



# MMWR<sup>TM</sup>

## Morbidity and Mortality Weekly Report

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### World Kidney Day — March 8, 2007

March 8 marks the second observance of World Kidney Day, which was established by the International Federation of Kidney Foundations to increase awareness of kidney disease and educate persons at risk regarding the importance of prevention and early detection. During 1988–1994, an estimated 20 million persons in the United States had chronic kidney disease (CKD) (1). CKD is caused primarily by diabetes and high blood pressure (2), and persons with a family history of kidney disease also are at risk (3). In addition, persons with CKD are at increased risk for cardiovascular disease and are more likely to die from cardiovascular disease than progress to kidney failure (4).

Throughout March (National Kidney Month), *MMWR* will publish reports related to CKD and its complications. Additional information regarding kidney disease is available from the National Institutes of Health at <http://www.nkdep.nih.gov>. Information regarding World Kidney Day activities is available from the National Kidney Foundation at <http://www.kidney.org>.

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### Prevalence of Chronic Kidney Disease and Associated Risk Factors — United States, 1999–2004

Chronic kidney disease (CKD) is a serious condition associated with premature mortality, decreased quality of life, and increased health-care expenditures. Untreated CKD can result in end-stage renal disease and necessitate dialysis or kidney transplantation. Risk factors for CKD include cardiovascular disease, diabetes, hypertension, and obesity (1–3). To estimate the prevalence of CKD in the United States (overall and by health risk factors and other characteristics), CDC analyzed the most recent data from the National Health and Nutrition Examination Survey (NHANES). This report summarizes the results of that analysis, which determined that 16.8% of the U.S. population aged  $\geq 20$  years had CKD, according to 1999–2004 NHANES data, compared with 14.5% from the 1988–1994 NHANES (i.e., NHANES III),

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an increase of 15.9% based on crude estimates of prevalence\* (4). Persons with diabetes or cardiovascular disease had a greater prevalence of CKD than persons without those conditions. The results underscore the need to continue surveillance for CKD and its risk factors in the United States and to implement new strategies to reduce the number of persons with this condition.

NHANES is a continuous survey of the health and nutritional status of the U.S. civilian, noninstitutionalized population; samples of participants are selected through a complex, multistage probability design. NHANES collects data through interviews in participants' homes and medical examinations conducted in a mobile examination center.<sup>†</sup> Although data are collected continuously, they are released in 2-year increments. The analyses in this report use combined NHANES data from three survey periods: 1999–2000, 2001–2002, and 2003–2004.

The NHANES examination includes measurement of serum creatinine and urine albumin and creatinine from a single spot urine test. For this study, kidney damage (stages 1 and 2 only) was suggested by the presence of albuminuria (i.e., abnormal amounts of urine albumin assessed by the urine albumin to urine creatinine ratio [ACR]).<sup>§</sup> Persons with apparent kidney damage included those with microalbuminuria (ACR of 17–250 mg/g for men or 25–355 mg/g for women) or macroalbuminuria (ACR of >250 mg/g for men or >355 mg/g for women). Level of kidney function was estimated from the glomerular filtration rate (GFR), with lower values corresponding to diminished kidney function. CKD prevalence was estimated from apparent kidney damage and kidney function and categorized into stages, with increasing stage numbers corresponding to increased severity,

\*To enable comparison of CKD prevalence from 1999–2004 NHANES with that from NHANES III (1988–1994), data from the older report were recalculated using 1999–2004 NHANES criteria, resulting in an estimated CKD prevalence of 14.5% for adults aged  $\geq 20$  years. The new criteria called for a single spot urine test to determine albuminuria (i.e., apparent kidney damage) instead of two tests (i.e., an initial test and a confirming test), which were conducted for some participants in NHANES III. For participants in NHANES III who had received two tests, the initial urine test was used in the recalculation. Initial analyses of NHANES data, using two tests, had resulted in an estimated CKD prevalence of 11.0% for adults aged  $\geq 20$  years. Comparison of crude estimates for CKD overall is presented because NHANES III data were not age standardized.

<sup>†</sup>Additional NHANES information is available at <http://www.cdc.gov/nchs/nhanes.htm>.

<sup>§</sup>Stages 1 and 2 refer to CKD indicators, rather than actual CKD, because persistent albuminuria assessed from two urine samples is required to confirm the presence of kidney damage, whereas one sample suggests that kidney damage is likely present.

according to the National Kidney Foundation classification system (2,5).<sup>§</sup>

CKD prevalence estimates were calculated by demographic characteristics (i.e., age group, sex, race/ethnicity, and education level) and by CKD risk factors: diagnosed diabetes, diagnosed cardiovascular disease, hypertension,\*\* and body mass index group.<sup>††</sup> Diabetes was defined as self-report of diagnosis by a doctor or other health professional. Cardiovascular disease was defined as self-report of diagnosis by a doctor or other health professional of congestive heart failure, coronary heart disease, angina, stroke, or heart attack.

Data were analyzed using sample weights to account for differential probabilities of sample selection, nonresponse, and sample noncoverage. Estimates by demographic characteristic and risk factor were age standardized to the 2000 U.S. standard population aged  $\geq 20$  years. Two sample *t* tests were used to test the statistical significance ( $p < 0.05$ ) of differences in CKD prevalence (all stages) between population subgroups.

The total crude (i.e., not age-standardized) CKD prevalence estimate for adults aged  $\geq 20$  years in the United States was 16.8%. By disease stage, the prevalences were as follows: stage 1, 5.7%; stage 2, 5.4%; stage 3, 5.4%; stages 4/5, 0.4% (Table). By age group, CKD (all stages) was more prevalent among persons aged  $\geq 60$  years (39.4%) than among persons aged 40–59 years (12.6%) or 20–39 years (8.5%). By education level, CKD (all stages) was more prevalent among persons with less than a high school education (22.1%) than persons with at least a high school education (15.7%). CKD prevalence also was greater among persons with diabetes than among those without diabetes (40.2% versus 15.4%), among persons with cardiovascular disease than among those

without cardiovascular disease (28.2% versus 15.4%), and among persons with hypertension than among those without hypertension (24.6% versus 12.5%). In addition, CKD prevalence was greater among non-Hispanic blacks (19.9%) and Mexican Americans (18.7%) than among non-Hispanic whites (16.1%). This racial/ethnic disparity was most pronounced among participants with stage 1 CKD. In that group, Mexican Americans had a prevalence of 10.2% and non-Hispanic blacks had a prevalence of 9.4%, compared with 4.2% for non-Hispanic whites.

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**Editorial Note:** This report provides the most current nationally representative estimates of CKD in the U.S. population. The findings indicate that CKD affected an estimated 16.8% of adults aged  $\geq 20$  years during 1999–2004, an increase from the recalculated NHANES III (1988–1994) estimate of 14.5%. Persons with CKD have high rates of morbidity, mortality, and health-care utilization (6,7). The findings in this report suggest that CKD is a growing health problem in the United States.

CKD prevalence was greater among older persons and among persons with diabetes, cardiovascular disease, and hypertension than among persons without these conditions, supporting previous findings (2,6). Mexican Americans and non-Hispanic blacks had greater prevalence of CKD than non-Hispanic whites. The large disparity in prevalence among those with stage 1 CKD might be explained, in part, by racial/ethnic differences in microalbuminuria among non-Hispanic blacks and Mexican Americans (8).

Activities aimed at preventing CKD or its progression can decrease prevalence of the most severe form of CKD, stage 5 (i.e., end-stage renal disease), which is associated with increased morbidity and mortality and diminished health-related quality of life (1). Both the incidence and prevalence of end-stage renal disease have increased during the past 30 years and are expected to continue increasing through 2010 (1,9). Treatments such as control of high blood pressure in the early stages of CKD can prevent progression to end-stage renal disease (2).

The findings in this report are subject to at least four limitations. First, albuminuria was used to determine kidney damage for categorizing persons as having stage 1 and stage 2 CKD, but albuminuria is not the only marker for kidney damage.

<sup>§</sup> **Stage 1:** GFR  $\geq 90$  mL/min/1.73m<sup>2</sup> with kidney damage (i.e., presence of albuminuria); **Stage 2:** GFR 60–89 mL/min/1.73 m<sup>2</sup> with kidney damage; **Stage 3:** GFR 30–59 mL/min/1.73 m<sup>2</sup>; **Stage 4:** GFR 15–29 mL/min/1.73 m<sup>2</sup>; and **Stage 5:** GFR  $< 15$  mL/min/1.73 m<sup>2</sup>. **Notes:** GFR =  $186.0 \times (\text{serum creatinine})^{-1.154} \times \text{age}^{-0.203} \times (0.742 \text{ if female}) \times (1.21 \text{ if black})$ . An alternate method was developed recently that can provide more accurate GFR estimates and will be used in future estimates, when possible. Additional information is available at [http://www.nkdep.nih.gov/resources/laboratory\\_reporting.htm#fn4e](http://www.nkdep.nih.gov/resources/laboratory_reporting.htm#fn4e). Serum creatinine measures for 1999–2000 NHANES data, as recommended by NHANES, were standardized as follows:  $1.013 \times \text{NHANES creatinine} + 0.147$ . In addition, creatinine measures were standardized for NHANES III (1988–1994) data as follows:  $0.960 \times \text{NHANES III creatinine} - 0.184$ . Additional information is available at [http://www.cdc.gov/nchs/data/nhanes/frequency/lab18\\_doc.pdf](http://www.cdc.gov/nchs/data/nhanes/frequency/lab18_doc.pdf).

\*\* Systolic blood pressure  $\geq 140$  mm Hg, diastolic blood pressure  $\geq 90$  mm Hg, or reported current use of a prescription medication for hypertension.

<sup>††</sup> Body mass index = weight (kg) / height (m<sup>2</sup>). Normal = 18.5–24.9, overweight = 25.0–29.9, and obese =  $\geq 30.0$ .

**TABLE. Prevalence of chronic kidney disease among adults aged ≥20 years, by disease stage\* and selected characteristics — National Health and Nutrition Examination Survey, United States, 1999–2004**

Characteristic	No. in sample	All stages		Stage 1 <sup>†</sup>		Stage 2 <sup>†</sup>		Stage 3		Stages 4/5	
		%	(95% CI) <sup>§</sup>	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Total (not age standardized)</b>	<b>12,785<sup>¶</sup></b>	<b>16.8</b>	<b>(15.9–17.7)</b>	<b>5.7</b>	<b>(5.1–6.3)</b>	<b>5.4</b>	<b>(4.8–6.0)</b>	<b>5.4</b>	<b>(4.9–5.9)</b>	<b>0.4</b>	<b>(0.3–0.5)</b>
<b>Age group (yrs)</b>											
20–39	4,565	8.5	(7.3–9.8)**	5.9	(5.0–6.9)	2.2	(1.7–2.7)	0.3	(0.2–0.6)	0.1	(0.1–0.3)
40–59	3,848	12.6	(11.3–13.9)**	5.8	(4.8–7.0)	4.4	(3.6–5.5)	2.1	(1.6–2.8)	0.2	(0.1–0.4)
≥60 (referent)	4,372	39.4	(37.5–41.2)	5.0	(4.1–6.1)	12.8	(11.3–14.5)	20.3	(18.6–22.0)	1.3	(1.0–1.7)
<b>Sex<sup>††</sup></b>											
Male	6,080	17.6	(16.6–18.7)	6.3	(5.6–7.1)	6.4	(5.6–7.2)	4.5	(4.0–5.1)	0.4	(0.3–0.6)
Female	6,705	16.7	(15.7–17.8)	5.1	(4.4–5.8)	4.7	(4.0–5.6)	6.5	(5.9–7.1)	0.4	(0.3–0.6)
<b>Race/Ethnicity<sup>†† §§</sup></b>											
White, non-Hispanic (referent)	6,449	16.1	(15.2–17.1)	4.2	(3.7–4.9)	5.8	(5.0–6.6)	5.8	(5.3–6.4)	0.3	(0.2–0.5)
Black, non-Hispanic	2,369	19.9	(18.2–21.8)**	9.4	(8.0–10.9)	4.8	(3.9–5.7)	4.7	(4.0–5.6)	1.1	(0.7–1.6)
Mexican-American	2,934	18.7	(17.2–20.2) <sup>¶¶</sup>	10.2	(8.9–11.6)	5.0	(4.2–5.8)	2.9	(2.3–3.6)	0.7	(0.5–1.0)
<b>Education<sup>††</sup></b>											
Less than high school	4,127	22.1	(20.6–23.6)**	9.0	(7.8–10.4)	6.1	(5.2–7.0)	6.5	(5.8–7.3)	0.5	(0.4–0.8)
High school graduate/General Education Diploma or higher	8,637	15.7	(14.8–16.7)	4.8	(4.2–7.0)	4.9	(4.3–5.6)	5.7	(4.7–5.9)	0.4	(0.3–0.5)
<b>Diagnosed diabetes<sup>††</sup></b>											
Yes	1,228	40.2	(34.8–45.8)**	19.5	(15.3–24.5)	11.4	(8.4–15.2)	8.2	(6.9–9.8)	1.0	(0.7–1.7)
No	11,374	15.4	(14.4–16.4)	4.9	(4.3–5.5)	5.1	(4.4–5.8)	5.2	(4.7–5.8)	0.3	(0.2–0.4)
<b>Diagnosed cardiovascular disease<sup>††</sup></b>											
Yes	1,436	28.2	(23.2–33.9) <sup>¶¶</sup>	4.5	(3.1–6.5)	10.8	(7.0–16.4)	10.5	(8.9–12.3)	2.4	(1.2–5.0)
No	11,283	15.4	(14.6–16.3)	5.6	(5.0–6.3)	5.1	(4.5–5.7)	4.5	(4.0–5.1)	0.2	(0.1–0.3)
<b>Hypertension<sup>†† ***</sup></b>											
Yes	4,469	24.6	(22.5–26.8)**	9.1	(7.8–10.7)	7.1	(6.0–8.4)	7.3	(6.5–8.2)	1.1	(0.7–1.7)
No	7,932	12.5	(11.7–13.3)	4.5	(3.9–5.1)	4.1	(3.3–5.0)	3.8	(3.3–4.3)	0.2	(0.1–0.4)
<b>Body mass index<sup>†† †††</sup></b>											
Normal (referent)	3,762	15.8	(14.1–17.7)	5.2	(4.3–6.2)	5.0	(4.0–6.2)	5.2	(4.3–6.3)	0.5	(0.4–0.7)
Overweight	4,528	14.7	(13.4–16.0)	4.3	(3.6–5.1)	4.7	(4.0–5.6)	5.3	(4.7–6.0)	0.4	(0.2–0.6)
Obese	3,988	19.8	(18.2–21.5) <sup>¶¶</sup>	7.9	(5.9–8.4)	6.5	(5.5–7.7)	5.8	(5.1–6.6)	0.4	(0.2–0.6)

\* Increasing stage number corresponds to increased severity, in accordance with the National Kidney Foundation classification system. **Stage 1:** Glomerular filtration rate (GFR) ≥90 mL/min/1.73m<sup>2</sup> with kidney damage (i.e., presence of albuminuria); **Stage 2:** GFR 60–89 mL/min/1.73 m<sup>2</sup> with kidney damage; **Stage 3:** GFR 30–59 mL/min/1.73 m<sup>2</sup>; **Stage 4:** GFR 15–29 mL/min/1.73 m<sup>2</sup>; and **Stage 5:** GFR <15 mL/min/1.73 m<sup>2</sup>. **Notes:** GFR = 186.0 × (serum creatinine)<sup>-1.154</sup> × age<sup>-0.203</sup> × (0.742 if female) × (1.21 if black). An alternate method was developed recently that can provide more accurate GFR estimates and will be used in future estimates, when possible. Additional information is available at [http://www.nkdep.nih.gov/resources/laboratory\\_reporting.htm#fn4e](http://www.nkdep.nih.gov/resources/laboratory_reporting.htm#fn4e). Serum creatinine measures for 1999–2000 NHANES data, as recommended by NHANES, were standardized as follows: 1.013 × NHANES creatinine + 0.147. In addition, creatinine measures were standardized for NHANES III (1988–1994) data as follows: 0.960 × NHANES III creatinine – 0.184. Additional information is available at [http://www.cdc.gov/nchs/data/nhanes/frequency/lab18\\_doc.pdf](http://www.cdc.gov/nchs/data/nhanes/frequency/lab18_doc.pdf).

† Stages 1 and 2 refer to CKD indicators, rather than actual CKD, because persistent albuminuria assessed from two urine samples is required to confirm the presence of kidney damage, whereas one sample suggests that kidney damage is likely present.

§ Confidence interval.

¶ Subgroups might not sum to total because of missing data for certain characteristics.

\*\* p<0.0001.

†† Age standardized to the 2000 standard U.S. population, by using age groups 20–39, 40–59, and ≥60 years.

§§ Data for persons of other racial/ethnic groups not included here are included in estimates elsewhere in the table.

¶¶ p<0.001.

\*\*\* Systolic blood pressure ≥140 mm Hg, diastolic blood pressure ≥90 mm Hg or reporting current use of a prescription medication for hypertension.

††† Body mass index = weight (kg) / height (m<sup>2</sup>). Normal: 18.5–24.9, overweight: 25.0–29.9, and obese: ≥30.0.

Urine sediment and abnormal imaging tests also are used to determine kidney damage; however, these tests were not available in NHANES. As a result, kidney damage and reported prevalence of stage 1 and stage 2 CKD might be underestimated (5). Second, estimates for stages 1 and 2 reflect CKD

indicators, rather than actual disease, because two urine samples were not available in NHANES 1999–2004 to assess persistent albuminuria and confirm the presence of kidney damage. Previous analyses of NHANES III data demonstrated that using two urine tests to confirm kidney damage produced



a lesser prevalence of stage 1 and stage 2 CKD compared with using one urine test, resulting in more conservative estimates for CKD overall (11.0% versus 14.5%). Thus, CKD in this report might be overestimated (4). Third, the data are cross-sectional, not longitudinal, preventing assessment of whether risk factors caused or resulted from CKD. Finally, the number of persons with stages 3, 4, and 5 CKD is small, limiting the power of the analysis and precluding separate estimates for persons with stage 4 and stage 5 and comparison of estimates by demographic characteristic and risk factor.

New programs aimed at decreasing the number of CKD cases were established recently (1,10). The National Kidney Disease Education Program provides resources to the public, patients, and health-care professionals with the goal of reducing morbidity and mortality from kidney disease complications. World Kidney Day was instituted in 2006 to increase awareness of kidney disease and promote early detection. Continued surveillance of albuminuria and serum creatinine using NHANES can track the prevalence of CKD, monitor trends, and identify groups at high risk, enabling targeted programs. Finally, CDC is working with Johns Hopkins University and the University of Michigan to develop a comprehensive national surveillance system for CKD that will monitor early stages of the disease and its risk factors and the effects of CKD on the U.S. population.

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## ***Escherichia coli* O157:H7 Infection Associated with Drinking Raw Milk — Washington and Oregon, November–December 2005**

During the week of December 5, 2005, public health officials in Clark County, Washington, were notified of four county residents with laboratory-confirmed *Escherichia coli* O157:H7 infection. All four residents reported having consumed raw (i.e., unpasteurized) milk obtained from a farm in neighboring Cowlitz County, Washington. The farm participated in a cow-share program, in which persons purchase interests in, or shares of, dairy cows in return for a portion of the milk produced.\* The farm had five dairy cows and regularly provided raw milk to shareholders. Although the sale of raw milk and cow-share agreements are illegal in certain states, they are legal in Washington; however, Washington farms that provide raw milk to consumers must be licensed, meet state milk-production and processing standards, and pass health and sanitation inspections by the state department of agriculture (1). The Cowlitz County farm was not licensed. This report summarizes the investigation of *E. coli* O157:H7 cases associated with the farm and reinforces previous warnings about the health hazards of consuming raw milk.

The farm's shareholder list, obtained through a court order, was used to conduct a retrospective cohort study to identify risks for infection. During December 16–19, 2005, shareholders were interviewed by telephone using a standard questionnaire to collect information regarding their milk consumption since November 20, 2005. Forty-three of the 45 families who held shares in the dairy cows from the farm were interviewed; information regarding 157 persons was collected. A case was defined as either 1) laboratory-confirmed *E. coli* O157:H7 infection or 2) diarrhea with abdominal cramping or blood in a person with illness onset during November 20–December 13, 2005, who was a customer of the farm. Additional cases in the community were identified using faxed health alerts

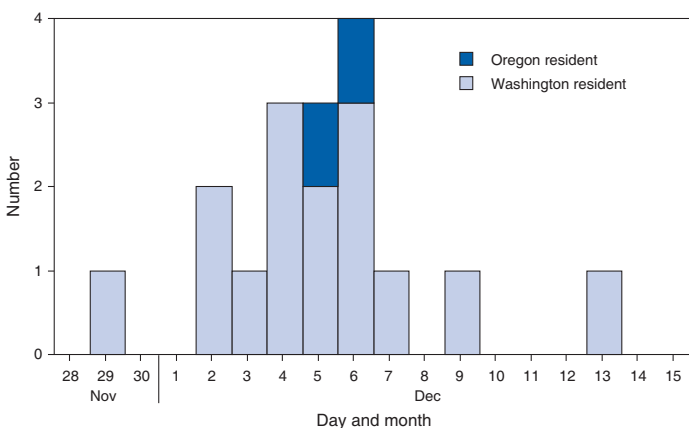
\* In a cow-share agreement, a person who does not own, house, or care for the milking cow signs a contract or an agreement with the owner of the cow, pays an initial contract fee, and pays a monthly fee for the boarding and care of the cow. Depending on state law, the person might subsequently have partial ownership in the cow. In exchange for the fees, the person has the right to receive on a weekly basis a certain amount of unpasteurized milk, milk products, or both produced from the cow. The person can either pick up the unpasteurized milk at the farm or pay someone else to pick it up and deliver it or can pay a fee to the owner of the cow to have the products delivered.

and media releases to notify health-care providers, infection-control practitioners, neighboring public health agencies, and the public of the cluster of illnesses.

Eighteen cases were identified among the 43 families who were interviewed, and eight (44%) of these were laboratory confirmed. Dates of illness onset ranged from November 29 to December 13, 2005 (Figure). Patients were residents of two southwest Washington counties and one northwest Oregon county. The median age was 9 years (range: 1–47 years); nine (50%) were female. Among the 18 patients, 17 (94%) reported diarrhea, 13 (72%) bloody diarrhea, and 13 (72%) abdominal cramps. Five patients (28%), aged 1–13 years, were hospitalized; four of these had hemolytic uremic syndrome (HUS). Seventeen patients were farm shareholders or children of shareholders; one patient, a child aged 10 years, was a friend of a shareholder.

Of 140 persons who reported consuming raw milk from the farm, 18 (13%) became ill; among the 157 persons for whom information was obtained, no illness was reported among those who did not consume raw milk. Among 102 of 140 exposed persons who provided information about their raw milk consumption during November 20–December 13, the relative risk for illness increased with the average number of cups of milk consumed daily. The dose-response trend for average daily consumption was statistically significant ( $p=0.008$  by expanded Mantel-Haenszel chi-square test), with attack rates of 3.6% for 0–0.9 cups of milk, 6.7% for 1–1.9 cups, 14.3% for 2–2.9 cups, and 37.5% for  $\geq 3$  cups. Visiting the farm and consumption of raw milk products from other sources were not associated with illness.

**FIGURE.** Number of persons reported with *Escherichia coli* O157:H7 infections who were customers of a Cowlitz County, Washington, farm, by date of illness onset and state of residence — Washington and Oregon, November–December 2005



\*  $n = 17$ . Although 18 cases were identified during the investigation, for one patient who was asymptomatic, date of illness onset could not be established.

Pulsed-field gel electrophoresis (PFGE) was used to analyze *E. coli* O157:H7 isolates from stool samples from eight patients; seven (88.0%) isolates had PFGE patterns that were indistinguishable (pattern A), and one isolate from an Oregon patient had a PFGE pattern that differed from pattern A by one band.

*E. coli* O157:H7 also was isolated from raw milk samples obtained from the farm and one shareholder. In addition, *E. coli* O157:H7 was isolated from seven environmental samples collected from the floor of the farm milking parlor. All *E. coli* O157:H7 isolates from milk and environmental samples had PFGE pattern A. No *E. coli* O157:H7 was isolated from stool samples of any of the farm's five cows.

During inspections of the farm, officials from the Washington State Department of Agriculture (WSDA) noted mud and manure accumulation in the entrance to the milking parlor and on the rubber mats covering the dirt floors of the parlor. The bucket used for milk collection had direct contact with these surfaces. Inspectors also noted inadequate hand-washing facilities and improper procedures for cleaning milking equipment and handling fresh milk.

On December 9, 2005, the farm contacted shareholders and advised them to discard any remaining raw milk. After a court order was obtained by the Cowlitz County Health Department and an embargo was placed by WSDA, the farm discontinued sales of raw milk on December 13, 2005. No additional reports of illness associated with the farm have been received.

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**Editorial Note:** *E. coli* O157:H7 causes an estimated 73,000 illnesses and 61 deaths annually in the United States (2). Approximately 8% of reported infections lead to HUS, particularly in children aged <5 years and older adults (3); 4% of patients with HUS die (4). Raw milk is an important vehicle of transmission of *E. coli* O157:H7 and other pathogens, including *Mycobacterium bovis*, *Listeria monocytogenes*, and *Campylobacter*, *Brucella*, and *Salmonella* species (5,6). During 1988–2005, a total of 33 outbreaks of *Campylobacter* species, *E. coli* O157:H7, and *Salmonella* species infections associated with raw milk consumption were reported to CDC (7).

Several findings from this investigation indicate that consumption of raw milk was the cause of the outbreak: 1) all ill persons drank raw milk; 2) the illness risk increased with the amount of milk consumed; 3) *E. coli* O157:H7 was isolated from raw milk samples and environmental samples collected

from the milking-parlor floor; and 4) PFGE patterns of isolates from patient, milk, and environmental samples were indistinguishable. Investigators found several factors that might have contributed to contamination of milk at the farm, although previous outbreaks have demonstrated that even raw milk collected using stringent hygiene methods might be contaminated with pathogens (9).

Although many consumers are aware that raw milk can contain pathogens, some believe that it has potential benefits (e.g., vitamins that are present naturally rather than added, enhanced fertility, and protection against tooth decay). However, the validity of any health or nutritional benefits from consuming raw milk has not been proven scientifically (6).

Raw milk is a well-documented cause of enteric infections and was first recognized as one approximately 100 years ago (6). Pathogens that infect humans, including *E. coli* O157:H7, are shed in the feces of cows and can contaminate milk during the milking process. Using standard hygiene practices during milking (e.g., washing hands, keeping equipment clean, and keeping the milking area separated from other areas) can reduce but not eliminate the risk for milk contamination. Pasteurization decreases the number of pathogenic organisms, prevents transmission of pathogens, and has been determined to improve the safety of raw milk more than other measures, including certification of raw milk (8). Because raw milk certification has failed to prevent many raw-milk-associated infections in the past, consumers should not assume that certified raw milk is free of pathogens (9). To prevent *E. coli* O157:H7 and other infections, consumers should not drink raw milk.

In Washington, cow-share programs and the regulated sale of raw milk are legal; however, the Cowlitz County farm was not licensed, and it did not follow applicable sanitation and public health safety regulations. As a result of this outbreak, WSDA revised regulations to help ensure that milk producers who sell pasteurized milk and those who sell raw milk through cow-share programs obtain the appropriate state licenses and comply with milk-processing sanitation and public health guidelines. As of February 2007, raw milk could be sold legally in 27 states, including Washington. During 1973–1992, a total of 40 (87%) of the 46 reported raw-milk-associated illness outbreaks occurred in states in which the intrastate sale of raw milk was legal (5). State milk regulations and methods for their enforcement should be reviewed and strengthened to minimize the hazards of raw milk.

Early in the 20th century, widespread adoption of the pasteurization process led to substantial reductions in milk-associated disease, a milestone in the history of food safety (10). In the 21st century, more effective consumer education regarding the hazards of drinking raw milk is needed to further reduce milk-associated diseases.

### Acknowledgments

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## Rates of Hospitalization Related to Traumatic Brain Injury — Nine States, 2003

Traumatic brain injury (TBI) is a major cause of morbidity and mortality in the United States. Each year, on average, TBIs are associated with an estimated 1.1 million emergency department visits, 235,000 hospitalizations, and 50,000 deaths in the United States (1). For 2002, the overall rate of TBI-related hospitalization reported by the 12 states in the CDC TBI surveillance system was 79.0 per 100,000 population (2); across these states, however, the rates varied substantially (from 50.6 in Nebraska to 96.9 in Arizona). To update results from the CDC TBI surveillance system, CDC analyzed data from 2003, the most recent year for which data were available. This report summarizes the results of that analysis, which indicated that an estimated 28,819 persons (87.9 per 100,000 population) were hospitalized with a TBI-related diagnosis in the nine states that reported data for 2003. For all age groups combined, rates were higher among males. Age-specific rates



were highest among persons aged  $\geq 75$  years. Unintentional motor-vehicle–traffic incidents (MV-T) and unintentional falls were the two leading causes associated with TBI-related hospitalization. The findings underscore the need for states to continue monitoring the occurrence, external causes, and risk factors for TBI and to design and implement more effective injury-prevention programs.

For 2003, nine states\* that were funded by CDC to conduct TBI-related surveillance submitted data using the standard CDC TBI surveillance case definition and methods (3). Probable cases of TBI-related hospitalizations were identified from administrative hospital discharge records coded with *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) codes and from vital statistics mortality data coded with *International Classification of Diseases, Tenth Revision* (ICD-10) codes in accordance with the CDC TBI surveillance case definition.† The administrative data also included external cause-of-injury codes (E-codes), which were used to classify cases into major intent and cause-of-injury categories (4,5).

For 2003, the nine states reported a total of 30,464 probable cases of TBI-related hospitalization. Five of the nine states were awarded additional funding to conduct medical-record reviews for a random sample of the probable cases. In these states, records for 6,456 cases were successfully reviewed, allowing estimation of the predictive value positive (PVP) of the TBI surveillance case definition (estimated at 0.93 overall). Probable TBI case counts were adjusted downward on the basis of estimated PVP (6). U.S. Census Bureau population estimates by state, age, and sex were combined with the surveillance data to calculate age-adjusted annual incidence rates per 100,000 population. All case counts and rates presented in this report are PVP adjusted.

In 2003, an estimated 28,819 persons were hospitalized with a TBI-related diagnosis in the nine reporting states (Table 1). The age-adjusted rate of TBI-related hospitalization was 87.9 per 100,000 population; this rate ranged from 51.8 in Nebraska to 105.0 in Arizona. Overall and in each reporting state, males had a TBI-related hospitalization rate approximately two times as high as females. Overall and in each

**TABLE 1. Estimated incidence and age-adjusted rate\* of hospitalization related to traumatic brain injury, by state and sex — nine states, 2003**

State	Male		Female		Total†	
	No.	Rate	No.	Rate	No.	Rate
Alaska	385	120.4	196	65.8	581	93.9
Arizona	3,774	136.6	2,083	72.5	5,857	105.0
Colorado	2,559	119.1	1,425	64.7	3,983	91.8
Maryland	3,195	125.2	1,769	60.7	4,964	91.8
Minnesota	2,886	117.3	1,675	62.2	4,561	89.5
Nebraska	576	68.0	357	35.9	933	51.8
Oklahoma	1,933	114.0	1,284	66.7	3,217	90.5
South Carolina	1,848	93.6	1,028	46.6	2,876	69.6
Utah	1,162	107.3	685	59.9	1,847	83.1
<b>Total†</b>	<b>18,318</b>	<b>115.1</b>	<b>10,501</b>	<b>61.1</b>	<b>28,819</b>	<b>87.9</b>

\* Per 100,000 population; age-adjusted rates calculated using the U.S. 2000 standard population. Rates are based on case counts adjusted using estimated predictive value positive.

† Numbers might not add to totals because of rounding.

reporting state, persons aged  $\geq 75$  years had the highest rates of TBI-related hospitalization; these rates ranged from 184.6 in Alaska to 359.7 in Oklahoma (Table 2). Children aged 5–14 years had the lowest rates of TBI-related hospitalization overall and in each state; these rates ranged from 24.4 in Maryland to 69.7 in Alaska.

Overall, unintentional MV-T incidents and unintentional falls were the leading causes of TBI-related hospitalization (32.1 and 29.8 per 100,000 population, respectively) (Table 3). The rate of MV-T-related TBI hospitalization ranged from 17.6 in Nebraska to 37.8 in Arizona; the rate of fall-related TBI hospitalization ranged from 19.8 in South Carolina to 36.7 in Colorado. Assaults were the third leading cause of TBI-related hospitalization (7.1 per 100,000 population). The rate of assault-related TBI hospitalization ranged from 2.9 in Utah to 9.8 in Alaska.

Most patients hospitalized with a TBI-related diagnosis were discharged home with no or unskilled assistance (64.9%) or with home health care (3.7%). Additionally, 9.0% were discharged to a residential facility (e.g., skilled nursing facility), and 7.7% were transferred for inpatient rehabilitation. Approximately 6.8% of these patients died while hospitalized.

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**Editorial Note:** This report confirms that TBI-related hospitalizations were a major public health problem in the nine reporting states during 2003 but that rates varied substantially by age and sex. Most TBI-related hospitalizations were associated with unintentional MV-T incidents and unintentional falls.

The overall TBI-related hospitalization rate described in this report is higher than the estimate reported by CDC for 2002 (87.9 versus 79.0 per 100,000 population, respectively) (2);

\* Alaska, Arizona, Colorado, Maryland, Minnesota, Nebraska, Oklahoma, South Carolina, and Utah.

† ICD-9-CM codes, ICD-10 codes, or both were used to identify cases. Cases identified with multiple qualifying codes were counted as single cases. TBI-related hospitalizations were identified using the following ICD-9-CM codes: 800.0–801.9, 803.0–804.9, 850.0–854.1, 950.1–950.3, 959.01, and 995.55. TBI-related hospitalizations that resulted in death and listed only a mortality code were identified using the following ICD-10 codes: S01.0–S01.9, S02.0, S02.1, S02.3, S02.7–S02.9, S04.0, S06.0–S06.9, S07.0, S07.1, S07.8, S07.9, S09.7–S09.9, T01.0, T02.0, T04.0, T06.0, T90.1, T90.2, T90.4, T90.5, T90.8, and T90.9. Although included in the case definition, T01.0, T02.0, T04.0, and T06.0 are considered invalid codes in the United States.



**TABLE 2. Estimated rate\* of hospitalization related to traumatic brain injury, by state and age group — nine states, 2003**

State	Age group (yrs)						
	0–4	5–14	15–24	25–34	35–64	65–74	≥75
Alaska	75.5	69.7	138.0	82.4	74.2	129.3	184.6
Arizona	92.7	60.5	150.5	96.6	86.7	92.5	271.3
Colorado	44.3	34.1	119.5	76.2	75.9	121.6	325.6
Maryland	42.7	24.4	133.5	87.3	72.4	117.6	320.2
Minnesota	61.0	52.7	121.5	80.2	67.4	106.5	281.4
Nebraska	37.5	27.0	61.7	39.8	33.5	85.7	211.5
Oklahoma	72.5	52.4	110.6	59.4	64.9	118.0	359.7
South Carolina	46.2	35.4	93.4	61.2	58.0	75.5	210.6
Utah	59.9	47.3	97.1	53.0	63.6	125.6	308.9
<b>Total</b>	<b>60.1</b>	<b>43.4</b>	<b>118.0</b>	<b>75.0</b>	<b>69.2</b>	<b>104.6</b>	<b>287.3</b>

\* Per 100,000 population. Rates are based on case counts adjusted using estimated predictive value positive.

**TABLE 3. Estimated age-adjusted rate\* of hospitalization related to traumatic brain injury, by state and intent/cause of injury — nine states, 2003**

State	Unintentional			Intentional	
	Falls	Motor-vehicle traffic†	Struck by/against object	Assault	Other/Unknown
Alaska	32.1	29.9	4.2	9.8	17.8
Arizona	24.1	37.8	2.0	9.7	31.4
Colorado	36.7	33.2	3.3	6.5	12.1
Maryland	33.8	33.9	3.2	9.1	11.8
Minnesota	34.2	31.4	3.7	6.8	13.5
Nebraska	21.7	17.6	1.8	3.8	6.9
Oklahoma	32.4	27.9	3.6	7.7	18.8
South Carolina	19.8	34.0	2.3	4.6	8.9
Utah	32.5	29.4	2.7	2.9	15.5
<b>Total</b>	<b>29.8</b>	<b>32.1</b>	<b>2.9</b>	<b>7.1</b>	<b>16.0</b>

\* Per 100,000 population; age-adjusted rates calculated using the U.S. 2000 standard population. Rates are based on case counts adjusted using estimated predictive value positive.

† Includes drivers, passengers, pedestrians, motorcyclists, and bicyclists.

however, rates for the individual states providing data for both reporting years did not increase as substantially. For 2002, approximately 54% of all TBI-related hospitalization cases reported to the CDC TBI surveillance system were from New York and California, where rates were the third and fourth lowest among the 12 states reporting for that year (74.4 and 75.8, respectively) (2); these states did not report data for 2003. Although the multistate TBI-related hospitalization rates described in this report are consistent with those reported for 2002, formal comparisons have not been made because of the difference in the numbers of reporting states for the 2 years.

The variability in the state-specific TBI-related hospitalization rates for 2003 and the changes in some of these rates from 2002 might be related to differences and changes in admission practices, administrative coding practices, or underlying differences in TBI risk factors in each state (7). The state-specific differences in rates by sex, age group, and external cause suggest a continuing need for the collection of

surveillance data at the state level to support interventions focused on populations at high risk.

The findings in this report are subject to at least two limitations. First, the findings are based on administrative billing data that were not designed for public health surveillance purposes (8). Second, estimates of TBI-related hospitalizations by race/ethnicity could not be reliably produced because of the substantial percentage of cases for which this information was not available. In addition, the data in this report underestimate the incidence of TBI because the analysis excludes 1) preadmission deaths that might have been TBI-related, 2) persons treated and discharged from emergency departments, 3) persons who sought care in outpatient clinics and physician offices, and 4) persons who did not seek medical care after an injury.

Information resulting from TBI surveillance is important for increasing public awareness of TBI and guiding prevention measures. To reduce the burden of TBI in the United States, prevention measures should focus on the leading causes (i.e., MV-T incidents, falls, and assaults) and the implementation of evidence-based prevention interventions (9,10).

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## Bloodstream Infections Among Patients Treated with Intravenous Epoprostenol or Intravenous Treprostinil for Pulmonary Arterial Hypertension — Seven Sites, United States, 2003–2006

Pulmonary arterial hypertension (PAH) is a life-threatening disorder characterized by elevated pulmonary artery pressure and pulmonary vascular resistance. Continuous infusion of a prostanoid, which acts as a vasodilator and anti-proliferative agent, is indicated in the treatment of patients with severe PAH. Two prostanoids are approved for intravenous (IV) use in the United States: epoprostenol (epoprostenol sodium [brand name Flolan<sup>®</sup>], Gilead, Foster City, California) and treprostinil (treprostinil sodium [brand name Remodulin<sup>®</sup>], United Therapeutics, Silver Spring, Maryland) (1). These drugs are administered to PAH patients at hundreds of treatment centers in the United States. In September 2006, CDC received a report from a PAH specialist of a suspected increase in the number of gram-negative bloodstream infections (BSIs) among PAH patients treated with IV treprostinil. CDC conducted a retrospective investigation with the assistance of several state health departments and the cooperation of seven PAH treatment centers to determine the relative rates of BSI in a sample of patients treated with IV treprostinil and IV epoprostenol during 2003–2006. This report describes the results of that investigation, which indicated that, based on combined data from seven separate PAH treatment centers, pooled mean rates of BSI (primarily gram-negative BSI) were significantly higher for patients on treprostinil than for those on epoprostenol. The results do not suggest intrinsic contamination of IV treprostinil as a cause of the infections; the difference in rates might have been caused by differences in preparation and storage of the two agents, differences in catheter care practices, or differences in the anti-inflammatory activity of the agents. Health-care providers who care for PAH patients should be aware of these findings. Further investigation is needed to determine the causes of the different infection rates at centers where this was observed and to determine whether such a difference exists in other PAH treatment centers.

A BSI was defined as any positive blood culture result for a patient receiving IV epoprostenol or IV treprostinil as reported from a clinical laboratory or by a health-care provider in the medical record during the period for which data were collected. BSI rate information among patients on either IV prostanoid was requested from all PAH treatment centers that were major prescribers of IV treprostinil during 2006, as reported to investigators by United Therapeutics. BSI rates were calculated on the basis of the number of BSIs per 1,000 medicine days (i.e., days on which an IV prostanoid was administered). Because of varying arrangements between PAH treatment centers and investigators, the period and method of data collection varied by center. Data for calculating infection rates were available from seven different centers. Data for both agents were available from five centers; three reviewed their records to determine the numbers of infections and medicine days (one center retrospectively determined its rates for 2003–2006, one center for 2004–2006, and one center for 2006 only), and two invited state health departments and CDC to perform site visits to collect this information (data collected for 2004–2006). Data on IV treprostinil only was available from two centers, which provided CDC the number of BSIs among patients on IV treprostinil from January 1 to October 1, 2006; rates for these two centers were then calculated using medicine-day data specific to each center provided by United Therapeutics. Rates of BSI for patients receiving IV epoprostenol at these two centers could not be calculated because the total number of medicine days was not available.

A total of 51,183 medicine days were reported from the seven centers for IV treprostinil and 201,158 from five centers for IV epoprostenol. A total of 144 BSIs were identified (57 among patients on IV treprostinil and 87 among patients on IV epoprostenol). Overall, 26 different organisms (12 gram positive, 12 gram negative, and two acid fast bacilli) were identified in patients with BSIs. Fourteen different organisms were found in BSIs among patients on IV epoprostenol (nine gram positive, four gram negative, and one acid fast bacillus), and 18 different organisms were found in BSIs among patients on IV treprostinil (seven gram positive, 10 gram negative, and one acid fast bacillus). The three most common organisms isolated in BSIs among patients on IV epoprostenol were coagulase-negative *Staphylococcus* (28), *Micrococcus* sp. (18), and *Staphylococcus aureus* (12). The three most common organisms isolated in BSIs among patients on IV treprostinil were *Pseudomonas* sp. (11), *Enterobacter* sp. (nine), and coagulase-negative *Staphylococcus* (eight). The overall BSI pooled mean rate (per 1,000 medicine days) was higher for patients receiving IV treprostinil compared with those receiving IV epoprostenol (1.11 versus 0.43; pooled incidence rate ratio [IRR] = 2.57; 95% confidence interval [CI] = 1.81–

3.64). Individual center BSI rates for treprostinil ranged from 0.28 to 2.10, and for epoprostenol from 0.23 to 1.02; IRR at individual centers ranged from 0.59 to 3.90. The pooled mean rate for gram-negative BSIs was higher among patients on IV treprostinil than on IV epoprostenol (0.76 versus 0.06; pooled IRR = 12.77; CI = 6.55–26.80). Individual center gram-negative BSI rates for treprostinil ranged from 0.28 to 1.11, and for epoprostenol from 0.03 to 0.25; IRR ranged from 1.19 to 29.90. Among the five centers for which rates for both drugs were available, overall BSI rates for treprostinil were higher than epoprostenol at four centers, and gram-negative BSI rates for treprostinil were higher at all five. Mantel-Haenszel-adjusted IRRs were calculated from the five centers that supplied rate information for both medications: 2.62 (CI = 1.84–3.72) for overall BSI and 13.53 (CI 6.72–27.22) for gram-negative BSI. Overall and gram-negative BSI rates for both patients receiving IV treprostinil and IV epoprostenol were higher than historic BSI rates among patients receiving IV epoprostenol (historic BSI rates: 0.15 per 1,000 medicine days; historic gram-negative BSI rates: 0.01 per 1,000 medicine days), as reported in a previously published, two-center study (2).

Pooled mean rates of overall and gram-negative BSIs for treprostinil remained higher than those for epoprostenol after stratification for several factors, including 1) method of data collection (data available from seven centers), 2) time receiving IV prostanoids (<2 years versus  $\geq$ 2 years) (two centers), 3) age (<18 years versus  $\geq$ 18 years) (two centers), 4) home health-care company providing the medications and coordinating their administration (two centers), and 5) co-administration of immunosuppressive medications (two centers). BSI-related mortality was evaluated at three centers (the two centers that CDC investigators visited and for which this variable could be evaluated, and one center for which these data were available). Two deaths from two different centers were identified as possibly related to a BSI, both in patients who received IV treprostinil. One death was in a patient with a gram-negative BSI, and one was in a patient with a gram-positive BSI.

Ten partially used vials of IV treprostinil from BSI patients in five states were cultured for the presence of bacteria at the New York State Department of Health's Wadsworth Center laboratory, the New York City Department of Health laboratory, or CDC. No organisms were recovered from any of these vials.

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**Editorial Note:** Epoprostenol and treprostinil are prostanoids used in the treatment of severe PAH via continuous infusion. Epoprostenol, also called prostacyclin, was approved by the Food and Drug Administration (FDA) in 1995 and is the most frequently prescribed prostanoid. Patients must reconstitute the medication at home and keep it continually cool once mixed. It has a half-life of approximately 3–6 minutes, and sudden interruptions in the infusion can be life-threatening (1,3). Treprostinil was approved by FDA in 2004 for continuous IV infusion. This agent has several advantages over epoprostenol, including a longer half-life (approximately 4 hours) and the ability to remain stable without refrigeration (1). Both medications can be administered via a central venous catheter, putting patients at risk for catheter-related BSI. The medications are administered to patients primarily at home, and patients and their caregivers are primarily responsible for preparing and infusing medications and for changing dressings and IV tubing.

The investigation described in this report identified higher overall and gram-negative BSI rates among PAH patients receiving IV treprostinil compared with IV epoprostenol among patients treated at seven centers. Although the cause of this difference is unclear, the variety of organisms involved and the absence of bacterial growth in vials of used IV treprostinil obtained from patients with BSIs argue against intrinsic contamination of IV treprostinil or its diluents as a cause of the apparent BSI rate increase. At least three hypotheses exist that might explain the difference.

First, differences in practices involved in the preparation and storage of the two agents might create different levels of risk for BSI. IV epoprostenol is supplied as a powder that is mixed by the patient with single-use vials of a diluent, accessed by a single-use needle and syringe. IV treprostinil is supplied in a multiple-dose vial that the patient may use for up to 30 days, accessed either by a single-use needle and syringe or via a vial adaptor that may remain in place for as long as the vial is in use. Multiple-dose vials of medications



have been implicated repeatedly in infection outbreaks in health-care settings, particularly when health-care providers used suboptimal infection-control practices or did not follow manufacturer-recommended storage conditions (4,5).

Second, differences in infection-control practices involved in central venous catheter and infusion-set care might create different levels of risks for BSIs. During the investigation, concerns were raised by several PAH specialists about infection-control practices associated with administration of these medications, including differences in line tubing and dressing changes, techniques for accessing vials of IV treprostinil, use of in-line filters, and the use of vial adaptors, which may be left in place for extended periods of time. In addition, the longer half-life and simpler administration requirements of treprostinil might lead to greater complacency regarding catheter care and use. For example, patients might disconnect the infusion for certain periods, thereby increasing the risk for BSI because breaks in the infusion system can allow for introduction of bacteria.

Third, the difference might be attributed to differences in the anti-inflammatory activity of the agents. However, studies of this subject in prostanoid analogues are limited because they all have been conducted *in vitro*, have not evaluated epoprostenol, and have used concentrations of prostacyclin analogues that are generally higher than those achieved *in vivo* for treatment of PAH (6–8).

The findings in this report are subject to at least four limitations. First, to maximize data collection for both medications, data were collected from several clinical centers that might not have been able to provide data for the entire period requested. Thus, the analyses were limited because 1) data were collected during different periods and were not available for both medications at all seven centers and 2) detailed information on potential risk factors for BSI were not available from most centers. Second, the sample of centers was not random, and the findings are subject to ascertainment bias because centers that noticed differences in rates might have been more likely to submit data; hence, the findings might not be representative of all PAH centers. Third, to be consistent across all data sources, a microbiologic definition of BSI was used rather than a clinical definition. Therefore, infections diagnosed on clinical grounds alone (i.e., without cultures) were not included, whereas positive blood cultures of unknown clinical significance (e.g., those not associated with clinical symptoms) might have been included. Finally, differences in BSI detection rates might have resulted from clinicians being more likely to obtain blood cultures from patients treated with one agent versus the other.

In the sample described in this report, the rate of BSI and gram-negative BSI in patients on IV treprostinil were higher than the rates in patients on IV epoprostenol. The rates reported in this report equate to one BSI every 2.5 years for a patient receiving IV treprostinil and every 6.4 years for a patient receiving IV epoprostenol. Further investigation is needed to identify the causes of the differences identified and to determine if these results are found at other PAH centers. Until further information is available, clinicians who administer these drugs should be aware of the potential differences in BSI risk, particularly regarding infections caused by gram-negative organisms, which can be difficult to treat and can lead to substantial morbidity and mortality. Because IV treprostinil offers certain advantages over IV epoprostenol, clinicians should advise patients about the potential advantages and disadvantages of both drugs and assist patients in choosing the medication that best suits their clinical situation. Clinicians should also be aware of the risk for gram-negative pathogens in patients receiving IV prostanoid infusions when choosing empiric antibiotic treatment for patients with possible catheter-associated infections. Health-care providers also should routinely review with patients the infection-control practices for the management of central venous catheters and administration of these medications.

#### Acknowledgment

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## Update: *Ralstonia* Species Contamination Associated with VapoTherm® 2000i Respiratory Gas Humidifier Systems — United States, 2005–2006

This report updates previously published information regarding contamination of VapoTherm® 2000i respiratory gas humidifiers (VapoTherm, Inc., Stevensville, Maryland) with *Ralstonia* species (1–3). The manufacturer took corrective actions (Table) and reintroduced the device in January 2007, after meeting Food and Drug Administration (FDA) 510(k) submission requirements.\*

CDC and FDA recommend that clinicians using the VapoTherm device ensure that they are following the most recent recommendations and have the most recent instructions for the device and its components; the 2000i operating instruction manual can be obtained by contacting VapoTherm, Inc., by telephone: 410-604-3977 or 866-827-6843, fax: 410-604-3978, or e-mail: [info@vtherm.com](mailto:info@vtherm.com). Additional information regarding use of the reintroduced device is available from FDA at <http://www.fda.gov/cdrh/safety/020107-vapoTherm.html>.

FDA encourages reporting of adverse events related to the use of medical devices; such reports can be submitted to MedWatch, FDA's voluntary reporting program, by telephone: 1-800-FDA-1088, by fax: 1-800-FDA-0178, by mail: MedWatch, Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20852-9787, or online: <http://www.fda.gov/medwatch/report.htm>. Clinicians who would like to conduct surveillance for health-care-associated infections in patients using the VapoTherm device can use strategies similar to those used for surveillance of ventilator-associated infections.

**Reported by:** A Srinivasan, MD, National Center for Preparedness, Detection, and Control of Infectious Diseases (proposed); M Jhung, MD, EIS Officer, CDC.

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3. CDC. Update: public health notification regarding *Ralstonia* associated with VapoTherm® respiratory gas administration devices—United States, 2005. MMWR 2005;54:1286–7.

\*Additional information is available at <http://www.fda.gov/cdrh/devadvice/314.html>.

**TABLE.** Potential sources of *Ralstonia* species contamination of VapoTherm® 2000i respiratory gas humidifier systems and corrective actions taken by the manufacturer — United States, 2005–2006

Potential source of contamination	Corrective actions
Contamination of machine interior during initial calibration with unfiltered water	All devices in distribution were recalled to the manufacturer's facility and disinfected with 1,000 parts per million (ppm) chlorine dioxide.
Contamination of vapor-transfer cartridge, a component of the device, during manufacture	Manufacture of new devices now requires use of filtered water, followed by 1,000 ppm chlorine dioxide disinfection and a separate drying step.  Manufacture of all new vapor-transfer cartridges now includes ethylene oxide sterilization.
Contamination of either the VapoTherm device, vapor-transfer cartridge, or both during patient use	A new system was developed for retaining sterile water, and the manufacturer now recommends that only sterile water be used for humidification.*  The vapor-transfer cartridge, previously a multiuse item, is now recommended for use by a single patient and must be discarded after 30 days of use.
Failure to remove bacterial organisms during routine decontamination	The company continues to recommend disinfection of the VapoTherm unit between patients or after every 30 days of use and now offers a peracetic acid formulation in addition to the quaternary ammonium disinfectant that has been packaged with the device.

\* Previously, the device had a refillable reservoir bag, which created an open-water circuit, and tap water for humidification was considered adequate.

### Notice to Readers

#### Brain Injury Awareness Month — March 2007

March is Brain Injury Awareness Month, which is dedicated to helping the public learn more about brain injury and to improving the lives of persons living with brain injury. "Brain Injury: As Diverse As We Are" is the theme for this year's Brain Injury Awareness Month campaign, which will highlight the diversity of the causes of brain injuries and the persons who sustain them.

Traumatic brain injuries (TBIs) contribute to a substantial number of deaths and permanent disabilities each year. CDC estimates that approximately 1.4 million persons sustain a TBI

(1) each year in the United States. In addition, approximately 5.3 million persons in the United States (nearly 2% of the U.S. population) need long-term assistance with performing activities of daily living because of TBIs (2). Lifetime costs of TBI totaled \$60 billion in 2000; this includes direct medical and indirect costs such as lost productivity (3).

In recognition of Brain Injury Awareness Month, the Brain Injury Association of America (BIAA), with support from CDC, is offering educational kits about living with brain injury. The materials include 1) five booklets that provide information for persons with brain injuries and their families and caregivers, 2) fact sheets that describe the experiences of four persons who sustained brain injuries, 3) a poster that depicts the diversity of the causes of brain injuries and the persons affected by them, and 4) CDC's Facts about Traumatic Brain Injury fact sheet. These materials and additional information about Brain Injury Awareness Month are available from BIAA online at <http://www.biausa.org/media.htm#march> or by telephone at 1-800-444-6443.

CDC also assisted the Defense and Veterans Brain Injury Center in the development of a fact sheet and video documentary, "Understanding Traumatic Brain Injury," which features the recovery experiences of several military service personnel and their families. The video aims to raise awareness about TBI among the general public, active duty service members, and veterans. Additional information about the fact sheet and video is available online from the Defense and Veterans Brain Injury Center at <http://www.dvbic.org/cms.php?p=education>. Additional information about CDC's TBI-related activities, educational materials, and research is available at <http://www.cdc.gov/ncipc/tbi/tbi.htm>.

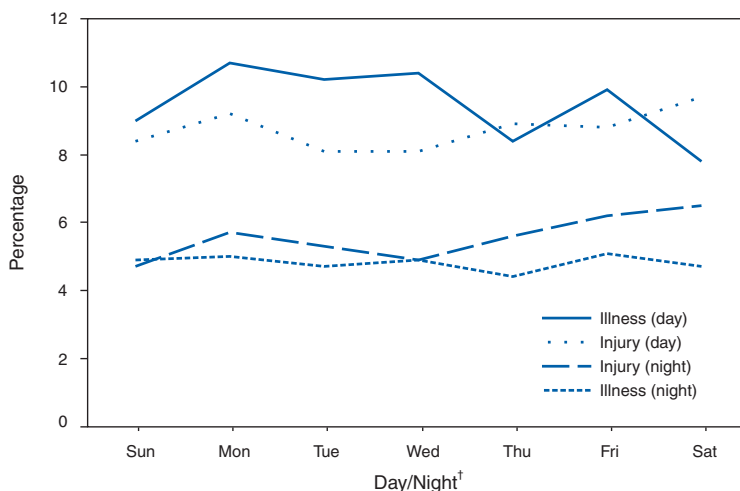
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# QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

## Percentage of Weekly Visits to Emergency Departments for Illness and Injury by Patients Arriving via Ambulance,\* by Day/Night Period of Arrival — United States, 2003–2004



\* Air, ground, private, or public ambulances, including fire and rescue vehicles.

† Day is 3:00 a.m. to 5:59 p.m., and night is 6:00 p.m. to 2:59 a.m.

Percentages indicate the proportion of weekly visits for illness or injury distributed over 14 periods (day and night). Overall, persons who arrive by ambulance at an emergency department (ED) are more likely to do so because of illness (57%) than injury (43%). However, on Saturdays, ambulances are more likely to bring persons with injuries than illnesses, both during the day and at night. Ambulance-transported patients account for approximately 15% of all ED visits and 16 million patients annually.

**SOURCE:** National Hospital Ambulatory Medical Care Survey, 2003–04. Available at <http://www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm>.

**TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending February 24, 2007 (8th 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	—	—	0	1	—	—	—	2	
Botulism:									
foodborne	—	—	0	18	19	16	20	28	
infant	—	6	1	92	85	87	76	69	
other (wound & unspecified)	—	1	1	46	31	30	33	21	
Brucellosis	—	8	2	116	120	114	104	125	
Chancroid	—	1	1	34	17	30	54	67	
Cholera	—	—	0	6	8	5	2	2	
Cyclosporiasis§	—	8	4	129	543	171	75	156	
Diphtheria	—	—	—	—	—	—	1	1	
Domestic arboviral diseases§¶:									
California serogroup	—	—	0	63	80	112	108	164	
eastern equine	—	—	—	7	21	6	14	10	
Powassan	—	—	—	1	1	1	—	1	
St. Louis	—	—	—	9	13	12	41	28	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis§:									
human granulocytic	1	9	1	540	786	537	362	511	FL (1)
human monocytic	—	15	1	480	506	338	321	216	
human (other & unspecified)	2	6	0	201	112	59	44	23	MD (2)
<i>Haemophilus influenzae</i> **,									
invasive disease (age <5 yrs):									
serotype b	—	1	0	9	9	19	32	34	
nonserotype b	—	5	3	97	135	135	117	144	
unknown serotype	5	48	5	240	217	177	227	153	OH (1), GA (2), AZ (1), UT (1)
Hansen disease§	—	7	1	75	87	105	95	96	
Hantavirus pulmonary syndrome§	—	2	0	36	26	24	26	19	
Hemolytic uremic syndrome, postdiarrheal§	2	11	2	256	221	200	178	216	WA (1), CA (1)
Hepatitis C viral, acute	3	76	20	825	652	713	1,102	1,835	NY (1), WA (2)
HIV infection, pediatric (age <13 yrs)††	—	—	4	52	380	436	504	420	
Influenza-associated pediatric mortality§,§§	5	20	1	41	45	—	N	N	KS (1), TX (2), NE (1), OH (1)
Listeriosis	4	63	9	790	896	753	696	665	IN (1), NC (2), TN (1)
Measles¶¶	—	1	1	52	66	37	56	44	
Meningococcal disease, invasive***:									
A, C, Y, & W-135	2	22	7	232	297	—	—	—	MD (1), CO (1)
serogroup B	—	10	4	142	156	—	—	—	
other serogroup	—	3	1	24	27	—	—	—	
unknown serogroup	6	94	21	716	765	—	—	—	PA (2), OH (1), NE (1), FL (1), UT (1)
Mumps	8	65	10	6,487	314	258	231	270	MN (2), IA (1), MO (1), KS (1), AZ (1), CA (2)
Plague	—	—	0	15	8	3	1	2	
Poliomyelitis, paralytic	—	—	—	—	1	—	—	—	
Poliovirus infection, nonparalytic§	—	—	—	N	N	N	N	N	
Psittacosis§	—	2	0	20	16	12	12	18	
Q fever§	—	13	1	168	136	70	71	61	
Rabies, human	—	—	—	3	2	7	2	3	
Rubella†††	1	3	0	8	11	10	7	18	FL (1)
Rubella, congenital syndrome	—	—	0	1	1	—	1	1	
SARS-CoV§,§§§	—	—	0	—	—	—	8	N	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	6	4	99	129	132	161	118	
Syphilis, congenital (age <1 yr)	7	19	8	315	329	353	413	412	NY (1), MI (6)
Tetanus	1	1	0	32	27	34	20	25	FL (1)
Toxic-shock syndrome (staphylococcal)§	1	7	2	108	90	95	133	109	MN (1)
Trichinellosis	—	1	—	14	16	5	6	14	
Tularemia	—	—	0	84	154	134	129	90	
Typhoid fever	3	22	6	273	324	322	356	321	MO (1), NC (1), FL (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	—	—	3	2	—	N	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	—	—	3	1	N	N	
Vibriosis (non-cholera <i>Vibrio</i> species infections)§	—	11	—	N	N	N	N	N	
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 2004 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 (proposed) (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 (proposed). 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 (proposed). A total of 21 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.

††† The one rubella case reported for the current week was indigenous.

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



**TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending February 24, 2007, and February 25, 2006 (8th Week)\***

Reporting area	Chlamydia†					Coccidioidomycosis					Cryptosporidiosis				
	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>	9,125	19,921	22,110	119,065	143,627	116	151	393	1,176	1,314	25	67	304	309	394
<b>New England</b>	712	608	1,244	4,576	3,875	—	0	0	—	—	—	3	22	14	55
Connecticut	299	136	713	834	537	N	0	0	N	N	—	0	3	3	36
Maine§	39	45	72	344	290	—	0	0	—	—	—	1	6	5	4
Massachusetts	275	298	604	2,465	2,067	—	0	0	—	—	—	0	14	—	11
New Hampshire	11	40	69	292	262	—	0	0	—	—	—	1	5	4	2
Rhode Island§	67	63	108	473	514	—	0	0	—	—	—	0	5	—	—
Vermont§	21	21	45	168	205	N	0	0	N	N	—	0	5	2	2
<b>Mid. Atlantic</b>	1,784	2,397	3,865	15,894	16,657	—	0	0	—	—	3	10	32	37	65
New Jersey	113	378	555	1,706	2,804	N	0	0	N	N	—	0	3	—	1
New York (Upstate)	375	502	2,563	2,664	2,163	N	0	0	N	N	1	3	13	8	9
New York City	802	748	1,566	5,772	5,936	N	0	0	N	N	—	3	12	8	19
Pennsylvania	494	778	1,005	5,752	5,754	N	0	0	N	N	2	4	17	21	36
<b>E.N. Central</b>	1,240	3,162	4,106	16,957	25,542	—	1	3	4	4	8	16	110	62	80
Illinois	692	1,024	1,355	5,759	8,160	—	0	0	—	—	—	2	22	—	10
Indiana	—	378	586	2,841	3,301	—	0	0	—	—	1	1	18	3	3
Michigan	406	668	1,225	4,803	3,957	—	1	3	3	2	—	2	9	11	13
Ohio	12	633	1,424	1,508	6,699	—	0	2	1	2	7	5	33	35	32
Wisconsin	130	365	527	2,046	3,425	N	0	0	N	N	—	5	53	13	22
<b>W.N. Central</b>	622	1,187	1,445	7,951	9,598	—	0	1	2	—	2	12	77	45	40
Iowa	89	163	223	1,255	1,388	N	0	0	N	N	—	2	28	9	3
Kansas	170	145	275	1,044	1,372	N	0	0	N	N	1	1	8	6	7
Minnesota	—	246	321	1,066	1,994	—	0	0	—	—	—	3	21	8	15
Missouri	226	447	628	3,313	3,422	—	0	1	2	—	—	2	21	7	9
Nebraska§	64	97	180	673	722	N	0	0	N	N	—	1	16	3	3
North Dakota	24	31	64	207	313	N	0	0	N	N	1	0	1	1	—
South Dakota	49	51	84	393	387	N	0	0	N	N	—	1	7	11	3
<b>S. Atlantic</b>	1,747	3,762	5,634	22,834	27,102	—	0	1	1	2	10	17	67	112	108
Delaware	73	68	107	577	549	N	0	0	N	N	—	0	3	1	—
District of Columbia	85	61	161	698	395	—	0	0	—	—	—	0	2	3	5
Florida	—	970	1,187	3,300	6,901	N	0	0	N	N	7	7	32	52	37
Georgia	—	702	2,541	3,839	4,125	N	0	0	N	N	3	5	12	40	33
Maryland§	285	343	482	2,804	2,391	—	0	1	1	2	—	0	3	3	4
North Carolina	428	624	1,772	4,086	6,283	—	0	0	—	—	—	0	11	2	22
South Carolina§	453	361	2,105	3,852	2,353	N	0	0	N	N	—	1	13	4	2
Virginia§	401	453	687	3,298	3,786	N	0	0	N	N	—	1	5	6	4
West Virginia	22	59	96	380	319	N	0	0	N	N	—	0	3	1	1
<b>E.S. Central</b>	499	1,456	2,051	10,149	10,936	—	0	0	—	—	1	3	15	10	7
Alabama§	9	421	761	2,243	3,649	N	0	0	N	N	1	1	12	5	2
Kentucky	46	139	691	973	1,442	N	0	0	N	N	—	1	3	4	1
Mississippi	—	385	807	2,575	2,003	N	0	0	N	N	—	0	3	—	1
Tennessee§	444	518	634	4,358	3,842	N	0	0	N	N	—	1	5	1	3
<b>W.S. Central</b>	533	2,211	3,028	11,591	15,825	—	0	1	—	—	1	4	46	8	13
Arkansas§	225	153	337	1,160	1,201	N	0	0	N	N	—	0	2	1	1
Louisiana	93	275	610	812	2,638	—	0	1	—	—	—	0	9	1	—
Oklahoma	215	243	423	1,715	1,551	N	0	0	N	N	1	1	4	5	7
Texas§	—	1,442	1,907	7,904	10,435	N	0	0	N	N	—	3	37	1	5
<b>Mountain</b>	267	1,290	2,042	6,514	9,612	88	103	202	780	957	—	3	39	12	12
Arizona	8	461	1,017	1,836	2,825	88	102	200	770	938	—	0	3	1	3
Colorado	75	320	418	1,127	2,431	N	0	0	N	N	—	1	7	6	2
Idaho§	26	52	253	549	471	N	0	0	N	N	—	0	5	1	—
Montana§	—	50	143	285	220	N	0	0	N	N	—	0	26	—	1
Nevada§	—	103	397	838	1,088	—	1	3	3	10	—	0	1	—	1
New Mexico§	69	186	314	1,152	1,641	—	0	3	2	1	—	0	5	3	—
Utah	89	96	181	664	718	—	1	3	5	6	—	0	3	1	5
Wyoming§	—	28	54	63	218	—	0	0	—	2	—	0	11	—	—
<b>Pacific</b>	1,721	3,373	3,926	22,599	24,480	28	51	299	389	351	—	1	5	9	14
Alaska	106	82	156	664	595	N	0	0	N	N	—	0	1	—	—
California	1,029	2,671	3,187	17,232	19,093	28	51	299	389	351	—	0	0	—	—
Hawaii	—	107	133	618	897	N	0	0	N	N	—	0	1	—	—
Oregon§	185	173	394	1,472	1,384	N	0	0	N	N	—	1	4	9	14
Washington	401	350	604	2,613	2,511	N	0	0	N	N	—	0	0	—	—
American Samoa	U	0	46	U	U	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	157	105	236	1,136	719	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	U	5	15	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. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.

† Chlamydia refers to genital infections caused by *Chlamydia trachomatis*.

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

**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending February 24, 2007, and February 25, 2006 (8th Week)\***

Reporting area	Giardiasis					Gonorrhea					<i>Haemophilus influenzae</i> , invasive All ages, all serotypes <sup>†</sup>				
	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>	144	308	526	1,617	2,127	2,780	6,771	8,602	39,063	50,834	28	42	115	344	368
<b>New England</b>	7	18	44	67	134	129	100	224	765	663	—	2	12	20	17
Connecticut	—	3	25	28	17	71	29	168	187	142	—	0	8	15	—
Maine <sup>§</sup>	7	3	15	25	5	—	2	8	14	21	—	0	4	2	3
Massachusetts	—	4	18	—	80	48	47	96	448	371	—	0	7	—	12
New Hampshire	—	0	9	1	6	3	3	9	21	45	—	0	2	3	—
Rhode Island <sup>§</sup>	—	1	17	—	6	7	10	19	84	75	—	0	3	—	1
Vermont <sup>§</sup>	—	3	12	13	20	—	1	5	11	9	—	0	2	—	1
<b>Mid. Atlantic</b>	16	65	109	267	411	518	636	1,279	4,418	4,740	4	9	26	72	89
New Jersey	—	8	16	—	71	70	103	158	637	805	—	1	4	3	16
New York (Upstate)	11	25	88	111	89	151	121	834	774	645	—	3	15	17	15
New York City	—	16	31	82	134	170	176	377	1,342	1,477	—	2	6	16	22
Pennsylvania	5	14	34	74	117	127	223	324	1,665	1,813	4	3	8	36	36
<b>E.N. Central</b>	11	44	96	182	407	551	1,261	2,203	6,459	10,628	5	5	13	35	51
Illinois	—	9	27	—	86	197	367	488	2,015	3,230	—	0	4	—	15
Indiana	N	0	0	N	N	—	158	260	1,165	1,471	—	1	10	5	7
Michigan	3	12	38	68	130	312	275	880	1,988	1,601	—	0	5	4	9
Ohio	8	15	32	90	111	3	303	701	506	3,142	5	2	6	26	11
Wisconsin	—	9	24	24	80	39	129	179	785	1,184	—	0	3	—	9
<b>W.N. Central</b>	10	23	118	115	188	195	382	510	2,676	2,898	2	2	12	17	15
Iowa	—	5	15	28	38	23	38	64	270	283	—	0	1	—	—
Kansas	2	3	11	11	21	54	43	93	328	386	1	0	2	5	3
Minnesota	—	0	87	5	50	—	65	87	326	486	—	0	9	—	—
Missouri	7	9	28	58	57	95	193	268	1,544	1,516	—	0	5	9	9
Nebraska <sup>§</sup>	1	2	9	8	9	16	27	56	157	151	—	0	2	2	3
North Dakota	—	0	2	—	1	—	2	6	9	23	1	0	2	1	—
South Dakota	—	1	6	5	12	7	6	15	42	53	—	0	0	—	—
<b>S. Atlantic</b>	33	51	88	335	306	580	1,637	2,542	9,132	12,020	10	11	26	97	98
Delaware	—	0	4	3	5	36	28	44	253	204	—	0	1	1	—
District of Columbia	—	1	4	11	8	31	35	63	320	284	—	0	2	1	—
Florida	20	22	44	162	132	—	450	549	1,564	3,239	4	3	9	29	23
Georgia	7	12	28	80	59	—	349	1,196	1,644	1,933	4	2	6	34	24
Maryland <sup>§</sup>	1	4	11	27	32	121	121	160	941	1,049	—	1	5	20	17
North Carolina	—	0	0	—	—	160	310	571	2,081	3,376	2	0	8	5	12
South Carolina <sup>§</sup>	—	2	8	6	14	147	162	1,135	1,622	963	—	0	3	5	9
Virginia <sup>§</sup>	5	9	28	45	54	80	119	249	594	881	—	1	7	—	9
West Virginia	—	0	6	1	2	5	18	43	113	91	—	0	4	2	4
<b>E.S. Central</b>	5	11	42	51	50	163	585	877	3,775	4,455	1	2	8	22	22
Alabama <sup>§</sup>	3	6	30	27	26	7	195	313	915	1,759	1	0	5	6	5
Kentucky	N	0	0	N	N	15	55	268	368	517	—	0	1	—	2
Mississippi	N	0	0	N	N	—	149	434	984	834	—	0	1	—	—
Tennessee <sup>§</sup>	2	4	12	24	24	141	195	239	1,508	1,345	—	1	5	16	15
<b>W.S. Central</b>	6	6	21	36	22	243	934	1,484	4,938	6,818	1	1	26	14	12
Arkansas <sup>§</sup>	6	3	13	19	7	67	81	142	605	755	—	0	2	—	2
Louisiana	—	0	6	2	—	80	184	366	718	1,464	—	0	3	2	—
Oklahoma	—	2	11	15	15	96	88	184	629	530	1	1	24	12	9
Texas <sup>§</sup>	N	0	0	N	N	—	568	932	2,986	4,069	—	0	2	—	1
<b>Mountain</b>	19	29	69	168	212	31	280	466	1,454	2,258	4	4	12	48	41
Arizona	1	3	10	33	27	4	117	231	426	727	3	2	9	28	16
Colorado	11	10	33	65	78	11	72	92	422	610	—	1	4	8	14
Idaho <sup>§</sup>	3	3	12	15	28	2	2	20	25	30	—	0	1	1	2
Montana <sup>§</sup>	—	2	11	9	9	—	3	20	17	10	—	0	0	—	—
Nevada <sup>§</sup>	—	1	8	6	6	—	33	135	231	410	—	0	1	1	—
New Mexico <sup>§</sup>	—	1	6	8	9	8	31	65	213	288	—	0	2	3	6
Utah	4	7	25	29	52	6	17	26	115	149	1	0	4	7	3
Wyoming <sup>§</sup>	—	1	4	3	3	—	2	5	5	34	—	0	1	—	—
<b>Pacific</b>	37	58	118	396	397	370	787	971	5,446	6,354	1	2	7	19	23
Alaska	—	1	17	11	3	10	10	27	68	75	—	0	2	4	2
California	30	41	70	297	299	281	646	833	4,560	5,319	—	0	5	—	2
Hawaii	—	1	4	11	8	—	15	30	74	154	—	0	1	—	2
Oregon <sup>§</sup>	4	8	12	56	73	19	27	46	173	236	1	1	4	15	16
Washington	3	7	44	21	14	60	77	142	571	570	—	0	1	—	1
American Samoa	U	0	0	U	U	U	0	2	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	1	5	19	9	6	9	5	13	49	56	—	0	2	—	—
U.S. Virgin Islands	U	0	0	U	U	U	0	4	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> Data for *H. influenzae* (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.

<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 February 24, 2007, and February 25, 2006 (8th Week)\***

Reporting area	Hepatitis (viral, acute), by type <sup>†</sup>										Legionellosis				
	A					B									
	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>	28	62	95	267	586	31	86	219	387	546	15	49	107	196	194
<b>New England</b>	—	2	20	2	46	—	2	4	4	33	1	1	12	3	11
Connecticut	—	1	2	1	4	—	0	3	—	15	1	0	9	2	2
Maine <sup>§</sup>	—	0	2	—	2	—	0	2	—	3	—	0	2	—	1
Massachusetts	—	0	4	—	28	—	0	2	—	11	—	0	4	—	7
New Hampshire	—	0	16	1	7	—	0	1	—	3	—	0	1	—	—
Rhode Island <sup>§</sup>	—	0	2	—	1	—	0	4	4	1	—	0	6	—	—
Vermont <sup>§</sup>	—	0	2	—	4	—	0	1	—	—	—	0	2	1	1
<b>Mid. Atlantic</b>	3	7	19	30	48	1	8	17	41	78	4	15	53	47	59
New Jersey	—	1	5	3	14	—	2	6	8	28	—	2	11	10	10
New York (Upstate)	3	1	11	9	5	—	1	8	6	3	3	6	30	11	11
New York City	—	2	11	12	18	—	2	6	5	17	—	2	18	3	15
Pennsylvania	—	1	4	6	11	1	3	7	22	30	1	5	19	23	23
<b>E.N. Central</b>	3	6	13	33	44	4	8	16	54	55	1	8	26	41	35
Illinois	—	1	4	10	10	—	1	7	—	10	—	0	2	—	7
Indiana	1	0	9	1	3	1	0	9	2	1	—	0	5	2	3
Michigan	—	2	8	12	15	—	3	8	23	27	—	3	10	14	7
Ohio	2	1	4	10	12	3	2	10	26	15	1	4	19	24	11
Wisconsin	—	1	4	—	4	—	0	3	3	2	—	1	3	1	7
<b>W.N. Central</b>	—	2	8	8	25	—	3	9	18	18	—	1	15	10	6
Iowa	—	0	1	1	1	—	0	2	3	3	—	0	3	1	—
Kansas	—	0	2	—	15	—	0	2	1	3	—	0	2	—	—
Minnesota	—	0	7	—	—	—	0	5	—	—	—	0	11	1	—
Missouri	—	1	3	4	5	—	1	6	11	11	—	0	2	6	4
Nebraska <sup>§</sup>	—	0	2	1	2	—	0	3	2	1	—	0	2	1	2
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	3	2	2	—	0	1	1	—	—	0	1	1	—
<b>S. Atlantic</b>	7	9	26	58	90	14	23	42	126	150	3	9	23	54	46
Delaware	—	0	2	—	2	—	1	4	3	5	—	0	2	1	1
District of Columbia	—	0	5	5	1	—	0	2	—	1	—	0	5	—	—
Florida	3	3	13	26	32	3	8	16	47	63	2	3	10	23	19
Georgia	—	1	5	11	5	3	3	8	15	15	1	1	5	9	1
Maryland <sup>§</sup>	1	1	6	4	15	1	2	7	13	32	—	2	8	12	15
North Carolina	—	0	11	1	28	5	0	23	21	19	—	0	5	3	4
South Carolina <sup>§</sup>	—	0	3	2	4	—	2	5	8	9	—	0	2	2	—
Virginia <sup>§</sup>	3	1	7	9	3	1	2	5	15	4	—	1	5	3	5
West Virginia	—	0	3	—	—	1	0	7	4	2	—	0	4	1	1
<b>E.S. Central</b>	2	2	8	8	20	3	7	23	25	53	2	2	9	10	7
Alabama <sup>§</sup>	—	0	3	1	1	—	2	13	10	19	—	0	2	1	2
Kentucky	—	0	5	2	7	—	1	5	1	14	—	1	5	4	1
Mississippi	—	0	1	1	1	—	0	4	—	5	—	0	2	—	—
Tennessee <sup>§</sup>	2	1	5	4	11	3	3	7	14	15	2	1	7	5	4
<b>W.S. Central</b>	—	6	20	3	27	3	18	109	41	71	2	1	12	6	2
Arkansas <sup>§</sup>	—	0	9	1	2	1	1	4	5	8	—	0	1	—	1
Louisiana	—	0	4	2	1	—	1	5	5	3	—	0	2	—	—
Oklahoma	—	0	3	—	1	1	0	14	2	—	—	0	6	—	—
Texas <sup>§</sup>	—	4	15	—	23	1	14	90	29	60	2	1	12	6	1
<b>Mountain</b>	4	5	12	34	65	—	3	8	14	30	1	2	9	15	9
Arizona	3	3	9	29	41	—	0	2	—	7	1	1	4	4	—
Colorado	1	1	3	4	9	—	0	4	2	7	—	0	2	2	2
Idaho <sup>§</sup>	—	0	2	—	3	—	0	2	2	4	—	0	3	1	2
Montana <sup>§</sup>	—	0	3	—	1	—	0	0	—	—	—	0	1	—	—
Nevada <sup>§</sup>	—	0	1	1	3	—	0	4	6	7	—	0	2	2	3
New Mexico <sup>§</sup>	—	0	2	—	4	—	0	2	3	3	—	0	1	2	—
Utah	—	0	2	—	4	—	0	5	1	2	—	1	6	4	2
Wyoming <sup>§</sup>	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
<b>Pacific</b>	9	15	53	91	221	6	11	33	64	58	1	1	10	10	19
Alaska	—	0	0	—	—	—	0	3	2	—	—	0	0	—	—
California	8	13	48	84	205	3	8	24	45	45	1	1	10	10	19
Hawaii	—	0	2	—	5	—	0	1	—	—	—	0	0	—	—
Oregon <sup>§</sup>	—	1	4	5	6	2	1	5	14	10	—	0	0	—	—
Washington	1	1	4	2	5	1	1	8	3	3	—	0	0	—	—
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	1	11	4	6	1	1	9	4	2	—	0	1	—	—
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> Data for acute hepatitis C, viral are available in Table I.

<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 February 24, 2007, and February 25, 2006 (8th Week)\***

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All serogroups				
	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>	49	247	1,014	745	680	4	24	46	85	195	8	19	45	129	208
<b>New England</b>	1	19	260	45	54	—	0	6	—	7	—	1	3	2	8
Connecticut	1	8	227	13	20	—	0	3	—	—	—	0	2	1	2
Maine§	—	2	34	20	10	—	0	1	—	—	—	0	3	1	2
Massachusetts	—	0	3	—	14	—	0	3	—	5	—	0	2	—	4
New Hampshire	—	3	95	8	8	—	0	3	—	1	—	0	2	—	—
Rhode Island§	—	0	93	—	1	—	0	1	—	—	—	0	1	—	—
Vermont§	—	1	15	4	1	—	0	0	—	1	—	0	1	—	—
<b>Mid. Atlantic</b>	21	144	566	381	423	—	5	18	15	52	2	2	11	14	33
New Jersey	—	25	186	55	148	—	1	7	—	19	—	0	2	—	3
New York (Upstate)	18	59	369	88	58	—	1	7	3	4	—	1	4	2	3
New York City	—	3	24	1	6	—	3	9	7	23	—	1	4	3	14
Pennsylvania	3	43	234	237	211	—	1	4	5	6	2	0	4	9	13
<b>E.N. Central</b>	1	12	158	9	40	1	2	8	12	23	1	2	12	16	19
Illinois	—	0	0	—	—	—	1	6	5	9	—	0	3	—	8
Indiana	—	0	3	—	—	—	0	3	—	3	—	0	5	6	1
Michigan	1	0	5	3	2	—	0	2	2	2	—	0	4	5	3
Ohio	—	0	5	2	4	1	0	2	3	6	1	1	4	5	4
Wisconsin	—	11	154	4	34	—	0	2	2	3	—	0	2	—	3
<b>W.N. Central</b>	1	5	169	14	9	—	1	14	8	5	1	1	4	10	8
Iowa	—	1	8	—	1	—	0	1	1	1	—	0	2	1	—
Kansas	—	0	2	1	—	—	0	2	—	—	—	0	1	1	—
Minnesota	1	2	167	13	8	—	0	12	4	2	—	0	3	—	—
Missouri	—	0	2	—	—	—	0	1	1	1	—	0	3	5	4
Nebraska§	—	0	2	—	—	—	0	1	2	—	1	0	1	1	4
North Dakota	—	0	0	—	—	—	0	1	—	—	—	0	1	1	—
South Dakota	—	0	1	—	—	—	0	0	—	1	—	0	1	1	—
<b>S. Atlantic</b>	21	39	131	265	140	1	6	14	30	55	2	4	10	21	37
Delaware	—	7	28	41	48	—	0	1	1	—	—	0	1	—	2
District of Columbia	—	0	7	—	3	—	0	2	1	—	—	0	1	—	—
Florida	—	1	5	7	3	—	1	4	8	5	1	2	7	8	13
Georgia	—	0	1	—	1	1	1	6	4	16	—	0	3	4	2
Maryland§	13	20	88	186	80	—	1	5	8	18	1	0	2	5	4
North Carolina	—	0	4	—	5	—	0	4	2	4	—	0	6	—	11
South Carolina§	—	0	2	1	—	—	0	2	—	2	—	0	2	2	2
Virginia§	8	6	36	30	—	—	1	4	6	10	—	0	4	2	3
West Virginia	—	0	10	—	—	—	0	1	—	—	—	0	2	—	3
<b>E.S. Central</b>	—	1	3	4	—	—	0	3	5	5	—	1	3	8	6
Alabama§	—	0	3	1	—	—	0	2	—	2	—	0	2	2	1
Kentucky	—	0	2	—	—	—	0	1	1	1	—	0	1	—	1
Mississippi	—	0	1	—	—	—	0	1	1	1	—	0	2	2	1
Tennessee§	—	0	2	3	—	—	0	2	3	1	—	0	2	4	3
<b>W.S. Central</b>	1	0	5	2	—	—	1	7	2	5	—	1	5	9	8
Arkansas§	—	0	0	—	—	—	0	2	—	—	—	0	1	—	2
Louisiana	—	0	1	—	—	—	0	1	1	—	—	0	2	1	—
Oklahoma	—	0	0	—	—	—	0	2	1	1	—	0	3	4	3
Texas§	1	0	5	2	—	—	1	6	—	4	—	0	5	4	3
<b>Mountain</b>	—	0	3	2	1	—	1	6	—	11	2	1	4	12	19
Arizona	—	0	2	—	1	—	0	3	—	2	—	0	2	2	8
Colorado	—	0	1	—	—	—	0	2	—	4	1	0	2	2	8
Idaho§	—	0	2	—	—	—	0	1	—	—	—	0	1	1	—
Montana§	—	0	1	1	—	—	0	1	—	—	—	0	1	1	—
Nevada§	—	0	1	1	—	—	0	1	—	—	—	0	0	—	—
New Mexico§	—	0	1	—	—	—	0	1	—	—	—	0	1	1	—
Utah	—	0	1	—	—	—	0	2	—	5	1	0	2	5	3
Wyoming§	—	0	1	—	—	—	0	0	—	—	—	0	2	—	—
<b>Pacific</b>	3	3	23	23	13	2	4	13	13	32	—	5	16	37	70
Alaska	1	0	1	2	—	—	0	4	2	2	—	0	1	1	2
California	2	2	21	19	13	2	2	6	7	25	—	3	10	27	43
Hawaii	N	0	0	N	N	—	0	2	—	—	—	0	2	2	—
Oregon§	—	0	2	2	—	—	0	3	3	3	—	0	4	4	17
Washington	—	0	2	—	—	—	0	6	1	2	—	0	5	3	8
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	0	—	—
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	—	—	—	0	1	1	—
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U	U	0	0	—	—

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.

† Data for meningococcal disease, invasive caused by serogroups A, C, Y, & 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 February 24, 2007, and February 25, 2006 (8th 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>	72	255	670	862	2,065	50	107	171	392	658	6	35	118	40	216
<b>New England</b>	1	21	53	16	236	1	12	26	59	54	—	0	1	—	—
Connecticut	—	1	9	—	14	—	4	14	29	13	—	0	0	—	—
Maine†	—	1	14	7	15	1	2	8	10	8	N	0	0	N	N
Massachusetts	—	7	28	—	184	—	2	17	—	25	—	0	1	—	—
New Hampshire	1	2	27	6	2	—	1	5	8	1	—	0	1	—	—
Rhode Island†	—	0	17	—	—	—	0	3	4	1	—	0	1	—	—
Vermont†	—	1	14	3	21	—	2	5	8	6	—	0	0	—	—
<b>Mid. Atlantic</b>	14	36	149	224	232	—	17	57	38	88	—	1	6	5	5
New Jersey	—	4	13	7	65	—	0	0	—	—	—	0	1	—	1
New York (Upstate)	11	21	143	158	41	—	0	0	—	—	—	0	2	—	—
New York City	—	0	8	—	12	—	1	5	8	—	—	0	3	—	1
Pennsylvania	3	11	26	59	114	—	16	56	30	88	—	1	4	5	3
<b>E.N. Central</b>	15	41	77	193	388	—	2	18	—	3	—	1	6	1	2
Illinois	—	8	17	—	102	—	0	7	—	1	—	0	4	—	1
Indiana	1	4	23	1	19	—	0	2	—	—	—	0	1	—	—
Michigan	2	11	39	48	78	—	0	5	—	2	—	0	1	1	—
Ohio	12	11	56	144	135	—	0	9	—	—	—	0	4	—	1
Wisconsin	—	2	8	—	54	—	0	0	—	—	—	0	1	—	—
<b>W.N. Central</b>	5	19	84	68	283	3	6	20	21	17	1	2	14	7	3
Iowa	—	5	12	18	84	—	1	7	2	3	—	0	1	—	—
Kansas	4	4	13	36	79	3	2	5	13	3	—	0	1	—	—
Minnesota	—	0	76	—	—	—	0	6	2	1	—	0	2	—	—
Missouri	—	5	13	7	87	—	1	6	1	1	1	2	12	7	3
Nebraska†	—	1	9	1	30	—	0	0	—	—	—	0	5	—	—
North Dakota	1	0	9	1	2	—	0	7	3	2	—	0	0	—	—
South Dakota	—	0	4	5	1	—	0	4	—	7	—	0	0	—	—
<b>S. Atlantic</b>	7	17	136	94	143	44	39	62	229	370	5	13	68	14	200
Delaware	—	0	1	—	1	—	0	0	—	—	—	0	3	1	2
District of Columbia	—	0	2	1	2	—	0	0	—	—	—	0	1	—	—
Florida	4	4	20	45	40	5	0	7	26	176	—	0	5	—	5
Georgia	—	0	3	—	6	12	5	16	28	31	—	1	5	1	2
Maryland†	2	2	6	19	39	—	6	13	18	39	2	1	7	6	7
North Carolina	—	0	94	—	19	13	9	22	55	26	3	5	61	3	183
South Carolina†	—	3	11	13	22	2	3	11	14	17	—	0	5	1	1
Virginia†	1	3	19	16	12	10	13	27	80	71	—	2	13	2	—
West Virginia	—	0	9	—	2	2	2	7	8	10	—	0	2	—	—
<b>E.S. Central</b>	5	6	28	34	51	—	4	13	8	28	—	6	31	11	4
Alabama†	—	2	19	11	12	—	1	8	—	9	—	2	11	5	—
Kentucky	—	0	5	—	8	—	0	4	4	1	—	0	1	—	—
Mississippi	—	0	4	1	9	—	0	2	—	—	—	0	1	—	—
Tennessee†	5	3	11	22	22	—	2	9	4	18	—	4	22	6	4
<b>W.S. Central</b>	1	18	119	29	70	—	5	34	10	68	—	1	27	—	2
Arkansas†	—	1	13	—	5	—	0	5	2	1	—	0	10	—	2
Louisiana	—	0	2	1	2	—	0	0	—	—	—	0	1	—	—
Oklahoma	—	0	9	—	1	—	1	9	8	5	—	0	18	—	—
Texas†	1	14	106	28	62	—	0	29	—	62	—	0	4	—	—
<b>Mountain</b>	21	41	88	163	502	1	3	27	8	16	—	0	5	2	—
Arizona	2	7	29	23	88	1	2	10	7	16	—	0	2	—	—
Colorado	6	9	32	60	253	—	0	0	—	—	—	0	1	1	—
Idaho†	—	1	7	8	17	—	0	25	—	—	—	0	3	1	—
Montana†	2	1	9	7	25	—	0	2	—	—	—	0	2	—	—
Nevada†	—	0	6	—	6	—	0	0	—	—	—	0	0	—	—
New Mexico†	—	2	8	5	7	—	0	2	—	—	—	0	2	—	—
Utah	11	13	39	52	97	—	0	1	1	—	—	0	2	—	—
Wyoming†	—	1	8	8	9	—	0	2	—	—	—	0	1	—	—
<b>Pacific</b>	3	28	226	41	160	1	4	12	19	14	—	0	1	—	—
Alaska	—	1	8	8	18	—	0	6	14	7	N	0	0	N	N
California	—	21	223	—	62	1	3	11	5	7	—	0	1	—	—
Hawaii	—	1	6	2	25	N	0	0	N	N	N	0	0	N	N
Oregon†	—	1	8	15	34	—	0	4	—	—	—	0	1	—	—
Washington	3	5	46	16	21	—	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	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	—	—	4	1	6	11	14	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 February 24, 2007, and February 25, 2006 (8th 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>	62	84	213	593	908	27	23	74	192	185
<b>New England</b>	1	2	15	11	36	—	1	4	6	8
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine <sup>§</sup>	—	0	2	2	3	—	0	2	—	—
Massachusetts	—	1	5	—	27	—	0	4	—	7
New Hampshire	1	0	9	3	5	—	0	4	2	1
Rhode Island <sup>§</sup>	—	0	4	—	—	—	0	3	3	—
Vermont <sup>§</sup>	—	0	2	6	1	—	0	1	1	—
<b>Mid. Atlantic</b>	10	14	40	93	174	3	3	16	23	26
New Jersey	—	2	8	6	41	—	1	4	—	9
New York (Upstate)	4	5	24	34	29	3	2	13	23	15
New York City	1	3	8	13	37	—	0	2	—	2
Pennsylvania	5	6	13	40	67	N	0	0	N	N
<b>E.N. Central</b>	14	14	45	105	205	5	6	14	36	55
Illinois	—	4	12	15	78	—	1	6	4	12
Indiana	—	2	9	12	23	—	0	10	4	6
Michigan	3	3	11	18	43	1	1	5	14	17
Ohio	11	4	19	60	45	4	1	7	13	12
Wisconsin	—	1	4	—	16	—	0	2	1	8
<b>W.N. Central</b>	7	5	57	41	36	1	2	10	11	7
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	1	1	3	10	18	—	0	3	2	4
Minnesota	—	0	52	—	—	—	1	7	—	—
Missouri	5	2	5	26	10	—	0	2	6	2
Nebraska <sup>§</sup>	—	0	2	1	7	1	0	2	2	1
North Dakota	1	0	2	2	1	—	0	1	1	—
South Dakota	—	0	2	2	—	—	0	0	—	—
<b>S. Atlantic</b>	17	21	45	158	212	8	1	9	43	13
Delaware	—	0	2	—	1	—	0	0	—	—
District of Columbia	—	0	2	1	4	—	0	1	—	—
Florida	7	5	16	37	54	2	0	2	8	—
Georgia	5	5	12	51	55	1	0	3	12	—
Maryland <sup>§</sup>	4	4	12	29	39	5	1	5	18	9
North Carolina	—	0	26	14	21	—	0	0	—	—
South Carolina <sup>§</sup>	—	1	6	8	17	—	0	2	4	—
Virginia <sup>§</sup>	1	2	9	15	15	—	0	1	1	—
West Virginia	—	0	6	3	6	—	0	2	—	4
<b>E.S. Central</b>	1	4	11	30	40	1	0	6	13	5
Alabama <sup>§</sup>	N	0	0	N	N	N	0	0	N	N
Kentucky	—	0	5	8	8	—	0	0	—	—
Mississippi	N	0	0	N	N	—	0	1	—	5
Tennessee <sup>§</sup>	1	3	9	22	32	1	0	6	13	—
<b>W.S. Central</b>	2	6	36	35	63	3	4	36	24	29
Arkansas <sup>§</sup>	—	0	5	4	1	—	0	2	3	6
Louisiana	—	0	2	2	1	—	0	1	2	—
Oklahoma	2	2	6	18	27	3	1	12	11	12
Texas <sup>§</sup>	—	4	32	11	34	—	2	21	8	11
<b>Mountain</b>	10	11	42	105	123	5	4	12	31	42
Arizona	2	5	34	45	69	3	2	9	20	25
Colorado	4	3	7	28	25	2	1	4	9	11
Idaho <sup>§</sup>	1	0	1	3	2	—	0	1	—	1
Montana <sup>§</sup>	N	0	0	N	N	N	0	0	N	N
Nevada <sup>§</sup>	—	0	3	3	—	—	0	0	—	—
New Mexico <sup>§</sup>	2	1	5	8	11	—	0	2	2	5
Utah	1	1	5	17	15	—	0	0	—	—
Wyoming <sup>§</sup>	—	0	1	1	1	—	0	0	—	—
<b>Pacific</b>	—	2	9	15	19	1	0	2	5	—
Alaska	—	0	2	5	N	1	0	2	5	—
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	2	9	10	19	—	0	1	—	—
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	0	0	U	U	U	0	0	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 February 24, 2007, and February 25, 2006 (8th 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>	34	44	99	423	481	12	6	19	53	65	63	181	233	1,031	1,294
<b>New England</b>	—	1	4	10	5	—	0	1	—	1	2	4	11	26	27
Connecticut	—	0	0	—	—	—	0	0	—	—	—	0	6	4	2
Maine‡	—	0	2	3	2	—	0	1	—	—	—	0	2	—	1
Massachusetts	—	0	0	—	—	—	0	0	—	—	2	2	7	15	19
New Hampshire	—	0	0	—	—	—	0	0	—	—	—	0	2	4	4
Rhode Island§	—	0	2	3	—	—	0	1	—	—	—	0	3	3	1
Vermont‡	—	0	2	4	3	—	0	1	—	1	—	0	1	—	—
<b>Mid. Atlantic</b>	3	3	8	28	23	—	0	4	4	2	19	23	35	204	146
New Jersey	—	0	0	—	—	—	0	0	—	—	1	3	8	20	26
New York (Upstate)	2	1	5	8	6	—	0	3	1	—	4	3	13	14	16
New York City	—	0	0	—	—	—	0	0	—	—	13	11	27	136	72
Pennsylvania	1	2	6	20	17	—	0	2	3	2	1	5	12	34	32
<b>E.N. Central</b>	7	10	40	118	94	4	1	8	15	19	6	15	32	79	149
Illinois	—	0	2	—	7	—	0	1	—	2	1	7	13	13	86
Indiana	1	2	24	18	10	2	0	5	3	5	—	2	5	5	14
Michigan	—	0	3	—	7	—	0	1	—	1	—	2	10	20	10
Ohio	6	5	38	100	70	2	1	5	12	11	5	4	9	34	31
Wisconsin	N	0	0	N	N	—	0	0	—	—	—	1	4	7	8
<b>W.N. Central</b>	—	1	51	11	8	—	0	10	1	1	2	5	13	29	32
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	3	—	2
Kansas	—	0	1	1	—	—	0	0	—	—	—	0	3	3	4
Minnesota	—	0	50	—	—	—	0	10	—	—	1	0	5	15	9
Missouri	—	1	3	10	8	—	0	1	—	1	1	3	9	11	16
Nebraska§	—	0	1	—	—	—	0	0	—	—	—	0	2	—	1
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	3	—	—	—	0	1	1	—	—	0	3	—	—
<b>S. Atlantic</b>	19	21	49	201	283	7	2	8	28	24	18	42	114	237	264
Delaware	—	0	0	—	—	—	0	0	—	—	—	0	3	2	6
District of Columbia	—	0	3	2	8	—	0	2	—	—	5	2	7	23	21
Florida	13	12	29	111	113	7	2	8	24	23	—	14	23	68	112
Georgia	6	7	24	81	143	—	0	1	—	1	—	7	83	5	10
Maryland§	—	0	0	—	—	—	0	0	—	—	3	6	14	45	39
North Carolina	—	0	0	—	—	—	0	0	—	—	3	5	21	45	45
South Carolina§	—	0	0	—	—	—	0	0	—	—	1	1	5	15	15
Virginia§	N	0	0	N	N	—	0	0	—	—	6	3	17	34	16
West Virginia	—	1	14	7	19	—	0	1	4	—	—	0	2	—	—
<b>E.S. Central</b>	1	2	11	26	42	1	0	2	4	6	5	14	30	91	87
Alabama§	N	0	0	N	N	—	0	0	—	—	1	5	18	26	43
Kentucky	—	0	3	6	8	—	0	2	—	—	—	1	9	11	6
Mississippi	—	0	0	—	—	—	0	0	—	—	—	1	8	15	13
Tennessee§	1	2	10	20	34	1	0	2	4	6	4	5	12	39	25
<b>W.S. Central</b>	2	1	5	20	3	—	0	1	—	2	7	29	57	189	203
Arkansas§	1	0	3	1	3	—	0	0	—	2	3	1	7	15	13
Louisiana	—	0	2	2	—	—	0	1	—	—	3	6	30	43	23
Oklahoma	1	0	4	17	—	—	0	0	—	—	1	1	4	14	10
Texas§	—	0	0	—	—	—	0	0	—	—	—	21	34	117	157
<b>Mountain</b>	2	1	7	9	23	—	0	5	1	10	2	8	26	29	67
Arizona	—	0	0	—	—	—	0	0	—	—	—	3	16	11	33
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	5	1	9
Idaho§	N	0	0	N	N	—	0	0	—	—	—	0	1	—	1
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Nevada§	—	0	2	5	2	—	0	1	1	—	—	1	12	8	18
New Mexico§	—	0	0	—	—	—	0	0	—	—	2	1	5	9	5
Utah	2	0	7	3	13	—	0	4	—	8	—	0	2	—	1
Wyoming§	—	0	3	1	8	—	0	2	—	2	—	0	0	—	—
<b>Pacific</b>	—	0	0	—	—	—	0	0	—	—	2	37	52	147	319
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	4	1	—
California	N	0	0	N	N	—	0	0	—	—	1	33	45	127	276
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	2	1	4
Oregon§	N	0	0	N	N	—	0	0	—	—	—	0	6	2	2
Washington	N	0	0	N	N	—	0	0	—	—	1	2	11	16	37
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	0	—	—	2	2	11	13	23
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 February 24, 2007, and February 25, 2006 (8th Week)\*

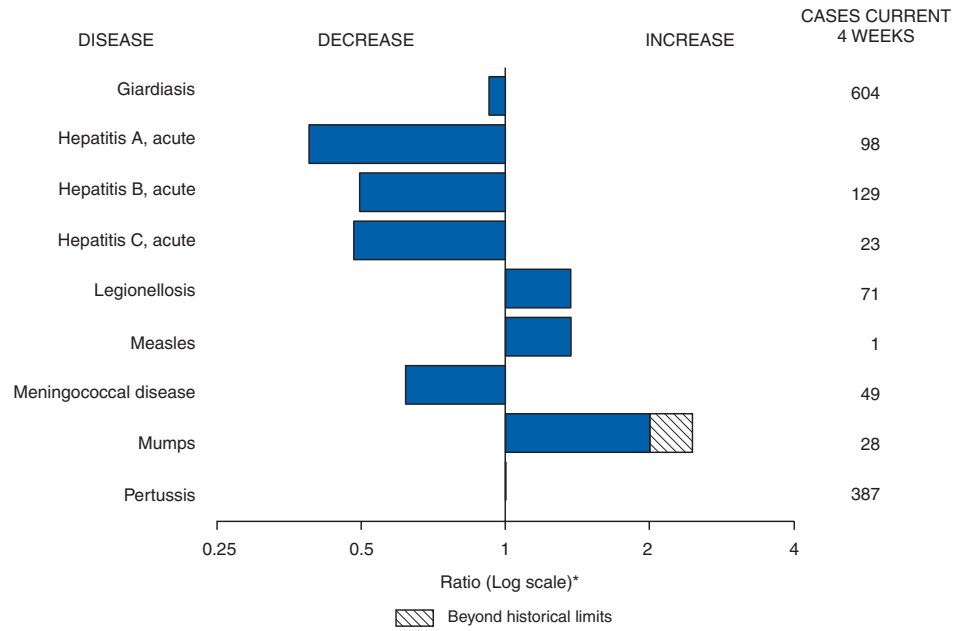
Table with columns for Reporting area, Varicella (chickenpox) (Current week, Previous 52 weeks Med/Max, Cum 2007, Cum 2006), West Nile virus disease† (Neuroinvasive and Non-neuroinvasive§) (Current week, Previous 52 weeks Med/Max, Cum 2007, Cum 2006). Rows include United States, New England, Mid. Atlantic, E.N. Central, W.N. Central, S. Atlantic, E.S. Central, W.S. Central, Mountain, and Pacific regions with state-level data.

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 (proposed) (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table 1. § 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 2004 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).





**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals February 24, 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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