in New York City. Since then, WNV has caused seasonal epidemics of febrile illness and severe neurologic disease in the United States. This report summarizes provisional WNV surveillance data for 2006 reported to CDC as of April 3, 2007. During 2006, WNV transmission to humans or animals expanded into 52 counties that had not previously reported transmission and recurred in 1,350 counties where transmission had been reported in previous years. In addition, 1,491 cases of WNV neuroinvasive disease (WNND) were reported in the United States during this period, amounting to a 14% increase from 2005 and the largest number reported since 2003. On the basis of extrapolations from past serosurveys, an estimated 41,750 cases of non-neuroinvasive WNV disease occurred in 2006; of these cases, 2,770 were reported. These findings highlight the need for ongoing surveillance, mosquito control, promotion of personal protection from mosquito bites, and research into additional prevention strategies.

WNV data are reported to CDC through ArboNET, an Internet-based arbovirus surveillance system managed by state health departments and CDC. State and local health departments 1) collect reports from health-care providers and clinical laboratories regarding cases of WNV disease in humans; 2) collect and test dead birds, often focusing on corvids (e.g., crows, jays, and magpies), which have high mortality attributed to WNV infection; 3) collaborate with veterinarians to collect reports of WNV infection in nonhuman mammals; and 4) collect mosquitoes to test for evidence of WNV infection. Human WNV disease cases are classified as 1) WNND (i.e., meningitis, encephalitis, or acute flaccid paralysis); 2) West Nile fever (WNF), which is symptomatic WNV disease that does not affect the nervous system; 3) other clinical illness; or 4) unspecified (i.e., unknown) illness. WNF reporting is highly variable by jurisdiction, depending on the level of interest in reporting and utilization of diagnostic testing; therefore, this report focuses on WNND cases, which are thought to be more consistently identified and reported because of the severity of the illness.

### Human Surveillance

During 2006, a total of 4,261 cases of WNV disease in humans were reported from 731 counties in 43 states and the District of Columbia, accounting for 23.3% of the 3,142 coun-



ties in the United States. Of these cases, 1,491 were WNND, 2,612 were WNF, and 158 were unspecified illnesses. Idaho, a state that reported four WNND cases (from a total of 17 human cases) during 2003–2005, reported 139 WNND cases in 2006, accounting for 9.3% of the national total. Idaho first reported any WNV activity in 2002; the first human case in the state was reported in 2003. Other focal outbreaks of WNND occurred in states that experienced outbreaks in previous years, including Texas (229 WNND cases), Illinois (127), Louisiana (91), and Mississippi (89). In the New York City metropolitan area, WNV disease recurred for the eighth consecutive year, with eight WNND cases reported. The counties with the highest incidence of WNND were primarily in the west-central United States (Figure 1). The states with the highest incidence included Idaho (9.9 cases per 100,000 residents), South Dakota (4.9), and North Dakota (3.2). The incidence of WNND peaked during the first week in August, and the overall trend was consistent with the seasonality observed in the preceding 6 years (Figure 2).

The median age of the 1,491 persons with WNND was 58 years (range: 3 months–99 years), and 891 (59.8%) were male. A total of 1,311 (87.9%) persons were hospitalized, and 161 (10.8%) died. A total of 101 (6.8%) persons with WNND had acute flaccid paralysis; the median age among these persons was 53 years (range: 1–87 years), and 62 (61.4%) were male. Twelve (11.9%) died; the median age of these persons was 76 years (range: 19–99 years).

## Animal Surveillance

In 2006, a total of 4,106 dead WNV-infected birds were reported from 701 counties in 43 states; 404 counties from

38 states reported infected birds but no human disease. Collection of WNV-infected birds peaked during mid-August. Corvids accounted for 3,292 (80%) of the birds; the majority of states targeted corvids for surveillance. Since 1999, WNV infection has been identified in approximately 300 avian species, including 11 species in which WNV was identified for the first time during 2006.

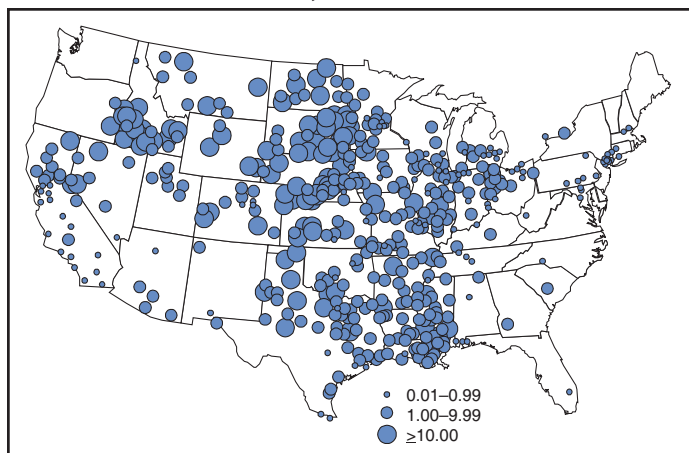
Of 1,121 reported WNV disease cases among nonhuman mammals, 1,086 (96.9%) occurred in equine animals, and 35 (3.2%) occurred in other species (squirrels [33] and unspecified species [two]). Equine cases were reported from 414 counties in 34 states; Idaho reported 31% of all equine cases. Peak reported incidences of equine disease occurred during mid-August.

A total of 11,898 mosquito pools\* from 459 counties in 38 states and the District of Columbia tested positive for WNV. Among the WNV-positive pools, 8,665 (72.8%) were made up of *Culex* mosquitoes thought to be the principal vectors of WNV transmission (i.e., *Cx. pipiens*, *Cx. quinquefasciatus*, *Cx. restuans*, *Cx. salinarius*, and *Cx. tarsalis*) (1). Unidentified or other species of *Culex* mosquitoes made up 3,032 (25.5%) pools, and non-*Culex* species (i.e., *Aedes* spp., *Anopheles* spp., *Coquillettidia* spp., *Culiseta* spp., *Ochlerotatus* spp., and *Psorophora* spp.) made up 135 (1.1%) pools. Data from 2006 included the first report of WNV infection in *Culex apicalis*, which was collected in Arizona. The number of reported WNV-infected mosquito pools peaked during the first week in August.

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**Editorial Note:** In 2006, a total of 1,491 cases of WNND were reported, the highest number reported since 2003.† WNV activity was detected in all 48 contiguous states for the second consecutive year. Human WNV disease was scattered throughout the United States, but the majority of cases were reported in Idaho and in the west-central states. One state (Washington) reported human cases for the first time. The increase in reported cases since 2004 suggests that endemic transmission of WNV in the United States will continue. Although WNND case reports from Idaho (a state that reported only four WNND cases during 2003–2005) accounted for nearly 10% of all WNND cases reported in 2006, focal outbreaks also recurred in areas where seasonal transmission has occurred for several years (1).

**FIGURE 1. Incidence\* of West Nile virus neuroinvasive disease† in humans — United States, 2006§**



\* Per 100,000 county residents.

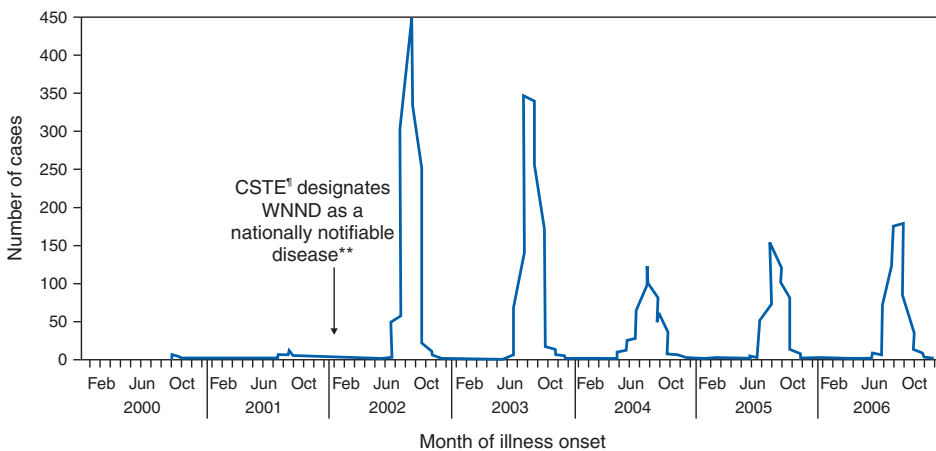
† Meningitis, encephalitis, or acute flaccid paralysis.

§ Provisional data as of April 3, 2007.

\* A sample of mosquitoes (usually no more than 50) of the same species and sex, collected within a defined sampling area and period.

† Additional information available at <http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm>.

**FIGURE 2. Number\* of reported West Nile virus neuroinvasive disease (WNND)<sup>†</sup> cases in humans, by month of illness onset — United States, 2000–2006<sup>§</sup>**



\* N = 9,902.

<sup>†</sup> Meningitis, encephalitis, or acute flaccid paralysis.

<sup>§</sup> Provisional data as of April 3, 2007.

<sup>¶</sup> Council of State and Territorial Epidemiologists.

\*\* West Nile virus was first detected in the United States in August 1999. The ArboNET surveillance system was established in 2000.

This report focuses on WNND cases because of the variability in WNF reporting by jurisdiction and by year. Reporting of WNND is thought to be more consistent and complete because of the higher likelihood of hospitalization and testing. Although the Council of State and Territorial Epidemiologists designated WNF as a notifiable disease in 2005, the true incidence and public health impact of WNF remains underestimated by national surveillance data (2,3). Population-based serologic surveys indicate that approximately 140 WNV infections occur for every case of WNND and that of all persons who become infected, approximately 20% have onset of WNF and 80% remain asymptomatic (2,4). By applying these ratios to the 1,491 reported WNND cases, an estimated 208,700 cases of WNV infection (1,491 WNND cases × 140) and 41,750 cases of WNF (208,700 × 0.20; only 2,612 cases were reported) occurred in the United States in 2006.

Although persons of all ages appear equally susceptible to WNV infection, both the incidence of WNND and the incidence of death related to WNND increase with age, especially among persons aged >60 years, and are slightly higher among males (1,5). During 2006, the median age among persons with fatal WNND was similar to that of previous years (4,6).

Reports of WNV disease in equine animals have decreased annually since 2002 (CDC, unpublished data, 2007). Whether this decline represents a true decrease in disease incidence resulting from naturally acquired immunity or vaccination (7) or is a result of reduced emphasis on equine WNV disease reporting is not clear. Nonetheless, the temporal and geographic distribution of equine WNV cases continues to cor-

relate with human cases, suggesting that surveillance of equine animals can continue to help indicate areas of increased risk for human WNV disease.

Since 1999, corvids have accounted for the majority (>70%) of all WNV-infected dead birds reported to CDC. The substantial number of reported corvid deaths likely results from the size of corvids and their susceptibility to WNV disease and from surveillance programs specifically targeted at corvids. Geographically, surveillance of WNV in different bird species can vary in usefulness as indicators for WNV transmission; targeting locally relevant species can optimize efficiency of WNV surveillance.

As of December 31, 2006, WNV had been detected in 62 of the approximately 175 mosquito species found in the United States. In 2006, *Culex* mosquitoes (specifically *Cx. pipiens*, *Cx. quinquefasciatus*, *Cx. restuans*, *Cx. salinarius*, and *Cx. tarsalis*) continued to be the most prevalent in WNV-positive pools. Although 33 different WNV-infected mosquito species were identified in 2006, *Culex* mosquitoes are believed to account for the majority of WNV transmission in the United States (1). Therefore, *Culex* mosquitoes remain the primary vector target for prevention of WNV disease in the United States.

WNV surveillance is important for monitoring further spread of the virus and targeting prevention and control strategies. The ArboNET surveillance system focuses on arboviral diagnosis, testing, and reporting and is well positioned to detect increased transmission of all domestic arboviruses, to identify future introduction of foreign arboviruses, and to monitor effects of climate and other determinants of arboviral disease incidence.

In the absence of an effective human vaccine, prevention of WNV disease depends on community-level mosquito control (e.g., larviciding, adulticiding, and breeding-site reduction) and promotion of personal protection against mosquito bites, such as use of repellents and avoiding outdoor exposure when mosquitoes are most active (usually from dusk to dawn). Repellents containing DEET, picaridin, or oil of lemon eucalyptus provide protection against mosquito bites. Intact window screens or air conditioning can reduce mosquito exposure in homes. Numbers of mosquitoes can be reduced by removing or emptying water from larval habitats such as flower pots, buckets, gutters, and barrels.

### Acknowledgments

This report is based, in part, on data provided by ArboNET surveillance coordinators in local and state health departments and ArboNET technical staff, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.

### References

1. Hayes EB, Komar N, Nasci RS, Montgomery SP, O'Leary DR, Campbell GL. Epidemiology and transmission dynamics of West Nile virus disease. *Emerg Infect Dis* 2005;11:1167–73.
2. Mostashari F, Bunning ML, Kitsutani PT, et al. Epidemic West Nile encephalitis, New York, 1999: results of a household-based seroepidemiological survey. *Lancet* 2001;358:261–4.
3. Watson JT, Pertel PE, Jones RC, et al. Clinical characteristics and functional outcomes of West Nile fever. *Ann Intern Med* 2004;141:360–5.
4. Tsai TF, Popovici F, Cernescu, et al. West Nile encephalitis epidemic in southeastern Romania. *Lancet* 1998;352:767–71.
5. O'Leary DR, Marfin AA, Montgomery SP, et al. The epidemic of West Nile virus in the United States, 2002. *Vector Borne Zoonotic Dis* 2004;4:61–70.
6. CDC. West Nile virus activity—United States, 2001. *MMWR* 2002;51:497–501.
7. Davidson AH, Traub-Dargatz JL, Rodeheaver RM, et al. Immunologic responses to West Nile virus in vaccinated and clinically affected horses. *J Am Vet Med Assoc* 2005;226:240–5.

### Notice to Readers

## Heads Up! Tool for Diagnosing and Managing Brain Injury

An estimated 75%–90% of the 1.4 million traumatic brain injury–related deaths, hospitalizations, and emergency department visits that occur each year in the United States are concussions or mild traumatic brain injuries (MTBIs) (1–5). Clinicians can help prevent MTBI or concussion and improve patient health outcomes with early diagnosis, management, and appropriate referral. However, diagnosing MTBIs can be challenging because certain symptoms are similar to those of other medical conditions (e.g., posttraumatic stress disorder,

depression, and headache syndromes), and the onset or recognition of symptoms might not occur until days or weeks after the injury (6).

To aid clinicians in the diagnosis and management of MTBIs, CDC recently updated and revised the Heads Up: Brain Injury in Your Practice tool kit. The free tool kit can be ordered or downloaded at [http://www.cdc.gov/ncipc/tbi/physicians\\_tool\\_kit.htm](http://www.cdc.gov/ncipc/tbi/physicians_tool_kit.htm). Additional information regarding MTBI is available at <http://www.cdc.gov/injury>, or by e-mail, [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov), or telephone, 800-CDC-INFO (800-232-4636).

### References

1. CDC. Traumatic brain injury in the United States: emergency department visits, hospitalizations, and deaths. Atlanta, GA: US Department of Health and Human Services, CDC; 2006. Available at [http://www.cdc.gov/ncipc/pub-res/tbi\\_in\\_us\\_04/tbi\\_ed.htm](http://www.cdc.gov/ncipc/pub-res/tbi_in_us_04/tbi_ed.htm).
2. CDC. Report to Congress on mild traumatic brain injury in the United States: steps to prevent a serious public health problem. Atlanta, GA: US Department of Health and Human Services, CDC; 2003.
3. Kraus JF, Nourjah P. The epidemiology of mild, uncomplicated brain injury. *J Trauma* 1988;28:1637–43.
4. Luerssen TG, Klauber MR, Marshall LF. Outcome from head injury related to patient's age: a longitudinal prospective study of adult and pediatric head injury. *J Neurosurg* 1988;68:409–16.
5. Lescossier I, DiScala C. Blunt trauma in children: causes and outcomes of head versus intracranial injury. *Pediatrics* 1993;91:721–5.
6. Kushner D. Mild traumatic brain injury: toward understanding manifestations and treatment. *Arch Intern Med* 1998;158:1617–24.

## Erratum: Vol. 56, No. 18

In the report, “Characteristics of Persons with Chronic Hepatitis B — San Francisco, California, 2006,” on page 446, the last sentence of the second paragraph should read, “A probable case is defined as an infection in a person with a single HBsAg-positive, HBV DNA-positive, or HBeAg-positive laboratory result with no IgM anti-HBc test reported.”

**TABLE 1. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending June 2, 2007 (22nd Week)\***

Disease	Current week	Cum 2007	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2006	2005	2004	2003	2002	
Anthrax	—	—	—	1	—	—	—	2	
Botulism:									
foodborne	—	2	0	20	19	16	20	28	
infant	—	29	2	97	85	87	76	69	
other (wound & unspecified)	—	8	1	48	31	30	33	21	
Brucellosis	—	48	2	119	120	114	104	125	
Chancroid	—	10	1	33	17	30	54	67	
Cholera	—	—	0	9	8	5	2	2	
Cyclosporiasis§	1	26	13	136	543	171	75	156	FL (1)
Diphtheria	—	—	—	—	—	—	1	1	
Domestic arboviral diseases§¶:									
California serogroup	—	—	0	63	80	112	108	164	
eastern equine	—	—	0	7	21	6	14	10	
Powassan	—	—	—	1	1	1	—	1	
St. Louis	—	—	0	9	13	12	41	28	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis§:									
human granulocytic	3	24	10	644	786	537	362	511	MN (2), MO (1)
human monocytic	7	57	6	548	506	338	321	216	MN (3), MD (2), NC (2)
human (other & unspecified)	1	21	3	234	112	59	44	23	MD (1)
<i>Haemophilus influenzae</i> **,									
invasive disease (age <5 yrs):									
serotype b	—	5	0	17	9	19	32	34	
nonserotype b	3	37	2	139	135	135	117	144	NC (2), OK (1)
unknown serotype	2	108	4	228	217	177	227	153	PA (1), UT (1)
Hansen disease§	1	20	2	66	87	105	95	96	MN (1)
Hantavirus pulmonary syndrome§	1	7	1	38	26	24	26	19	WA (1)
Hemolytic uremic syndrome, postdiarrheal§	—	37	4	286	221	200	178	216	
Hepatitis C viral, acute	7	253	20	824	652	713	1,102	1,835	MI (1), MO (1), KY (1), OK (2), TX (2)
HIV infection, pediatric (age <13 yrs)††	—	—	4	52	380	436	504	420	
Influenza-associated pediatric mortality§,§§	5	65	0	41	45	—	N	N	TX (5)
Listeriosis	4	195	12	873	896	753	696	665	MN (1), NC (1), TX (1), WA (1)
Measles¶¶	—	14	2	74	66	37	56	44	
Meningococcal disease, invasive***:									
A, C, Y, & W-135	2	119	6	288	297	—	—	—	SD (1), MD (1)
serogroup B	1	44	3	182	156	—	—	—	FL (1)
other serogroup	—	9	0	29	27	—	—	—	
unknown serogroup	4	303	15	685	765	—	—	—	PA (1), DE (1), ID (1), OR (1)
Mumps	5	391	44	6,587	314	258	231	270	OH (1), MI (1), MN (1), KS (1), FL (1)
Novel influenza A virus infections	—	—	—	N	N	N	N	N	
Plague	—	1	0	17	8	3	1	2	
Poliomyelitis, paralytic	—	—	—	—	1	—	—	—	
Poliovirus infection, nonparalytic§	—	—	—	N	N	N	N	N	
Psittacosis§	—	3	0	21	16	12	12	18	
Q fever§	1	69	3	175	136	70	71	61	NC (1)
Rabies, human	—	—	0	3	2	7	2	3	
Rubella†††	—	8	0	10	11	10	7	18	
Rubella, congenital syndrome	—	—	—	1	1	—	1	1	
SARS-CoV§,§§§	—	—	0	—	—	—	8	N	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	4	39	3	125	129	132	161	118	OH (3), IN (1)
Syphilis, congenital (age <1 yr)	—	88	8	380	329	353	413	412	
Tetanus	—	4	1	40	27	34	20	25	
Toxic-shock syndrome (staphylococcal)§	1	30	2	100	90	95	133	109	IN (1)
Trichinellosis	—	1	0	15	16	5	6	14	
Tularemia	1	11	3	99	154	134	129	90	MO (1)
Typhoid fever	—	105	6	346	324	322	356	321	
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	3	0	6	2	—	N	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	0	1	3	1	N	N	
Vibriosis (non-cholera <i>Vibrio</i> species infections)§	4	70	1	N	N	N	N	N	FL (2), CA (2)
Yellow fever	—	—	—	—	—	—	—	1	

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

\* Incidence data for reporting years 2006 and 2007 are provisional, whereas data for 2002, 2003, 2004, and 2005 are finalized.

† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at <http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf>.

§ Not notifiable in all states. Data from states where the condition is not notifiable are excluded from this table, except 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 non-neuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.

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

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

§§ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. A total of 66 cases were reported for the 2006–07 flu season.

¶¶ No measles cases were reported for the current week.

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

††† 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.











**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending June 2, 2007, and June 3, 2006 (22nd Week)\***

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	42	255	1,386	2,950	5,887	47	96	168	1,684	2,131	25	24	157	314	476
<b>New England</b>	1	36	77	456	950	4	11	25	196	226	—	0	9	—	5
Connecticut	—	2	10	18	27	1	4	14	67	54	—	0	0	—	—
Maine†	1	2	15	33	23	1	2	8	31	34	N	0	0	N	N
Massachusetts	—	28	45	369	692	—	0	7	—	92	—	0	1	—	4
New Hampshire	—	2	9	20	117	2	1	4	16	8	—	0	1	—	1
Rhode Island†	—	0	31	—	22	—	0	3	16	9	—	0	9	—	—
Vermont†	—	1	9	16	69	—	2	10	66	29	—	0	0	—	—
<b>Mid. Atlantic</b>	1	32	155	425	708	1	13	38	303	167	1	1	7	19	19
New Jersey	—	3	16	46	140	—	0	0	—	—	—	0	4	—	9
New York (Upstate)	—	18	146	255	256	—	—	—	—	—	—	0	2	—	1
New York City	—	1	6	—	35	—	1	5	24	4	—	0	3	6	4
Pennsylvania	1	9	20	124	277	1	12	37	279	163	1	0	3	13	5
<b>E.N. Central</b>	10	41	80	603	824	5	2	18	37	32	—	1	9	7	21
Illinois	—	9	23	62	214	—	0	7	3	7	—	0	4	1	13
Indiana	2	2	44	13	80	1	0	2	5	2	—	0	1	1	1
Michigan	—	10	39	116	152	—	0	5	8	17	—	0	1	1	—
Ohio	8	14	56	340	273	4	0	12	21	6	—	0	4	4	6
Wisconsin	—	3	17	72	105	—	0	0	—	—	—	0	0	—	1
<b>W.N. Central</b>	4	17	151	179	606	5	6	19	90	102	3	4	13	58	38
Iowa	—	4	16	52	156	—	1	7	10	13	—	0	1	—	1
Kansas	2	3	14	66	129	4	2	6	54	33	—	0	1	—	—
Minnesota	—	0	119	—	75	—	0	6	6	12	1	0	2	1	1
Missouri	1	3	10	35	169	—	1	6	8	9	1	3	12	54	34
Nebraska†	1	1	4	8	61	—	0	0	—	—	1	0	5	3	2
North Dakota	—	0	18	4	4	1	0	7	7	13	—	0	0	—	—
South Dakota	—	0	4	14	12	—	0	3	5	22	—	0	0	—	—
<b>S. Atlantic</b>	6	19	163	389	439	25	40	63	839	993	21	12	67	171	312
Delaware	—	0	1	3	2	—	0	0	—	—	—	0	3	4	8
District of Columbia	—	0	2	2	3	—	0	0	—	—	—	0	1	1	—
Florida	3	4	18	103	90	—	0	24	55	176	1	0	4	7	7
Georgia	—	1	7	6	33	—	5	9	81	103	—	0	5	5	12
Maryland†	2	2	7	50	73	—	6	12	116	185	—	1	7	16	12
North Carolina	—	1	112	145	77	9	11	21	206	165	19	6	61	109	254
South Carolina†	1	3	11	36	64	—	3	11	46	56	—	0	5	6	5
Virginia†	—	2	17	37	86	16	12	31	300	265	1	2	12	22	13
West Virginia	—	0	19	7	11	—	1	8	35	43	—	0	2	1	1
<b>E.S. Central</b>	—	6	24	77	120	—	4	11	60	105	—	5	27	54	63
Alabama†	—	1	17	23	25	—	0	8	—	33	—	1	9	12	16
Kentucky	—	0	5	2	22	—	0	4	8	7	—	0	1	1	—
Mississippi	—	0	9	9	17	—	0	0	—	4	—	0	1	—	—
Tennessee†	—	3	9	43	56	—	2	8	52	61	—	4	22	41	47
<b>W.S. Central</b>	4	17	153	185	276	3	15	35	33	362	—	1	114	4	9
Arkansas†	4	2	17	42	30	—	0	5	10	15	—	0	53	—	6
Louisiana	—	0	2	6	16	—	0	1	—	2	—	0	1	—	—
Oklahoma	—	0	9	1	3	3	0	7	23	24	—	0	55	—	1
Texas†	—	14	134	136	227	—	14	34	—	321	—	0	6	4	2
<b>Mountain</b>	9	29	63	514	1,390	3	2	28	41	63	—	0	4	1	8
Arizona	—	6	16	127	312	2	2	10	36	50	—	0	2	—	2
Colorado	6	7	18	141	481	—	0	0	—	—	—	0	1	—	1
Idaho†	—	1	7	20	31	—	0	24	—	—	—	0	3	1	—
Montana†	—	1	8	24	49	—	0	2	—	6	—	0	2	—	—
Nevada†	—	0	9	3	37	—	0	1	—	—	—	0	0	—	—
New Mexico†	—	2	8	17	39	—	0	1	1	5	—	0	1	—	3
Utah	3	9	48	170	410	1	0	1	3	1	—	0	0	—	—
Wyoming†	—	1	8	12	31	—	0	2	1	1	—	0	1	—	2
<b>Pacific</b>	7	24	547	122	574	1	4	13	85	81	—	0	1	—	1
Alaska	2	1	8	13	32	—	0	6	33	13	N	0	0	N	N
California	—	21	225	—	421	1	3	12	52	66	—	0	0	—	—
Hawaii	—	0	5	10	54	N	0	0	N	N	N	0	0	N	N
Oregon†	—	1	11	42	67	—	0	4	—	2	—	0	1	—	1
Washington	5	0	377	57	—	—	0	0	—	—	N	0	0	N	N
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	—	—	U	U	U	—	—	U	U	U	—	—	U	U
Guam	—	1	7	—	13	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	—	—	—	1	4	19	49	N	0	0	N	N
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U

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

U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2006 and 2007 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 June 2, 2007, and June 3, 2006 (22nd Week)\*

Reporting area	Salmonellosis					Shiga toxin-producing <i>E. coli</i> (STEC) <sup>†</sup>					Shigellosis				
	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	344	837	1,877	11,409	12,742	23	73	315	872	843	173	280	874	4,635	4,219
<b>New England</b>	2	36	129	586	1,226	—	3	23	51	122	—	4	21	77	200
Connecticut	—	0	115	115	503	—	0	9	9	75	—	0	12	12	67
Maine <sup>§</sup>	1	2	14	38	38	—	1	8	12	4	—	0	5	8	2
Massachusetts	—	23	87	335	585	—	2	13	21	36	—	3	18	50	121
New Hampshire	—	3	15	38	56	—	0	3	5	4	—	0	2	3	3
Rhode Island <sup>§</sup>	1	2	15	41	31	—	0	2	1	1	—	0	3	3	5
Vermont <sup>§</sup>	—	1	6	19	13	—	0	4	3	2	—	0	2	1	2
<b>Mid. Atlantic</b>	22	96	189	1,471	1,495	—	8	63	86	106	2	13	47	179	351
New Jersey	—	20	50	54	301	—	1	20	1	31	—	2	34	13	128
New York (Upstate)	—	27	112	452	313	—	3	15	40	33	—	3	42	40	85
New York City	2	23	45	401	411	—	0	4	8	17	—	5	12	96	101
Pennsylvania	20	32	66	564	470	—	3	47	37	25	2	1	6	30	37
<b>E.N. Central</b>	50	93	203	1,485	1,831	2	9	63	103	129	14	25	75	291	427
Illinois	—	29	65	290	525	—	1	8	12	15	—	9	53	35	143
Indiana	19	15	55	214	200	—	1	8	11	14	—	2	17	24	54
Michigan	1	18	35	283	333	—	1	6	20	26	—	2	5	15	79
Ohio	30	23	56	426	446	2	3	18	44	37	14	4	23	159	68
Wisconsin	—	17	32	272	327	—	2	41	16	37	—	4	14	58	83
<b>W.N. Central</b>	38	50	109	931	799	3	11	45	128	131	12	44	156	873	517
Iowa	—	8	26	139	137	—	2	38	20	25	—	2	14	23	18
Kansas	11	7	20	155	118	—	0	4	13	5	—	1	10	13	36
Minnesota	12	12	60	234	188	1	3	26	55	39	3	5	24	101	31
Missouri	9	15	35	264	228	1	2	13	23	42	9	14	72	706	352
Nebraska <sup>§</sup>	2	3	11	61	74	1	1	11	16	13	—	1	14	7	34
North Dakota	4	0	23	15	6	—	0	12	—	2	—	0	127	4	3
South Dakota	—	3	11	63	48	—	0	5	1	5	—	6	24	19	43
<b>S. Atlantic</b>	134	225	401	3,122	2,916	11	13	32	203	134	89	76	150	1,737	986
Delaware	1	3	10	35	30	—	0	3	6	1	—	0	2	4	—
District of Columbia	1	1	4	16	23	—	0	1	1	—	—	0	5	4	3
Florida	65	93	176	1,362	1,292	1	2	8	57	30	72	39	76	1,076	443
Georgia	3	30	73	456	428	—	2	7	20	23	12	26	62	543	351
Maryland <sup>§</sup>	14	14	32	223	140	1	3	9	35	9	—	2	10	26	19
North Carolina	30	29	130	474	462	8	2	11	33	29	3	1	14	28	82
South Carolina <sup>§</sup>	14	18	47	253	258	—	0	3	5	3	2	0	4	27	65
Virginia <sup>§</sup>	6	20	58	265	250	1	3	11	45	39	—	2	9	28	23
West Virginia	—	1	31	38	33	—	0	5	1	—	—	0	2	1	—
<b>E.S. Central</b>	6	51	139	718	724	1	4	21	39	58	15	13	89	357	275
Alabama <sup>§</sup>	1	11	70	206	241	—	0	5	8	6	11	6	66	156	71
Kentucky	5	9	23	160	127	1	1	12	13	13	4	2	15	45	131
Mississippi	—	12	101	118	151	—	0	3	1	1	—	2	76	86	31
Tennessee <sup>§</sup>	—	17	32	234	205	—	2	9	17	38	—	3	14	70	42
<b>W.S. Central</b>	23	87	189	486	1,194	1	4	52	51	42	27	39	246	431	579
Arkansas <sup>§</sup>	9	13	45	146	282	—	1	7	11	9	2	2	10	43	31
Louisiana	—	18	48	120	256	—	0	0	—	—	—	5	25	68	66
Oklahoma	14	10	103	134	86	—	0	17	11	4	1	2	60	29	32
Texas <sup>§</sup>	—	37	107	86	570	1	2	48	29	29	24	30	174	291	450
<b>Mountain</b>	18	50	88	889	914	1	9	34	110	94	10	22	84	278	333
Arizona	7	17	44	314	260	—	2	9	43	25	9	10	37	140	174
Colorado	9	11	30	242	276	—	1	8	19	24	1	3	15	46	48
Idaho <sup>§</sup>	—	3	9	41	50	—	1	8	7	14	—	0	3	4	6
Montana <sup>§</sup>	—	2	10	34	49	—	0	0	—	—	—	0	13	12	2
Nevada <sup>§</sup>	—	5	20	69	59	1	0	5	9	11	—	1	20	13	41
New Mexico <sup>§</sup>	—	4	15	71	78	—	1	5	14	8	—	2	15	38	39
Utah	2	4	14	95	116	—	2	14	18	10	—	1	4	8	20
Wyoming <sup>§</sup>	—	1	4	23	26	—	0	3	—	2	—	0	19	17	3
<b>Pacific</b>	51	105	890	1,721	1,643	4	4	164	101	27	4	33	256	412	551
Alaska	1	1	5	33	33	N	0	0	N	N	—	0	2	6	4
California	37	90	260	1,310	1,358	2	0	8	58	N	4	28	84	330	467
Hawaii	1	5	16	86	87	—	0	3	6	4	—	1	3	13	18
Oregon <sup>§</sup>	—	7	17	98	165	—	1	9	13	23	—	1	6	21	62
Washington	12	0	625	194	—	2	0	162	24	—	—	0	170	42	—
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	—	—	U	U	U	—	—	U	U	U	—	—	U	U
Guam	—	0	0	—	—	N	0	0	N	N	—	0	0	—	—
Puerto Rico	2	15	66	259	133	—	0	0	—	—	1	0	6	12	9
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U

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

U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2006 and 2007 are provisional.

<sup>†</sup> Includes *E. coli* O157:H7; Shiga toxin-positive, serogroup non-O157; and Shiga toxin-positive, not serogrouped.

<sup>§</sup> Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending June 2, 2007, and June 3, 2006 (22nd Week)\*

Reporting area	Streptococcal disease, invasive, group A					<i>Streptococcus pneumoniae</i> , invasive disease <sup>†</sup> Age <5 years				
	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006
		Med	Max				Med	Max		
<b>United States</b>	47	85	251	2,336	2,858	16	28	104	686	690
<b>New England</b>	—	6	29	169	240	—	2	11	56	85
Connecticut	—	0	17	35	55	—	0	6	—	20
Maine <sup>§</sup>	—	0	2	9	9	—	0	1	1	—
Massachusetts	—	3	10	95	145	—	2	6	42	60
New Hampshire	—	0	5	19	20	—	0	2	6	5
Rhode Island <sup>§</sup>	—	0	12	—	4	—	0	3	5	—
Vermont <sup>§</sup>	—	0	2	11	7	—	0	1	2	—
<b>Mid. Atlantic</b>	3	15	41	422	539	—	3	20	54	97
New Jersey	—	1	6	28	98	—	0	4	—	38
New York (Upstate)	—	5	27	147	158	—	2	15	54	50
New York City	—	3	11	98	97	—	0	3	—	9
Pennsylvania	3	6	11	149	186	N	0	0	N	N
<b>E.N. Central</b>	11	15	29	414	607	—	5	14	100	174
Illinois	—	4	10	81	186	—	1	6	9	48
Indiana	5	2	12	62	66	—	0	10	10	22
Michigan	1	4	10	108	126	—	1	4	41	43
Ohio	5	4	14	144	158	—	1	7	35	33
Wisconsin	—	1	6	19	71	—	0	2	5	28
<b>W.N. Central</b>	4	5	32	189	180	1	2	8	60	51
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	1	3	24	37	—	0	1	1	9
Minnesota	4	0	29	90	78	1	1	6	41	26
Missouri	—	2	6	49	33	—	0	2	13	10
Nebraska <sup>§</sup>	—	0	3	13	19	—	0	2	4	4
North Dakota	—	0	2	9	6	—	0	2	1	2
South Dakota	—	0	2	4	7	—	0	0	—	—
<b>S. Atlantic</b>	15	20	48	538	547	6	2	13	136	34
Delaware	—	0	2	4	5	—	0	0	—	—
District of Columbia	—	0	3	8	7	—	0	1	—	—
Florida	4	6	16	131	127	1	0	5	32	—
Georgia	2	5	11	107	144	1	0	5	42	—
Maryland <sup>§</sup>	5	4	8	97	75	1	1	6	37	26
North Carolina	—	0	26	56	67	—	0	0	—	—
South Carolina <sup>§</sup>	2	1	7	50	41	3	0	3	15	—
Virginia <sup>§</sup>	2	2	11	72	67	—	0	3	8	—
West Virginia	—	0	3	13	14	—	0	4	2	8
<b>E.S. Central</b>	1	4	11	91	118	—	0	6	42	10
Alabama <sup>§</sup>	N	0	0	N	N	N	0	0	N	N
Kentucky	1	1	4	25	29	—	0	0	—	—
Mississippi	N	0	0	N	N	—	0	2	2	10
Tennessee <sup>§</sup>	—	3	7	66	89	—	0	6	40	—
<b>W.S. Central</b>	7	6	80	147	206	1	4	39	110	104
Arkansas <sup>§</sup>	—	0	2	12	18	—	0	2	7	14
Louisiana	—	0	2	4	8	—	0	4	24	16
Oklahoma	1	2	21	42	58	—	1	12	24	21
Texas <sup>§</sup>	6	3	56	89	122	1	1	24	55	53
<b>Mountain</b>	6	11	23	304	376	7	4	12	110	122
Arizona	2	5	11	120	202	4	2	7	62	72
Colorado	4	3	9	94	62	3	1	4	33	29
Idaho <sup>§</sup>	—	0	1	6	6	—	0	1	2	1
Montana <sup>§</sup>	N	0	0	N	N	N	0	0	N	N
Nevada <sup>§</sup>	—	0	1	2	1	—	0	1	1	—
New Mexico <sup>§</sup>	—	1	6	25	68	—	0	4	12	20
Utah	—	1	7	54	35	—	0	0	—	—
Wyoming <sup>§</sup>	—	0	1	3	2	—	0	0	—	—
<b>Pacific</b>	—	3	9	62	45	1	0	4	18	13
Alaska	—	0	2	15	N	1	0	2	16	—
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	2	9	47	45	—	0	2	2	13
Oregon <sup>§</sup>	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	—	—	U	U	U	—	—	U	U
Guam	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	0	—	—	N	0	0	N	N
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U

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

U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2006 and 2007 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 June 2, 2007, and June 3, 2006 (22nd Week)\*

Reporting area	<i>Streptococcus pneumoniae</i> , invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Age <5 years					Current week	Previous 52 weeks		Cum 2007	Cum 2006
	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006		Med	Max		
		Med	Max				Med	Max							
<b>United States</b>	19	44	254	1,177	1,313	4	8	35	212	197	55	183	310	3,376	3,760
<b>New England</b>	—	1	12	26	76	—	0	3	5	2	1	4	13	87	81
Connecticut	—	0	5	—	59	—	0	0	—	—	—	0	10	10	17
Maine§	—	0	2	5	4	—	0	2	1	1	—	0	1	2	5
Massachusetts	—	0	0	—	—	—	0	0	—	—	1	3	7	55	45
New Hampshire	—	0	0	—	—	—	0	0	—	—	—	0	2	10	5
Rhode Island§	—	0	4	10	5	—	0	1	2	—	—	0	5	9	7
Vermont§	—	0	2	11	8	—	0	1	2	1	—	0	1	1	2
<b>Mid. Atlantic</b>	1	3	9	75	79	—	0	5	17	10	13	24	44	635	489
New Jersey	—	0	0	—	—	—	0	0	—	—	—	3	8	57	74
New York (Upstate)	—	1	5	25	22	—	0	4	7	4	—	3	14	48	65
New York City	—	0	0	—	—	—	0	0	—	—	13	15	35	435	240
Pennsylvania	1	2	6	50	57	—	0	2	10	6	—	5	12	95	110
<b>E.N. Central</b>	12	10	40	299	296	1	1	7	36	47	3	15	32	280	371
Illinois	—	0	3	3	14	—	0	1	1	3	—	6	13	106	204
Indiana	6	2	31	74	69	1	0	5	7	13	—	1	5	18	34
Michigan	—	0	1	1	14	—	0	0	—	2	—	2	10	46	35
Ohio	6	5	38	221	199	—	1	5	28	29	3	4	9	85	81
Wisconsin	N	0	0	N	N	—	0	0	—	—	—	1	4	25	17
<b>W.N. Central</b>	—	1	124	89	22	—	0	15	4	1	1	4	14	56	113
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	3	4	7
Kansas	—	0	10	48	—	—	0	2	2	—	—	0	3	8	11
Minnesota	—	0	123	—	—	—	0	15	—	—	—	1	5	21	25
Missouri	—	1	5	34	22	—	0	1	—	1	—	2	8	21	67
Nebraska§	—	0	1	2	—	—	0	0	—	—	—	0	2	1	2
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
South Dakota	—	0	3	5	—	—	0	1	2	—	1	0	3	1	—
<b>S. Atlantic</b>	5	21	59	526	630	3	4	15	116	91	19	37	180	574	812
Delaware	—	0	1	4	—	—	0	1	1	—	—	0	3	5	12
District of Columbia	—	0	2	5	17	—	0	0	—	2	2	2	11	65	48
Florida	5	11	29	307	320	2	2	8	68	60	—	11	24	68	301
Georgia	—	6	16	176	226	1	1	10	40	29	—	4	153	33	103
Maryland§	—	0	1	1	—	—	0	0	—	—	2	5	15	118	138
North Carolina	—	0	0	—	—	—	0	0	—	—	12	5	23	152	117
South Carolina§	—	0	0	—	—	—	0	0	—	—	3	1	10	46	34
Virginia§	N	0	0	N	N	—	0	0	—	—	—	4	17	84	57
West Virginia	—	1	17	33	67	—	0	1	7	—	—	0	2	3	2
<b>E.S. Central</b>	—	2	9	74	98	—	0	3	16	16	10	15	29	304	241
Alabama§	N	0	0	N	N	—	0	0	—	—	—	5	17	95	102
Kentucky	—	0	2	16	23	—	0	1	2	3	1	1	7	33	32
Mississippi	—	0	0	—	—	—	0	0	—	—	1	2	9	48	25
Tennessee§	—	2	8	58	75	—	0	3	14	13	8	6	13	128	82
<b>W.S. Central</b>	1	1	9	62	55	—	0	2	10	6	4	30	56	619	587
Arkansas§	—	0	3	1	5	—	0	0	—	2	4	1	7	47	33
Louisiana	—	1	3	22	50	—	0	1	2	4	—	7	30	143	83
Oklahoma	1	0	8	39	—	—	0	2	8	—	—	1	5	31	32
Texas§	—	0	0	—	—	—	0	0	—	—	—	21	31	398	439
<b>Mountain</b>	—	1	5	26	57	—	0	5	8	24	2	7	27	112	209
Arizona	—	0	0	—	—	—	0	0	—	—	2	2	16	31	81
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	5	12	36
Idaho§	N	0	0	N	N	—	0	0	—	—	—	0	1	1	2
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	1	1	1
Nevada§	—	0	3	15	14	—	0	2	5	—	—	2	12	36	59
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	1	7	27	26
Utah	—	0	5	8	24	—	0	4	2	16	—	0	2	3	4
Wyoming§	—	0	3	3	19	—	0	1	1	8	—	0	1	1	—
<b>Pacific</b>	—	0	0	—	—	—	0	0	—	—	2	38	57	709	857
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	2	5	5
California	N	0	0	N	N	—	0	0	—	—	2	34	54	646	751
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	1	2	11
Oregon§	N	0	0	N	N	—	0	0	—	—	—	0	6	8	8
Washington	N	0	0	N	N	—	0	0	—	—	—	2	11	48	82
American Samoa	U	0	0	U	U	U	0	1	U	U	U	0	0	U	U
C.N.M.I.	U	—	—	U	U	U	—	—	U	U	U	—	—	U	U
Guam	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	0	—	—	—	3	11	56	67
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U

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

U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2006 and 2007 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 June 2, 2007, and June 3, 2006 (22nd Week)\***

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Neuroinvasive					Non-neuroinvasive§				
		Med	Max			Current week	Med	Max	Cum 2007	Cum 2006	Current week	Med	Max	Cum 2007	Cum 2006
<b>United States</b>	560	771	1,581	20,009	26,626	—	0	178	—	12	—	1	399	—	6
<b>New England</b>	2	24	209	314	2,480	—	0	3	—	—	—	0	2	—	—
Connecticut	—	8	76	1	914	—	0	3	—	—	—	0	1	—	—
Maine¶	—	1	9	—	151	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	95	—	865	—	0	1	—	—	—	0	1	—	—
New Hampshire	2	6	17	127	202	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Vermont¶	—	9	66	186	348	—	0	0	—	—	—	0	0	—	—
<b>Mid. Atlantic</b>	89	105	195	2,490	2,754	—	0	11	—	—	—	0	4	—	—
New Jersey	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
New York (Upstate)	N	0	0	N	N	—	0	5	—	—	—	0	1	—	—
New York City	—	0	0	—	—	—	0	4	—	—	—	0	2	—	—
Pennsylvania	89	105	195	2,490	2,754	—	0	2	—	—	—	0	1	—	—
<b>E.N. Central</b>	149	218	568	5,918	9,224	—	0	43	—	2	—	0	33	—	—
Illinois	—	2	11	71	71	—	0	23	—	1	—	0	23	—	—
Indiana	—	0	0	—	—	—	0	7	—	1	—	0	12	—	—
Michigan	44	88	258	2,298	2,669	—	0	11	—	—	—	0	2	—	—
Ohio	105	118	449	2,979	5,791	—	0	11	—	—	—	0	3	—	—
Wisconsin	—	17	57	570	693	—	0	2	—	—	—	0	2	—	—
<b>W.N. Central</b>	44	32	136	1,129	1,134	—	0	36	—	—	—	0	79	—	1
Iowa	N	0	0	N	N	—	0	3	—	—	—	0	4	—	1
Kansas	14	8	52	418	220	—	0	3	—	—	—	0	3	—	—
Minnesota	—	0	0	—	—	—	0	6	—	—	—	0	7	—	—
Missouri	30	16	78	574	865	—	0	14	—	—	—	0	2	—	—
Nebraska¶	N	0	0	N	N	—	0	9	—	—	—	0	38	—	—
North Dakota	—	0	60	84	18	—	0	5	—	—	—	0	28	—	—
South Dakota	—	1	15	53	31	—	0	7	—	—	—	0	22	—	—
<b>S. Atlantic</b>	68	85	224	2,270	2,494	—	0	2	—	—	—	0	7	—	—
Delaware	—	1	6	13	41	—	0	0	—	—	—	0	0	—	—
District of Columbia	6	0	8	14	18	—	0	0	—	—	—	0	1	—	—
Florida	24	0	89	680	N	—	0	1	—	—	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	4	—	—
Maryland¶	N	0	0	N	N	—	0	2	—	—	—	0	2	—	—
North Carolina	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
South Carolina¶	6	17	72	588	717	—	0	1	—	—	—	0	0	—	—
Virginia¶	—	18	176	331	811	—	0	0	—	—	—	0	2	—	—
West Virginia	32	25	50	644	907	—	0	1	—	—	—	0	0	—	—
<b>E.S. Central</b>	1	6	43	252	54	—	0	15	—	3	—	0	16	—	—
Alabama¶	1	6	43	250	54	—	0	2	—	—	—	0	0	—	—
Kentucky	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
Mississippi	—	0	2	2	—	—	0	10	—	3	—	0	16	—	—
Tennessee¶	N	0	0	N	N	—	0	4	—	—	—	0	2	—	—
<b>W.S. Central</b>	198	191	979	6,013	6,757	—	0	58	—	5	—	0	26	—	2
Arkansas¶	1	9	105	179	437	—	0	4	—	—	—	0	2	—	—
Louisiana	—	1	11	46	168	—	0	13	—	—	—	0	9	—	1
Oklahoma	—	0	0	—	—	—	0	6	—	—	—	0	4	—	—
Texas¶	197	170	873	5,788	6,152	—	0	38	—	5	—	0	16	—	1
<b>Mountain</b>	9	55	133	1,601	1,729	—	0	61	—	2	—	0	228	—	2
Arizona	—	0	0	—	—	—	0	9	—	—	—	0	15	—	—
Colorado	7	22	62	619	894	—	0	10	—	2	—	0	51	—	1
Idaho¶	N	0	0	N	N	—	0	30	—	—	—	0	157	—	1
Montana¶	—	0	26	206	N	—	0	3	—	—	—	0	8	—	—
Nevada¶	—	0	1	1	8	—	0	9	—	—	—	0	16	—	—
New Mexico¶	—	5	39	238	285	—	0	1	—	—	—	0	1	—	—
Utah	2	17	73	524	513	—	0	8	—	—	—	0	17	—	—
Wyoming¶	—	0	11	13	29	—	0	7	—	—	—	0	10	—	—
<b>Pacific</b>	—	0	9	22	—	—	0	15	—	—	—	0	51	—	1
Alaska	—	0	9	22	N	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	N	—	0	15	—	—	—	0	37	—	1
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	2	—	—	—	0	14	—	—
Washington	N	0	0	N	N	—	0	0	—	—	—	0	2	—	—
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	—	—	U	U	U	—	—	U	U	U	—	—	U	U
Guam	—	4	14	—	135	—	0	0	—	—	—	0	0	—	—
Puerto Rico	13	12	27	325	252	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U

C.N.M.I.: Commonwealth of Northern Mariana Islands.  
 U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.  
 † Incidence data for reporting years 2006 and 2007 are provisional.  
 ‡ 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 notifiable in all states. Data from states where the condition is not notifiable are excluded from this table, except 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 June 2, 2007 (22nd Week)

Reporting Area	All causes, by age (years)							Reporting Area	All causes, by age (years)						
	All Ages	≥65	45-64	25-44	1-24	<1	P&I† Total		All Ages	≥65	45-64	25-44	1-24	<1	P&I† Total
<b>New England</b>	459	315	96	24	12	12	44	<b>S. Atlantic</b>	1,054	684	239	71	35	25	46
Boston, MA	132	79	32	11	3	7	11	Atlanta, GA	155	85	41	22	6	1	9
Bridgeport, CT	29	22	6	—	—	1	7	Baltimore, MD	118	77	28	5	6	2	3
Cambridge, MA	16	12	3	—	1	—	2	Charlotte, NC	106	70	23	7	1	5	6
Fall River, MA	18	13	5	—	—	—	2	Jacksonville, FL	160	114	35	2	8	1	6
Hartford, CT	47	34	7	3	2	1	2	Miami, FL	85	65	11	3	3	3	6
Lowell, MA	12	11	1	—	—	—	3	Norfolk, VA	33	22	6	1	—	4	—
Lynn, MA	12	11	1	—	—	—	2	Richmond, VA	48	24	18	2	3	1	6
New Bedford, MA	20	14	5	—	—	1	3	Savannah, GA	46	26	12	5	3	—	—
New Haven, CT	U	U	U	U	U	U	U	St. Petersburg, FL	49	29	12	6	1	1	1
Providence, RI	48	33	9	4	1	1	3	Tampa, FL	151	101	34	12	3	1	6
Somerville, MA	3	2	—	—	1	—	—	Washington, D.C.	77	51	15	4	1	6	1
Springfield, MA	29	19	8	1	1	—	2	Wilmington, DE	26	20	4	2	—	—	2
Waterbury, CT	25	17	6	2	—	—	—	<b>E.S. Central</b>	702	441	192	44	15	10	60
Worcester, MA	68	48	13	3	3	1	7	Birmingham, AL	158	111	32	9	3	3	11
<b>Mid. Atlantic</b>	1,723	1,199	356	114	31	20	92	Chattanooga, TN	60	43	12	4	1	—	2
Albany, NY	36	21	11	3	—	1	2	Knoxville, TN	94	57	30	6	—	1	10
Allentown, PA	16	11	5	—	—	—	1	Lexington, KY	47	27	13	4	3	—	2
Buffalo, NY	68	47	15	3	1	2	2	Memphis, TN	143	86	46	5	3	3	12
Camden, NJ	31	17	10	3	—	1	—	Mobile, AL	43	20	17	4	—	2	6
Elizabeth, NJ	14	7	5	2	—	—	2	Montgomery, AL	37	26	6	3	1	1	5
Erie, PA	30	25	4	1	—	—	2	Nashville, TN	120	71	36	9	4	—	12
Jersey City, NJ	20	16	3	1	—	—	1	<b>W.S. Central</b>	1,219	779	281	86	37	36	72
New York City, NY	948	681	187	57	13	8	39	Austin, TX	75	53	16	3	2	1	6
Newark, NJ	53	24	16	9	2	1	4	Baton Rouge, LA	52	32	12	2	2	4	2
Paterson, NJ	23	13	3	5	1	1	2	Corpus Christi, TX	46	33	7	4	1	1	—
Philadelphia, PA	132	80	35	13	3	1	7	Dallas, TX	171	95	43	19	7	7	14
Pittsburgh, PA <sup>§</sup>	32	19	8	4	1	—	3	El Paso, TX	73	53	14	4	2	—	1
Reading, PA	34	24	8	1	1	—	3	Fort Worth, TX	117	78	32	4	1	2	8
Rochester, NY	135	102	21	2	6	4	10	Houston, TX	277	177	66	18	9	7	17
Schenectady, NY	15	12	3	—	—	—	1	Little Rock, AR	75	47	15	5	4	4	4
Scranton, PA	28	21	2	3	1	1	3	New Orleans, LA <sup>¶</sup>	U	U	U	U	U	U	U
Syracuse, NY	62	49	11	1	1	—	8	San Antonio, TX	178	122	34	10	4	8	9
Trenton, NJ	17	9	4	4	—	—	1	Shreveport, LA	58	37	11	7	2	1	6
Utica, NY	12	8	2	1	1	—	—	Tulsa, OK	97	52	31	10	3	1	5
Yonkers, NY	17	13	3	1	—	—	1	<b>Mountain</b>	836	529	170	86	31	20	43
<b>E.N. Central</b>	1,721	1,145	380	125	37	34	115	Albuquerque, NM	88	56	18	11	1	2	4
Akron, OH	54	36	15	3	—	—	2	Boise, ID	30	23	1	4	1	1	2
Canton, OH	24	22	2	—	—	—	5	Colorado Springs, CO	64	43	12	5	2	2	1
Chicago, IL	310	168	87	37	11	7	23	Denver, CO	87	56	14	9	3	5	3
Cincinnati, OH	76	56	9	5	2	4	8	Las Vegas, NV	206	126	55	17	8	—	16
Cleveland, OH	165	120	36	4	3	2	7	Ogden, UT	23	12	6	2	2	1	1
Columbus, OH	169	110	35	14	4	6	8	Phoenix, AZ	122	71	22	18	4	7	4
Dayton, OH	132	86	34	6	5	1	9	Pueblo, CO	18	10	5	3	—	—	—
Detroit, MI	154	88	38	16	7	5	13	Salt Lake City, UT	105	70	17	7	9	2	10
Evansville, IN	38	30	4	1	3	—	2	Tucson, AZ	93	62	20	10	1	—	2
Fort Wayne, IN	71	54	11	4	—	2	3	<b>Pacific</b>	1,170	790	261	75	26	18	92
Gary, IN	8	3	5	—	—	—	—	Berkeley, CA	14	12	1	1	—	—	1
Grand Rapids, MI	61	40	18	3	—	—	7	Fresno, CA	62	42	13	6	1	—	5
Indianapolis, IN	103	63	24	13	—	3	7	Glendale, CA	U	U	U	U	U	U	U
Lansing, MI	38	32	3	2	1	—	2	Honolulu, HI	66	47	12	3	3	1	5
Milwaukee, WI	97	69	21	6	—	1	3	Long Beach, CA	67	43	18	4	1	1	10
Peoria, IL	35	27	5	2	—	1	3	Los Angeles, CA	U	U	U	U	U	U	U
Rockford, IL	40	27	9	2	—	2	3	Pasadena, CA	28	24	1	2	—	1	4
South Bend, IN	35	25	7	3	—	—	1	Portland, OR	70	48	13	6	—	3	4
Toledo, OH	67	49	14	4	—	—	6	Sacramento, CA	171	124	30	9	5	3	14
Youngstown, OH	44	40	3	—	1	—	3	San Diego, CA	134	84	29	12	6	3	13
<b>W.N. Central</b>	419	280	98	19	10	12	33	San Francisco, CA	125	77	31	11	3	3	10
Des Moines, IA	45	39	5	1	—	—	8	San Jose, CA	131	93	28	8	1	1	12
Duluth, MN	19	10	6	1	1	1	—	Santa Cruz, CA	32	24	7	1	—	—	2
Kansas City, KS	17	9	7	—	1	—	—	Seattle, WA	105	62	30	8	3	2	4
Kansas City, MO	80	47	22	4	3	4	4	Spokane, WA	70	45	23	1	1	—	6
Lincoln, NE	31	22	8	1	—	—	4	Tacoma, WA	95	65	25	3	2	—	2
Minneapolis, MN	53	33	12	3	2	3	5	<b>Total</b>	9,303**	6,162	2,073	644	234	187	597
Omaha, NE	64	44	16	2	1	1	7								
St. Louis, MO	14	3	6	2	2	1	—								
St. Paul, MN	52	40	9	1	—	2	2								
Wichita, KS	44	33	7	4	—	—	3								

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.

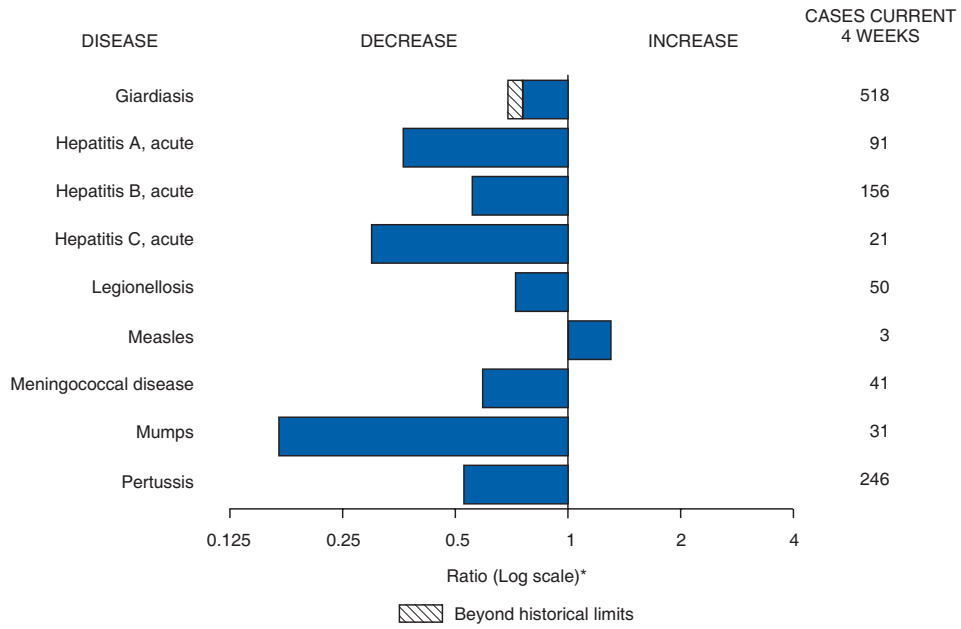
† Pneumonia and influenza.

§ 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.

¶ Because of Hurricane Katrina, weekly reporting of deaths has been temporarily disrupted.

\*\* Total includes unknown ages.

**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals June 2, 2007, 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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