



# MMWR<sup>TM</sup>

## Morbidity and Mortality Weekly Report

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### Hospitalization Discharge Diagnoses for Kidney Disease — United States, 1980–2005

Kidney disease is the ninth leading cause of death in the United States (1). Nearly 26 million persons in the United States have chronic kidney disease (CKD), and another 20 million are at increased risk for CKD (2). End-stage renal disease (ESRD), which can be caused by either CKD or acute renal failure (ARF), results in approximately 85,000 deaths each year in the United States (3). The total annual cost of treating ESRD in the United States was approximately \$33 billion in 2005 (3). Much of the care for CKD and ESRD is provided in the outpatient setting; however, the number of hospitalizations for ARF and chronic kidney failure (CKF) is substantial. In 2004, an estimated 221,000 hospitalizations with a first-listed discharge diagnosis of ARF and 19,000 with a first-listed discharge diagnosis of CKF occurred in the United States (4). To characterize national trends in kidney disease hospitalizations, CDC analyzed data from the National Hospital Discharge Survey (NHDS) for the period 1980–2005. This report summarizes the results of that analysis, which indicated that 1) numbers and rates of kidney disease hospital discharge diagnoses have increased since the early 1990s, especially among adults aged  $\geq 65$  years; 2) a shift has occurred in the type of kidney disease accounting for most of these reported hospitalizations (from CKF to ARF); and 3) an increasing number of kidney disease hospital discharges are associated with a concomitant diagnosis of diabetes mellitus or hypertension. These findings indicate a need for additional research to determine the cause of the increase in ARF discharge diagnoses and to quantify the progression from ARF to CKD and ESRD.

NHDS is conducted annually by CDC to abstract data from medical records from a sample of approximately 500 nonfederal short-stay (i.e., <30 days) hospitals in the 50 states and the District of Columbia (4). For this report,

kidney disease hospitalizations were classified as those for which kidney disease was listed first through seventh among discharge diagnoses as *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) codes 580–589, which include acute kidney disease, ARF, ESRD, CKF, and other kidney diseases. Hospital discharge records with a diagnosis of kidney disease were further analyzed for any additional diagnoses of diabetes mellitus (ICD-9-CM code 250) or hypertension (codes 401–405). Both age-adjusted and age-specific rates per 10,000 population were calculated by dividing the estimated number of hospitalizations by U.S. Census mid-year estimates of the civilian, noninstitutionalized U.S. population for each year during 1980–2005. The 2000 U.S. standard population was used for direct age standardization of hospital rates for men and women. Race- and ethnicity-specific rates were not calculated because of incomplete reporting of race and ethnicity.

During 1980–2005, approximately 10 million hospitalizations had kidney disease listed as a diagnosis. The annual number of hospitalizations with a recorded diagnosis of kidney disease quadrupled during this period, from approximately 416,000 in 1980 to 1,646,000 in 2005 (Table). Age-adjusted hospitalization rates per 10,000 population increased from 20.6 in 1980 to 54.6 in 2005. Kidney disease hospitalization rates were consistently 30%–40% higher among men than among women. The rates for both sexes increased during 1980–2005, from 25.0 to 66.6

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**TABLE. Number\* of hospitalizations and age-adjusted hospitalization rates† for kidney disease,§ by sex and year — National Hospital Discharge Survey, United States, 1980–2005**

Year	Total		Men		Women	
	No.	Rate	No.	Rate	No.	Rate
1980	416,000	20.6	214,000	25.0	202,000	17.8
1981	452,000	21.9	225,000	25.6	227,000	19.6
1982	486,000	23.3	240,000	27.2	246,000	20.9
1983	512,000	24.1	265,000	29.5	247,000	20.5
1984	612,000	28.6	307,000	34.7	305,000	25.0
1985	621,000	28.7	314,000	34.8	307,000	24.9
1986	685,000	31.3	340,000	37.2	345,000	27.7
1987	663,000	29.9	339,000	36.7	324,000	25.6
1988	688,000	30.2	355,000	37.0	333,000	25.8
1989	738,000	31.9	393,000	40.5	345,000	26.4
1990	702,000	30.2	357,000	36.8	345,000	26.3
1991	769,000	32.3	397,000	40.0	371,000	27.4
1992	825,000	34.1	420,000	41.0	405,000	29.7
1993	811,000	33.0	439,000	42.3	372,000	26.7
1994	846,000	33.8	428,000	40.5	419,000	29.6
1995	818,000	32.2	413,000	38.0	405,000	28.2
1996	901,000	34.9	462,000	41.5	438,000	30.2
1997	905,000	34.6	457,000	40.6	448,000	30.5
1998	936,000	35.1	481,000	41.6	455,000	30.4
1999	934,000	34.6	490,000	42.0	443,000	29.2
2000	985,000	35.3	485,000	40.4	500,000	31.8
2001	1,058,000	37.4	548,000	44.9	510,000	31.9
2002	1,123,000	39.0	602,000	48.3	521,000	32.2
2003	1,248,000	42.7	664,000	52.2	584,000	35.5
2004	1,368,000	46.1	701,000	54.2	666,000	40.1
2005	1,646,000	54.6	869,000	66.5	777,000	45.8

\* Rounded to the nearest 1,000.

† Per 10,000 population.

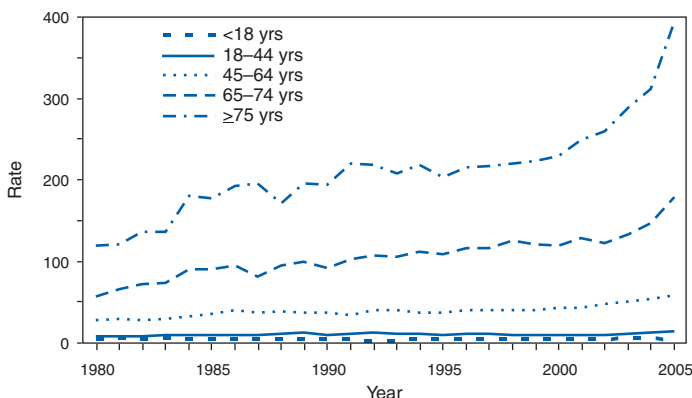
§ Based on *International Classification of Diseases, Ninth Revision, Clinical Modification* codes 580–589, which include acute kidney disease, acute renal failure, end-stage renal disease, chronic kidney failure, and other kidney diseases.

per 10,000 population in men and from 17.8 to 45.8 per 10,000 population in women.

In 2005, nearly two thirds (61.4%) of patients hospitalized with kidney disease were aged  $\geq 65$  years, compared with 49.9% in 1980. Age-specific hospitalization rates increased in all age groups except persons aged  $< 18$  years, but the increase was greatest among persons aged  $\geq 65$  years (Figure 1). An increase of approximately 300% (from 56.2 to 179.3 per 10,000 population) occurred among persons aged 65–74 years, and an increase of approximately 350% (from 119.0 to 393.2 per 10,000 population) occurred among persons aged  $\geq 75$  years.

Much of the observed change in type of reported kidney disease was the result of consistent increases in the rate of hospitalization for ARF. The age-adjusted rate per 10,000 population for hospitalization for ARF increased from 1.8 in 1980 to 36.5 in 2005, with a smaller increase for CKF (from 7.4 to 13.8 per 10,000 population) during the same period (Figure 2). In 1980, 35.0% of all kidney disease hospitalizations were for CKF, 7.3% were for ARF, and

**FIGURE 1. Age-specific hospitalization rates\* for kidney disease,† by age group — National Hospital Discharge Survey, United States, 1980–2005**



\* Per 10,000 population.

† Based on *International Classification of Diseases, Ninth Revision, Clinical Modification* codes 580–589, which include acute kidney disease, acute renal failure, end-stage renal disease, chronic kidney failure, and other kidney diseases.

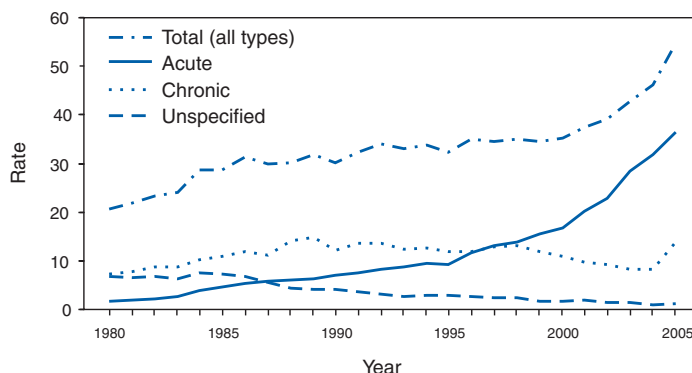
56.0% were for other kidney disease diagnoses. However, in 2005, 24.3% of these hospitalizations were for CKF, 60.0% were for ARF, and 9.3% were for other kidney disease diagnoses.

Among persons with a reported hospitalization for ARF in 2005, 23.1% had ARF as their first-listed diagnosis, whereas 6.9% had septicemia, 6.4% had congestive heart failure, and 5.9% had acute myocardial infarction as their first-listed diagnosis. In 1980, diabetes mellitus was reported as an additional discharge diagnosis for 23.4% of kidney disease hospitalizations. This proportion peaked at 39.0% in 1996; diabetes was associated with 27.0% of kidney disease hospitalizations in 2005. The proportion of kidney disease hospitalizations with hypertension listed among discharge diagnoses increased from 19.6% in 1980 to 41.1% in 2005.

**Reported by:** NT Flowers, JB Croft, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

**Editorial Note:** During 1980–2005, the rate of hospitalization for kidney disease increased, particularly among adults aged  $\geq 65$  years and primarily because of hospitalizations with diagnoses of ARF. The cause of the increase in hospitalizations with ARF diagnoses is unexplained and might be attributed to actual increases in ARF among hospitalized patients or to changes in the way ARF is diagnosed, defined, or reflected in hospital discharge codes. For example, the increase in hospitalization rates for ARF corresponds to the dissemination and implementation of the Kidney Disease Outcomes Quality Initiative guidelines for evaluation, classification, and stratification of CKD, which

**FIGURE 2. Age-adjusted hospitalization rates\* for kidney disease,† by type of kidney failure — National Hospital Discharge Survey, United States, 1980–2005**



\* Per 10,000 population.

† Based on *International Classification of Diseases, Ninth Revision, Clinical Modification* codes 580–589, which include acute kidney disease, acute renal failure, end-stage renal disease, chronic kidney failure, and other kidney diseases.

were issued by the National Kidney Foundation in 2002 (5). These guidelines identify five stages of CKD: 1) kidney damage with normal or increased glomerular filtration rate (GFR), 2) kidney damage with mild decreased GFR, 3) moderate decreased GFR, 4) severe decreased GFR, and 5) kidney failure. Although the guidelines were intended to help diagnose stages of CKD, the new criteria for kidney dysfunction might have led to increased diagnoses of ARF by causing physicians to make more aggressive attempts at recognizing and managing kidney disease and impaired kidney function. The increased number of hospitalizations for ARF also might be attributable, in part, to the aging of the U.S. population, with greater numbers of older adults having diabetes and hypertension, both of which are major risk factors and comorbidities for kidney disease (6).

The findings in this report are subject to at least four limitations. First, NHDS data are based on medical records, and determining the accuracy of physician or administrative reporting or the validity of ICD-9-CM classifications was not possible, especially for the diagnosis of ARF, for which no standardized diagnostic criterion exists (7). Second, data for certain patients might have been captured on multiple occasions because the survey counted hospital discharges and not individual patients. Third, NHDS data are based on a sample population and therefore are subject to sampling variability. Finally, although racial/ethnic disparities have been observed in the prevalence and treatment of kidney disease (8), NHDS data do not allow for analysis of kidney disease hospitalization rates by race or ethnicity because of incomplete reporting of patient race/ethnicity on hospital records.

Despite these limitations, the findings in this report are consistent with other epidemiologic evidence that 1) kidney disease prevalence has increased in the United States since the 1980s (9), 2) hospitalizations for ARF are more common among older adults (6), and 3) kidney disease hospitalizations are associated with a high prevalence of diabetes and hypertension (6). The increasing number of hospitalizations for kidney disease in the United States underscores the need for continued efforts in the early detection of kidney disease through screening programs that can slow or eliminate disease progression. The causes of ARF vary and include infections, toxins, acute organ system dysfunction, surgery, and dehydration. In addition, many cases of ARF are acquired during hospitalizations for other conditions.

A broad effort is needed to encourage health professionals to standardize the criteria for diagnosing ARF. Although the aging of the U.S. population and the change in diagnostic criteria for CKD might partially explain the increase in discharge diagnoses for ARF, the findings in this report also indicate a need for research to determine the causes for this increase and to further quantify the risk for CKD and ESRD associated with ARF.

#### Acknowledgment

The findings in this report are based, in part, on contributions by L Agodoa, MD, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health.

#### References

1. Heron MP. Deaths: leading causes for 2004. *Natl Vital Stat Rep* 2007;56(5).
2. National Kidney Foundation. *Kidney disease*. New York, NY: National Kidney Foundation; 2008. Available at <http://www.kidney.org/kidneydisease>.
3. US Renal Data System. *USRDS 2007 annual data report: atlas of end-stage renal disease in the United States*. Bethesda, MD: National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Disease; 2007. Available at <http://www.usrds.org/atlas.htm>.
4. Kozak LJ, DeFrances CJ, Hall MJ. National hospital discharge survey: 2004 annual summary with detailed diagnosis and procedure data. *Vital Health Stat* 2006;13(162). Available at [http://www.cdc.gov/nchs/data/series/sr\\_13/sr13\\_162acc.pdf](http://www.cdc.gov/nchs/data/series/sr_13/sr13_162acc.pdf).
5. Levey AS, Coresh J, Balk E, et al. National Kidney Foundation practice guidelines for chronic kidney disease: evaluation, classification, and stratification. *Ann Intern Med* 2003;139:137–47.
6. Liangos OR, Wald JW, O'Bell L, Price B, Pereira J, Jaber BL. Epidemiology and outcomes of acute renal failure in hospitalized patients: a national survey. *Clin J Am Soc Nephrol* 2006;1:43–51.
7. Ali T, Khan I, Simpson W, et al. Incidence and outcomes in acute kidney injury: a comprehensive population-based study. *J Am Soc Nephrol* 2007;18:1292–8.
8. Norris KC, Agodoa LY. Unraveling the racial disparities associated with kidney disease. *Kidney Int* 2005;68:914–24.
9. Coresh J, Selvin E, Stevens LA, et al. Prevalence of chronic kidney disease in the United States. *JAMA* 2007;298:2038–47.

## All-Terrain Vehicle Fatalities — West Virginia, 1999–2006

An all-terrain vehicle (ATV) is a motorized vehicle designed for off-road use with low-pressure tires, a seat that is straddled by the operator, and handlebars for steering. Currently, only four-wheeled models are produced in the United States; production of three-wheeled ATVs ended in 1987 because of safety concerns. During the 1990s, West Virginia led the United States in per capita deaths from ATV crashes, with rates approximately eight times higher than the national average (1). In an attempt to curtail this trend, West Virginia enacted legislation in 2004 to regulate ATV use (2). This law prohibited ATV operation on paved roads with a center line, unless the vehicle was traveling a distance of  $\leq 10$  miles and at a speed of  $\leq 25$  miles per hour. The statute also required helmet use and training for ATV riders aged  $< 18$  years, regardless of where the ATV was ridden. To guide further prevention campaigns and identify appropriate populations for targeted educational interventions, the West Virginia Department of Health and Human Resources used data from death certificates of 1999–2006 ATV fatalities to analyze demographic and socioeconomic trends. Trends by age and crash classification (i.e., traffic versus nontraffic) also were evaluated in the context of the 2004 law. Results of that analysis indicated that, after the ATV law was enacted in West Virginia, the ATV-related death rate in the state among children did not decline, and total ATV-related traffic fatalities increased from 0.72 per 100,000 population in 2004 to 1.32 in 2006. Higher annual ATV death rates occurred among males, persons aged 10–17 years, residents of the most impoverished counties, and persons aged  $\geq 25$  years who had not completed high school. Further preventive measures aimed at reducing ATV-related fatalities should be considered, such as targeted educational interventions and more stringent provisions of the law.

West Virginia death certificates for 1999–2006 with *International Classification of Diseases, 10th Revision* (ICD-10) codes correlating to occupants of an ATV injured during traffic or nontraffic crashes\* (i.e., V86.0, V86.1, V86.3, V86.5, V86.6, and V86.9) were selected for the analysis (3). Descriptive analyses were performed to identify temporal and spatial trends and demographic variations. Census data from 2000 were used to calculate death rates per 100,000 population, and rate ratios with corresponding 95% confidence intervals were calculated by comparing

\* Traffic crashes are defined as those occurring on a public highway. Nontraffic crashes are those occurring entirely in any place other than a public highway (3).

these death rates (4). Analyses were limited to West Virginia residents. Poverty prevalence in the decedent's county of residence was evaluated by categorizing the 55 West Virginia counties into quartiles based on the percentage of families with annual income in 1999 below the poverty line (5). The threshold used to determine poverty status depended on family size and composition, as defined by the U.S. Census Bureau (6).

According to death certificate data, 250 persons died from ATV crashes occurring in West Virginia during 1999–2006; of these, 215 (86%) were West Virginia residents. For the period of analysis, the average annual ATV-related death rate among West Virginia residents was 1.49 deaths per 100,000 population (Table). Males accounted for 186 (87%) of the fatalities and had an ATV-related death rate approximately seven times greater than the rate for females. Decedents from ATV crashes were primarily white (98%) and non-Hispanic (100%).<sup>†</sup> The mean age of decedents was 35 years; the median age was 31 years. Among all age groups, persons aged 10–17 years had the highest ATV-related death rate (2.70 per 100,000 population).

During 1999–2006, ATV fatalities increased by an average of 14% per year. The ATV-related death rate among children aged <18 years was relatively constant, whereas the rate among adults increased steadily (Figure 1). The death rate per 100,000 population for children ranged from a low of 0.25 in 2001 to a high of 1.53 in 2002 for traffic deaths. For adults, the death rate per 100,000 population ranged from a low of 0.14 in 2000 to a high of 1.40 in 2006 for traffic deaths. Temporal trends for traffic and nontraffic crashes were similar among adults and children, with traffic crashes accounting for 111 (52%) of all fatalities. Two thirds of fatal ATV crashes occurred during April–September. Time of crash information was available for 168 fatalities, of which 79 (47%) occurred during 4–8 p.m.

The rate of ATV-related deaths also varied by socioeconomic factors (Table). ATV-related death rates increased across each successive quartile of poverty in the county of residence (chi-square for trend  $p < 0.001$ ), with a peak rate of 3.2 per 100,000 population in the most impoverished counties. A similar analysis was performed to evaluate population density in the decedents' county of residence; however, no clear trend was observed. Analysis of the average annual ATV-related death rate by county of crash identified higher rates among specific counties in southwestern West Virginia (Figure 2). Crashes occurred in the decedent's county of residence in 179 (83%) fatalities. Higher

**TABLE. Number, percentage, and rate\* of fatal all-terrain vehicle (ATV) crashes, by decedent characteristics — West Virginia,<sup>†</sup> 1999–2006**

Characteristic	Fatalities		Average annual death rate <sup>§</sup>	Rate ratio (95% CI) <sup>¶</sup>
	No.	(%)		
<b>Sex</b>				
Female	29	(13.5)	0.39	Referent
Male	186	(86.5)	2.64	6.8 (4.6–10.0)
<b>Race</b>				
Non-white	5	(2.3)	0.70	Referent
White	210	(97.7)	1.53	2.2 (0.9–5.3)
<b>Ethnicity</b>				
Hispanic	0	—	0.00	Referent
Non-Hispanic	215	(100)	1.50	Undefined
<b>Age group (yrs)</b>				
≤9	4	(1.9)	0.23	Referent
10–17	41	(19.1)	2.70	11.5 (4.1–32.1)
18–24	36	(16.7)	2.59	11.1 (3.9–31.1)
25–34	38	(17.7)	2.07	8.8 (3.2–24.7)
35–54	56	(26.0)	1.29	5.5 (1.9–15.2)
≥55	40	(18.6)	1.08	4.6 (1.7–12.9)
<b>Poverty by county of residence**</b>				
Quartile 1 (7.1–11.5)	53	(24.7)	0.92	Referent
Quartile 2 (11.7–14.6)	49	(22.8)	1.37	1.5 (1.0–2.2)
Quartile 3 (14.7–17.9)	38	(17.7)	1.52	1.7 (1.1–2.5)
Quartile 4 (18.2–33.8)	71	(33.0)	3.20	3.5 (2.4–5.0)
<b>Education level<sup>††</sup></b>				
Any college	8	(6.0)	0.25	Referent
High school diploma	69	(51.5)	1.66	6.7 (3.2–14.0)
Less than high school diploma	51	(38.1)	2.73	11.0 (5.2–25.1)
Unknown	6	(4.5)	—	—
<b>Marital status<sup>§§</sup></b>				
Married or widowed	73	(38.8)	0.95	Referent
Divorced	32	(17.0)	2.37	2.5 (1.6–3.8)
Never married	83	(44.1)	3.13	3.3 (2.4–4.5)
<b>Total</b>	<b>215</b>	<b>(100)</b>	<b>1.49</b>	<b>—</b>

\* Per 100,000 population.

<sup>†</sup> Includes only decedents who were West Virginia residents involved in crashes that occurred in West Virginia (N = 215).

<sup>§</sup> Based on U.S. Census 2000 data.

<sup>¶</sup> Confidence interval.

\*\* Percentage of families with annual income below the poverty line, based on 1999 income; *Quartile 1*: Berkeley, Brooke, Hancock, Hardy, Jefferson, Kanawha, Mineral, Monongalia, Morgan, Ohio, Pendleton, Pleasants, Putnam, and Wood; *Quartile 2*: Cabell, Grant, Greenbrier, Hampshire, Harrison, Jackson, Marion, Marshall, Monroe, Pocahontas, Raleigh, Randolph, Ritchie, and Tyler; *Quartile 3*: Braxton, Doddridge, Lewis, Mason, Mercer, Nicholas, Preston, Roane, Taylor, Tucker, Upshur, Wayne, Wetzel, and Wirt; *Quartile 4*: Barbour, Boone, Calhoun, Clay, Fayette, Gilmer, Lincoln, Logan, McDowell, Mingo, Summers, Webster, and Wyoming.

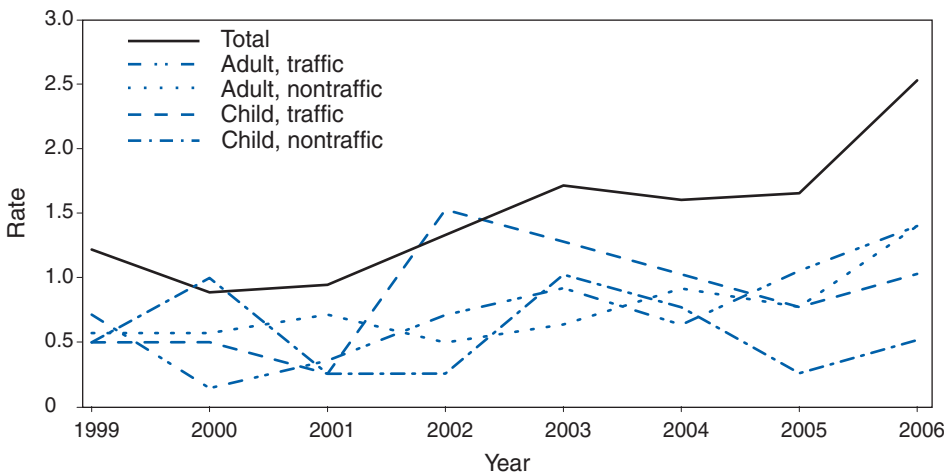
<sup>††</sup> Limited to decedents aged ≥25 years (n = 134).

<sup>§§</sup> Limited to decedents aged ≥15 years (n = 188).

<sup>†</sup> Whites represented 95.0% and non-Hispanics represented 99.3% of the West Virginia population reported by the U.S. Census for 2000 (4).

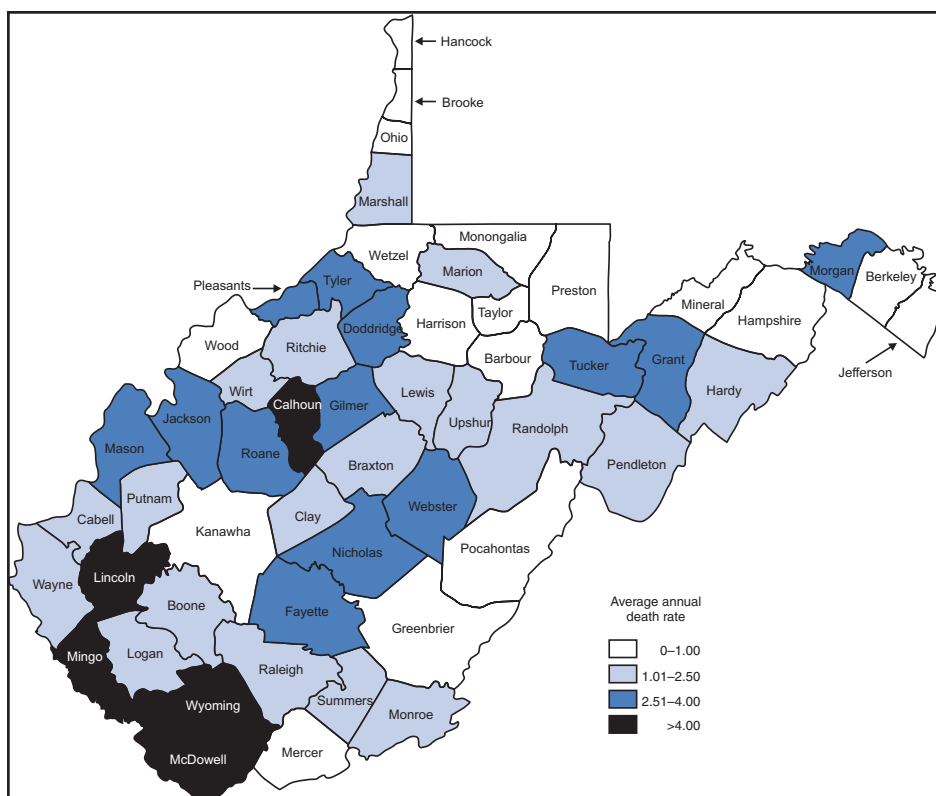
ATV-related death rates also occurred among less educated persons, with rates decreasing successively among each category of higher education attained ( $p < 0.001$ ). The ATV-related death rate of persons aged ≥25 years who had not completed high school (2.73 per 100,000 population) was

**FIGURE 1. Death rate\* attributed to fatal all-terrain vehicle crashes, by age group† and crash classification§ — West Virginia,¶ 1999–2006**



\* Per 100,000 population.  
 † Adult is defined as a person aged ≥18 years; child is defined as a person aged <18 years.  
 § Based on *International Classification of Deaths, 10th Revision*. Traffic crash defined as occurring on a public highway; nontraffic crash occurs entirely in any place other than a public highway.  
 ¶ Includes only decedents who were West Virginia residents involved in crashes that occurred in West Virginia (N = 215).

**FIGURE 2. Average annual death rate\* attributed to fatal all-terrain vehicle crashes, by county of crash — West Virginia,† 1999–2006**



\* Per 100,000 population.  
 † Includes only decedents who were West Virginia residents involved in crashes that occurred in West Virginia (N = 215).

11 times higher than that of those with at least some college education (0.25 per 100,000 population). Among different marital status groups, the highest ATV-related death rates occurred among persons who had never been married (3.13 per 100,000 population) and those who were divorced (2.37 per 100,000 population).

**Reported by:** J Helmkamp, PhD, Injury Control Research Center, West Virginia Univ, Morgantown. D Bixler, MD, J Kaplan, MD, West Virginia Dept of Health and Human Resources. A Hall, DVM, EIS Officer, CDC.

**Editorial Note:** This analysis determined that lower socioeconomic status, lower level of education attained, and single or divorced marital status were associated with higher rates of ATV-related deaths in West Virginia during 1999–2006. The associations between these factors and ATV-related fatalities, which might provide insights to help target community-based interventions, have not been previously described. Consistent with a previous study of ATV-related deaths in West Virginia during 1985–1997, the demographic groups identified with the highest ATV-related death rates in West Virginia include males and persons aged 10–17 years (7).

Since 1999, fatal ATV crashes in West Virginia have continued to increase, with an average of 27 deaths occurring annually and a peak of 46 fatalities in 2006. The West Virginia ATV law, which became effective in 2004, has resulted in no observed change in ATV fatalities among children, and ATV traffic fatalities among adults have continued to increase. One possible explanation for these findings is that the 2004 law effectively legalized ATV use on specific paved roads, contrary to manufacturer recommendations that ATVs be used off-road only. Also, various provisions of the law regarding ATV use on

paved roads, such as whether a rider has traveled  $\leq 10$  miles on the road, make enforcement difficult. Finally, initial public awareness of the law was limited, and households that own ATVs have not universally agreed with or abided by provisions of the law (8).

The findings in this report are subject to at least two limitations. First, helmet use among ATV-related decedents was not consistently reported through vital records throughout the study period; therefore, a comparison of helmet use before and after enactment of the 2004 ATV regulations was not possible. Second, death rates based on the whole population were calculated in this study because reliable estimates of the population of ATV riders in West Virginia during 1999–2006 were unavailable. As of April 2007, approximately 147,000 ATVs were titled in the state, as required by law (M. Holmes, West Virginia Department of Transportation, personal communication, 2007). This represents <33% of the estimated 460,000 ATVs in West Virginia, as determined from results of a household survey conducted in 2005 (8). Without exposure-based fatality rates, assessment of whether the observed trends in fatalities were reflective of all ATV users or were affected by changes in the numbers or use of ATVs during the 8-year study period was not possible.

Studies are being conducted to further evaluate the circumstances and potential contributing factors (e.g., alcohol and helmet use) of fatal West Virginia ATV crashes and the injuries sustained, which will provide useful information for developing additional or more specific prevention recommendations. Previous studies addressing the effectiveness of ATV laws have recommended a law consistent with American Academy of Pediatrics recommendations (9). These include requiring an automobile driver's license and additional certification specific to ATV use, and prohibiting all ATV use by persons aged <16 years or while under the influence of alcohol. The recommendations also would prohibit passengers on ATVs and ATV use on all public highways or at night (10). Such provisions might make the West Virginia ATV law more effective at reducing ATV-related deaths. Community and school-based programs, particularly those targeting adolescents in poor communities, and emphasizing ATV safety also might reduce deaths. Finally, incentive-based prevention strategies, such as reduced insurance premiums or extended warranty coverage for both safety training and helmet use, might provide an impetus for safer ATV use and help reduce the public health burden exacted by ATV-related deaths.

### Acknowledgments

The findings in this report are based, in part, on contributions by L Haddy, PhD, T Light, C Thayer, MS, G Thompson, West Virginia Dept of Health and Human Resources. D Bensyl, PhD, A De, PhD, Office of Workforce and Career Development, CDC.

### References

1. Helmkamp JC. A comparison of state-specific all-terrain vehicle-related death rates, 1990–1999. *Am J Public Health* 2001;91:1792–5.
2. West Virginia Code. Chapter 17F, All-Terrain Vehicles (2004). Available at <http://www.legis.state.wv.us/wvcode/code.cfm?chap=17f&art=1>.
3. World Health Organization. International classification of diseases and health conditions. 10th revision. 2nd ed. Geneva, Switzerland: World Health Organization; 2005. Available at <http://www.who.int/classifications/apps/icd/icd10online>.
4. US Census Bureau. Census 2000. Available at [http://factfinder.census.gov/servlet/DatasetMainPageServlet?\\_program=DEC&\\_submenuId=&\\_lang=en&\\_ts=](http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_submenuId=&_lang=en&_ts=).
5. Dalaker J, Proctor BD. Poverty in the United States: 1999. Current population reports. Washington, DC: US Census Bureau; 2000. Available at <http://www.census.gov/prod/2000pubs/p60-210.pdf>.
6. Bishaw A, Iceland J. Poverty 1999: Census 2000 brief. Washington, DC: US Census Bureau; 2003. Available at <http://www.census.gov/prod/2003pubs/c2kbr-19.pdf>.
7. CDC. All-terrain vehicle-related deaths—West Virginia, 1985–1997. *MMWR* 1999;48:1–4.
8. Althouse R, Kirby J, Helmkamp J. The public's knowledge and opinion about West Virginia's 2004 all-terrain vehicle safety law [Abstract]. Abstracts of the 2nd North American Congress of Epidemiology; June 21–24, 2006. *Am J Epidemiol* 2006;163(Suppl):S208.
9. Upperman JS, Schultz B, Gaines BA, et al. All-terrain vehicle rules and regulations: impact on pediatric mortality. *J Pediatr Surg* 2003;38:1284–6.
10. American Academy of Pediatrics, Committee on Injury and Poison Prevention. All-terrain vehicle injury prevention: two-, three-, and four-wheeled unlicensed motor vehicles. *Pediatrics* 2000;105:1352–4.

## Progress Toward Poliomyelitis Eradication — Pakistan and Afghanistan, 2007

Of the four countries worldwide where wild poliovirus (WPV) transmission has never been interrupted,\* Pakistan and Afghanistan are considered a single epidemiologic block. (1). Use of intense poliomyelitis eradication measures, including close coordination between the two countries and increased use of monovalent oral poliovirus vaccines (mOPVs) against type 1 WPV (WPV1) and type 3 WPV (WPV3), has reduced WPV transmission to historically low levels. However, despite these efforts, in 2007 both types of WPV continued to circulate in areas of Pakistan and

\*The other two countries where WPV transmission has never been interrupted are India and Nigeria.

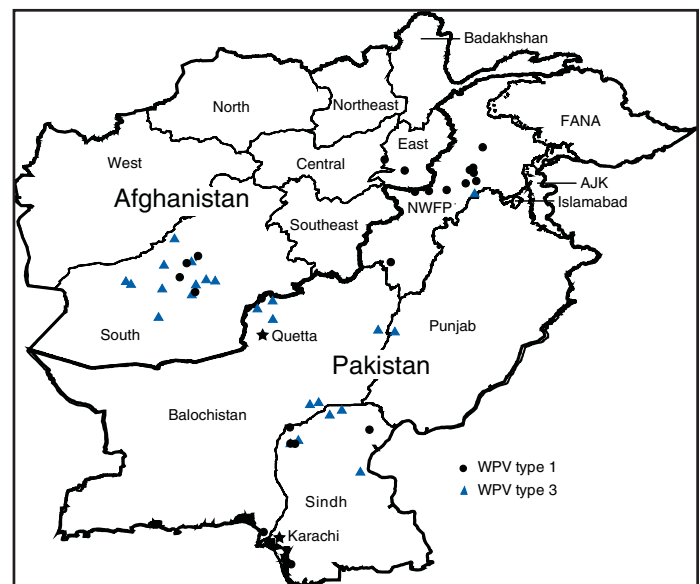
Afghanistan. Ongoing conflicts and security concerns in remote areas with rugged terrain limit access to children and decrease vaccination coverage from routine and supplementary immunization activities (SIAs)<sup>†</sup> in border areas of both countries where WPV transmission is endemic. In other WPV-endemic areas of Pakistan, where security and access concerns do not exist, operational problems in implementing SIAs resulted in inadequate vaccination of children, which failed to interrupt WPV transmission. This report updates previous reports (2) and describes polio eradication activities in Pakistan and Afghanistan during January–December 2007 (data as of March 22, 2008). Further progress toward polio eradication will require continued measures to address security concerns in portions of both countries and problems with implementing SIAs in secure areas of Pakistan.

### Immunization Activities

Estimated routine vaccination coverage of infants with 3 doses of oral poliovirus vaccine (OPV3) in 2006<sup>§</sup> was 83% nationally in Pakistan and 77% in Afghanistan (3). However, OPV3 coverage varied substantially among districts within each country; in Pakistan, 46 (35%) of the 132 districts reported infant OPV3 coverage below 80%, with 13 (10%) districts reporting <60% coverage. Reported infant OPV3 coverage data for Afghanistan, which are less reliable, ranged as low as 32% among the 329 districts.

Both Pakistan and Afghanistan conducted large-scale house-to-house SIAs with oral polio vaccine (OPV) during 2007, targeting children aged <5 years. Pakistan conducted four national immunization days (NIDs) and seven subnational immunization days (SNIDs) in the Federally Administered Tribal Areas and districts of North-West Frontier Province (NWFP), in districts in the Quetta area of Balochistan province bordering Afghanistan, in southern Punjab, and in Sindh province (including the city of Karachi) (Figure). Afghanistan also conducted four NIDs and seven SNIDs in its south, southeast, and east regions, along the border with Pakistan. Because of extensive cross-border movement and migration between the two countries extending from central Pakistan through Balochistan into southern Afghanistan, SIAs were synchronized largely to optimize simultaneous, comprehensive coverage of border areas and of children in transit. Because of circulation

**FIGURE. Wild poliovirus (WPV) cases, by type and province/region\* — Pakistan and Afghanistan, 2007**



\*NWFP: North-West Frontier Province (includes Federally Administered Tribal Areas); AJK: Azad, Jammu, and Kashmir; FANA: the Federally Administered Northern Areas.

of both WPV1 and WPV3, both countries used type 1 and type 3 mOPV (mOPV1 and mOPV3) in addition to trivalent OPV (tOPV) alone or in combination with mOPVs at different times on a district basis during the 2007 SIAs (Table 1).

Overall reported vaccination coverage achieved after SIAs was reported to be consistently >95% at the district level in Pakistan and the province level in Afghanistan. However, these reports might overestimate district coverage; in addition, an analysis of post-SIA coverage at the sub-district (union council) level in high-risk districts of Pakistan found reported coverage below the district average of approximately 95% in 20% of union councils. In particular, coverage remained suboptimal in security-compromised and remote areas along the border in both countries.

In 2007, efforts continued in Afghanistan to get agreement from all partners on ceasing hostilities during SIAs to allow vaccinators to safely reach all children. Indirect contact was made with antigovernment groups; since August 2007, these groups have publicly supported polio eradication and SIAs in their areas of influence. However, both post-SIA evaluation data and data on OPV status of investigated cases document that up to 20% of children still continue to be missed in some areas of southwest Afghanistan.

<sup>†</sup> Mass campaigns conducted for a brief period (days to weeks) in which 1 dose of oral poliovirus vaccine is administered to all children aged <5 years, regardless of vaccination history.

<sup>§</sup> Most recent year for which data are available; World Health Organization (WHO)/UNICEF estimates.



**TABLE 1. Supplementary immunization activities (SIAs),\* by type, month, and oral poliovirus vaccine preparation used—Pakistan and Afghanistan, 2007**

Month	Pakistan				Afghanistan			
	SIA type	Vaccine preparation			SIA type	Vaccine preparation		
		mOPV1 <sup>†</sup>	mOPV3 <sup>§</sup>	tOPV <sup>¶</sup>		mOPV1	mOPV3	tOPV
January	NID**			x	SNID			x
February	SNID <sup>††</sup>			x	SNID			x
March	SNID			x	NID			x
April	NID			x	NID			x
May	SNID	x		x	SNID	x		x
June	SNID	x		x	SNID	x		
July	SNID	x			SNID	x		
August	NID			x	NID			x
September	SNID	x	x		SNID	x	x	x
October	NID	x	x	x	NID	x	x	x
November	—				—			
December	SNID	x			SNID	x		

\* Mass campaign conducted for a brief period (days to weeks) in which 1 dose of oral poliovirus vaccine is administered to all children aged <5 years, regardless of vaccination history.

<sup>†</sup> Monovalent oral poliovirus vaccine type 1.

<sup>§</sup> Monovalent oral poliovirus vaccine type 3.

<sup>¶</sup> Trivalent oral poliovirus vaccine types 1, 2, and 3.

\*\* National immunization day.

<sup>††</sup> Subnational immunization day.

### Acute Flaccid Paralysis (AFP) Surveillance

High-quality AFP surveillance was maintained in both countries in 2007.<sup>‡</sup> The nonpolio AFP rate (number of nonpolio AFP cases per 100,000 population aged <15 years) at the national level was 5.6 in Pakistan (range among four provinces and other areas: 3.3–8.3) and 6.9 in Afghanistan (range among eight regions: 5.0–8.9) (Table 2). The percentage of AFP cases with collection of adequate stool specimens was 91% both in Pakistan (range: 83%–96%) and in Afghanistan (range: 87%–100%).

The polio laboratory at the National Institutes of Health in Islamabad, Pakistan, which serves as a Regional Reference Laboratory in the global polio laboratory network, provides laboratory support for AFP surveillance in both countries, including genomic sequencing. During 2007, the polio laboratory processed 13,513 stool specimens from both countries, with 10,845 (80%) of the specimens from AFP cases and the remaining specimens from contacts of persons with AFP.

### WPV Incidence

The number of confirmed polio cases in Pakistan decreased from 40 reported from 22 districts in 2006 to 32 cases

reported from 18 districts in 2007 (Figure and Table 2). Of polio cases reported in 2007, 19 (59%) were caused by WPV1 and 13 (41%) by WPV3, compared with 20 (50%) cases each caused by WPV1 and WPV3 in 2006. In 2007, 21 (66%) of the cases were among children aged <3 years. Among the 31 children with WPV for whom vaccination data were available, a substantial proportion were undervaccinated for their age; six (19%) had never received any OPV doses, and six (19%) had received 1–3 OPV doses. The median OPV doses received by children with polio was 6, compared with a median of 15 doses received by children with nonpolio AFP reported in 2007.

In Afghanistan, 17 confirmed polio cases were reported from 13 districts in 2007, compared with 31 from 17 districts in 2006 (Figure and Table 2). Of polio cases reported in 2007, six (35%) were caused by WPV1, and 11 (65%) were caused by WPV3, compared with 29 (94%) caused by WPV1 and two (6%) caused by WPV3 in 2006. Among children with WPV in 2007, 16 (94%) were aged <3 years, including 10 (59%) who were aged <2 years. Four (24%) of the 17 children with polio had never received OPV before, and six (35%) had received 1–3 OPV doses. The median OPV doses received by children with polio was 2, compared with a median of 12 doses received by children with nonpolio AFP reported in 2007.

Transmission of WPV in Pakistan and Afghanistan has occurred largely in two zones, with limited movement of WPV between these two zones occurring in Pakistan. The northern transmission zone in Pakistan, which reported 10 WPV1 cases and one WPV3 case in 2007, makes up most of NWFP, including the tribal agencies along the border

<sup>‡</sup> The quality of AFP surveillance is monitored by three performance indicators: 1) detection rate of AFP cases not caused by WPV, 2) the proportion of AFP cases with adequate stool specimens, and 3) the proportion of stool specimens processed in a WHO-accredited laboratory. Current WHO operational targets for countries with endemic polio transmission are a nonpolio AFP detection rate of at least two cases per 100,000 population aged <15 years and adequate stool-specimen collection from >80% of AFP cases, in which two specimens are collected ≥24 hours apart, both within 14 days of paralysis onset, and shipped on ice or frozen ice packs to a WHO-accredited laboratory, arriving in good condition.

**TABLE 2. Acute flaccid paralysis (AFP) surveillance indicators and reported wild poliovirus (WPV) cases, by province or region, quarter, and WPV type — Pakistan and Afghanistan, 2007\***

Country/ Province, Area, or Region	AFP surveillance indicators			Reported WPV cases						
	No. of AFP cases	Nonpolio AFP rate†	% with adequate specimens‡	WPV1/WPV3 Quarter				Total cases by type		Total WPV cases
				1st	2nd	3rd	4th	WPV1	WPV3	
<b>Pakistan</b>	<b>4,425</b>	<b>5.6</b>	<b>91</b>	<b>2/5</b>	<b>3/1</b>	<b>4/2</b>	<b>10/5</b>	<b>19</b>	<b>13</b>	<b>32</b>
NWFP¶	1,011	8.3	87	1/1	3/0		6/0	10	1	11
Balochistan	237	6.1	83	0/2			2/4	2	6	8
Punjab	2,000	4.8	94			0/1			1	1
Sindh	1,092	6.1	90	1/2	0/1	4/1	2/1	7	5	12
Other areas**	85	3.3	96							
<b>Afghanistan</b>	<b>1,115</b>	<b>6.9</b>	<b>91</b>		<b>4/1</b>	<b>0/7</b>	<b>2/3</b>	<b>6</b>	<b>11</b>	<b>17</b>
South	155	5.0	87		2/1	0/7	2/3	4	11	15
Southeast	101	6.1	89							
East	122	8.3	95		2/0			2	0	2
West	138	5.2	95							
Central	213	7.0	96							
Northeast	166	8.8	87							
North	178	7.9	92							
Badakhshan	42	8.9	100							

\* Data as of March 22, 2008.

† Per 100,000 children aged <15 years.

‡ Two stool specimens collected at an interval of at least 24 hours within 14 days of paralysis onset and properly shipped to the laboratory.

¶ North-West Frontier Province; includes Federally Administered Tribal Areas.

\*\* Includes Azad, Jammu, and Kashmir (AJK), Federally Administered Northern Areas, and Islamabad Capital Territory.

with Afghanistan (Figure). The east region of Afghanistan that borders this area of Pakistan reported two WPV1 cases in early 2007. The southern transmission zone, which forms a corridor from the south region of Afghanistan into Pakistan through Balochistan and southern Punjab into northern and southern Sindh (including Karachi), remained the principal transmission zone in 2007. Pakistan reported nine WPV1 and 12 WPV3 cases from this zone in 2007, and the adjacent south region of Afghanistan reported four WPV1 cases and 11 WPV3 cases. In 2007, 23 (96%) of 24 WPV3 cases in the two countries were reported from the southern zone, with no WPV3 case reported from the northern zone since January 2007. Genetic sequencing data of all isolates confirmed shared circulation of WPVs in Pakistan and Afghanistan in the two transmission zones.

In 2008, through mid-March, WPV transmission had continued in Pakistan, with three cases of WPV1 reported from north-central Sindh Province. WPV transmission also had continued in Afghanistan, with three cases of WPV1 reported from the south region (two cases) and adjacent west region (one case), and one case of WPV3 reported from the south region.

**Reported by:** World Health Organization (WHO) Eastern Mediterranean Regional Office Egypt, Cairo; WHO Pakistan, Islamabad; WHO Afghanistan, Kabul; Polio Eradication Dept, WHO, Geneva, Switzerland. Global Immunization Div, Division of Viral Diseases, National Center for Immunization and Respiratory Diseases, CDC.

**Editorial Note:** In 2007, limited progress was made toward interrupting WPV transmission in Pakistan-Afghanistan. The

number of polio cases was reduced, as was the geographic extent of poliovirus transmission in Pakistan and Afghanistan. In Afghanistan, increased use of mOPV1 and reduced use of type 3-containing OPV led to a decrease in WPV1 cases from 2006 but an increase in WPV3 cases. The majority of the population in both countries live in polio-free areas; Pakistan's largest province, Punjab (with >65% of the total population), reported only one case of WPV3 in 2007 and no cases of WPV1 since mid-2006. AFP surveillance remains highly sensitive in both countries, including in most of the insecure border areas. In Afghanistan, a breakthrough occurred in August 2007 when the support of antigovernment groups was obtained, which increased areas accessible to vaccinators during SIAs in the south region and resulted in improved coverage of SIAs during September–December 2007. Nonetheless, transmission continued in remote areas affected by ongoing conflict and security problems.

Despite implementation of 11 SIAs, WPV transmission continued in the same areas of Pakistan as in previous years for two main reasons. First, reaching children during SIAs in insecure areas remains one of the greatest challenges in both countries and will need continued engagement of civil administration and local communities, including support from tribal and religious leaders. Second, implementation of SIAs remains weak in the remaining WPV-endemic areas of the Pakistani provinces of Sindh and Balochistan, where no access or security concerns exist. Other secure areas of Pakistan succeeded in interrupting WPV transmission

several years ago. The Technical Advisory Group on Polio Eradication for Afghanistan and Pakistan recommended at its February 2008 meeting that the government of Pakistan take all necessary steps to ensure that health and political leaders in affected districts assure that SIA rounds reach the highest possible coverage.

Prompt interruption of WPV transmission in Pakistan and Afghanistan is a regional and global priority. In addition to continued support from the international polio eradication partnership,\*\* success will require overcoming one of the most important remaining challenges in polio eradication globally: the barrier to vaccination of children in large, remote, and security-compromised areas. Critical improvements are needed in the quality of SIAs and delivery of routine immunization, particularly in the Pakistan provinces of Sindh and Balochistan, to further limit transmission.

#### References

1. CDC. Progress toward interruption of wild poliovirus transmission—worldwide, January 2006–May 2007. *MMWR* 2007;56:682–5.
2. CDC. Progress toward poliomyelitis eradication—Pakistan and Afghanistan, January 2006–February 2007. *MMWR* 2007;56:340–3.
3. WHO vaccine-preventable diseases monitoring system: 2007 global summary. Geneva, Switzerland: World Health Organization. Available at [http://whqlibdoc.who.int/hq/2007/who\\_ivb\\_2007\\_eng.pdf](http://whqlibdoc.who.int/hq/2007/who_ivb_2007_eng.pdf).

\*\* Polio eradication efforts in Afghanistan and Pakistan are supported by the Bill and Melinda Gates Foundation; the governments of Japan, the Netherlands, and the United Kingdom; the International Committee of the Red Cross; the International Federation of Red Cross and Red Crescent Societies; Rotary International; UNICEF; the United States Agency for International Development; WHO; and CDC.

#### Notice to Readers

### Cerebral Palsy Awareness Day — March 25, 2008

On March 25, 2008, CDC hosted its second annual Cerebral Palsy Awareness Day. The National Center on Birth Defects and Developmental Disabilities partnered with Reaching for the Stars: A Foundation of Hope for Children with Cerebral Palsy to sponsor a program designed to bring awareness to this disability, which affects an estimated 3.6 per 1,000 school-age children in the United States (1). Cerebral palsy (CP) is the most common cause of motor disability among children, with an estimated lifetime cost of nearly \$1 million per person (2003 dollars) (2).

Understanding the magnitude and characteristics of the prevalence of CP is critical to creating policies and planning programs for affected children and their families. Investigators from the Autism and Developmental Disabilities Monitoring CP Network (Alabama, Georgia [CDC], and Wisconsin) recently reported these first population-based

estimates of CP prevalence in the United States across multiple communities (1). These will serve as meaningful baselines for understanding CP prevalence in the future.

Information on CDC's CP activities and the CP Awareness Day program is available at <http://www.cdc.gov/ncbddd/dd/ddcp.htm> and [http://www.cdc.gov/ncbddd/autism/actearly/cerebral\\_palsy.html](http://www.cdc.gov/ncbddd/autism/actearly/cerebral_palsy.html).

#### References

1. Yeargin-Allsopp M, Van Naarden Braun K, Doernberg NS, Benedict RE, Kirby RS, Durkin MS. Prevalence of cerebral palsy in 8-year-old children in three areas of the United States in 2002: a multisite collaboration. *Pediatrics* 2008;121:547–54.
2. Honeycutt A, Dunlap L, Chen H, al Homsy G, Grosse S, Schendel D. Economic costs associated with mental retardation, cerebral palsy, hearing loss, and vision impairment—United States, 2003. *MMWR* 2004;53:57–9.

#### Notice to Readers

### Update to N (Not Notifiable) Indicators in Table II

This issue of *MMWR* incorporates updates to N indicators used in *MMWR* Table II (Provisional cases of selected notifiable diseases, United States) to specify whether a given nationally notifiable infectious disease (NNID) is not notifiable for the specified reporting jurisdiction and period. Results from the 2007 Council of State and Territorial Epidemiologists (CSTE)-CDC State Reportable Conditions Assessment (SRCA) have been finalized and are being applied to data for N indicators displayed for 2007 NNID data (1). In addition, results from the 2007 SRCA also are being applied to data for N indicators for 2008 until results from the 2008 SRCA are available.

#### Reference

1. CDC. Changes to *MMWR* Table I and presentation of National Notifiable Diseases Surveillance System data—January 2008. *MMWR* 2008;57:14.

### Errata: Vol 57, No. 1

In “Recommended Immunization Schedules for Persons Aged 0–18 Years—United States, 2008,” errors occurred.

On page Q-2, under Figure 1, in footnote 4, *Haemophilus influenzae* type b conjugate vaccine (Hib), the second bullet should read:

- TriHiBit® (DTaP/Hib) combination products should not be used for primary immunization but can be used as boosters after any Hib vaccine in children aged  $\geq 12$  months.

On page Q-4, in the lower section of the Table titled, Catch-up schedule for persons aged 7–18 years, in row Human Papillomavirus, under column heading Dose 2 to Dose 3, the text should read:

12 weeks (and 24 weeks after the first dose)

**TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending March 22, 2008 (12th Week)\***

Disease	Current week	Cum 2008	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2007	2006	2005	2004	2003	
Anthrax	—	—	—	—	1	—	—	—	
Botulism:									
foodborne	—	1	0	26	20	19	16	20	
infant	—	12	2	83	97	85	87	76	
other (wound & unspecified)	—	1	0	24	48	31	30	33	
Brucellosis	—	9	1	128	121	120	114	104	
Chancroid	1	11	1	31	33	17	30	54	NY (1)
Cholera	—	—	—	7	9	8	6	2	
Cyclosporiasis§	—	14	3	91	137	543	160	75	
Diphtheria	—	—	—	—	—	—	—	1	
Domestic arboviral diseases§¶:									
California serogroup	—	—	0	44	67	80	112	108	
eastern equine	—	—	—	4	8	21	6	14	
Powassan	—	—	—	1	1	1	1	—	
St. Louis	—	—	—	7	10	13	12	41	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§¶¶:									
<i>Ehrlichia chaffeensis</i>	3	23	2	734	578	506	338	321	MD (2), TX (1)
<i>Ehrlichia ewingii</i>	—	1	—	—	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	1	6	1	729	646	786	537	362	MD (1)
undetermined	—	1	0	162	231	112	59	44	
<i>Haemophilus influenzae</i> ††									
invasive disease (age <5 yrs):									
serotype b	—	7	0	23	29	9	19	32	
nonserotype b	—	33	4	173	175	135	135	117	
unknown serotype	1	49	4	192	179	217	177	227	CO (1)
Hansen disease§	—	15	2	71	66	87	105	95	
Hantavirus pulmonary syndrome§	—	2	0	32	40	26	24	26	
Hemolytic uremic syndrome, postdiarrheal§	—	12	2	275	288	221	200	178	
Hepatitis C viral, acute	11	125	17	831	766	652	720	1,102	MO (1), MD (1), FL (1), AL (1), WA (1), CA (6)
HIV infection, pediatric (age <13 yrs)§§	—	—	4	—	—	380	436	504	
Influenza-associated pediatric mortality§¶¶¶	5	53	2	76	43	45	—	N	CA (1), MA (2), NY (1), PA (1)
Listeriosis	3	87	11	785	884	896	753	696	OH (1), FL (1), OK (1)
Measles***	—	7	1	42	55	66	37	56	
Meningococcal disease, invasive†††:									
A, C, Y, & W-135	3	62	8	304	318	297	—	—	PA (1), MN (2)
serogroup B	—	38	4	149	193	156	—	—	
other serogroup	1	9	1	31	32	27	—	—	OK (1)
unknown serogroup	9	154	19	581	651	765	—	—	NY (3), NYC (1), FL (2), TN (1), CO (1), CA (1)
Mumps	1	127	49	775	6,584	314	258	231	CA (1)
Novel influenza A virus infections	—	—	—	1	N	N	N	N	
Plague	—	—	—	6	17	8	3	1	
Poliomyelitis, paralytic	—	—	—	—	—	1	—	—	
Poliovirus infection, nonparalytic§	—	—	—	—	N	N	N	N	
Psittacosis§	—	1	0	11	21	16	12	12	
Q fever§,§§§ total:	—	8	2	190	169	136	70	71	
acute	—	6	—	—	—	—	—	—	
chronic	—	2	—	—	—	—	—	—	
Rabies, human	—	—	—	—	3	2	7	2	
Rubella¶¶¶	—	—	0	11	11	11	10	7	
Rubella, congenital syndrome	—	—	—	—	1	1	—	1	
SARS-CoV§,§§§§	—	—	0	—	—	—	—	8	

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

\* Incidence data for reporting years 2007 and 2008 are provisional, whereas data for 2003, 2004, 2005, and 2006 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 and 2008 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at <http://www.cdc.gov/epo/dphsi/phs/infdis.htm>.

¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.

¶¶ The names of the reporting categories changed in 2008 as a result of revisions to the case definitions. Cases reported prior to 2008 were reported in the categories: Ehrlichiosis, human monocytic (analogous to *E. chaffeensis*); Ehrlichiosis, human granulocytic (analogous to *Anaplasma phagocytophilum*), and Ehrlichiosis, unspecified, or other agent (which included cases unable to be clearly placed in other categories, as well as possible cases of *E. ewingii*).

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

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

¶¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Fifty-three cases occurring during the 2007–08 influenza season have been reported.

\*\*\* No measles cases were reported for the current week.

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

§§§ In 2008, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.

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

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

**TABLE I. (Continued) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending March 22, 2008 (12th Week)\***

Disease	Current week	Cum 2008	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2007	2006	2005	2004	2003	
Smallpox§	—	—	—	—	—	—	—	—	—
Streptococcal toxic-shock syndrome§	—	22	5	103	125	129	132	161	
Syphilis, congenital (age <1 yr)	—	18	7	292	349	329	353	413	
Tetanus	—	—	0	23	41	27	34	20	
Toxic-shock syndrome (staphylococcal)§	2	11	3	84	101	90	95	133	NY (1), ID (1)
Trichinellosis	—	2	0	6	15	16	5	6	
Tularemia	—	2	0	115	95	154	134	129	
Typhoid fever	5	63	5	380	353	324	322	356	NC (2), TX (1), WA (1), CA (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	—	0	27	6	2	—	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	—	—	1	3	1	N	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	4	25	1	361	N	N	N	N	FL (3), AL (1)
Yellow fever	—	—	—	—	—	—	—	—	

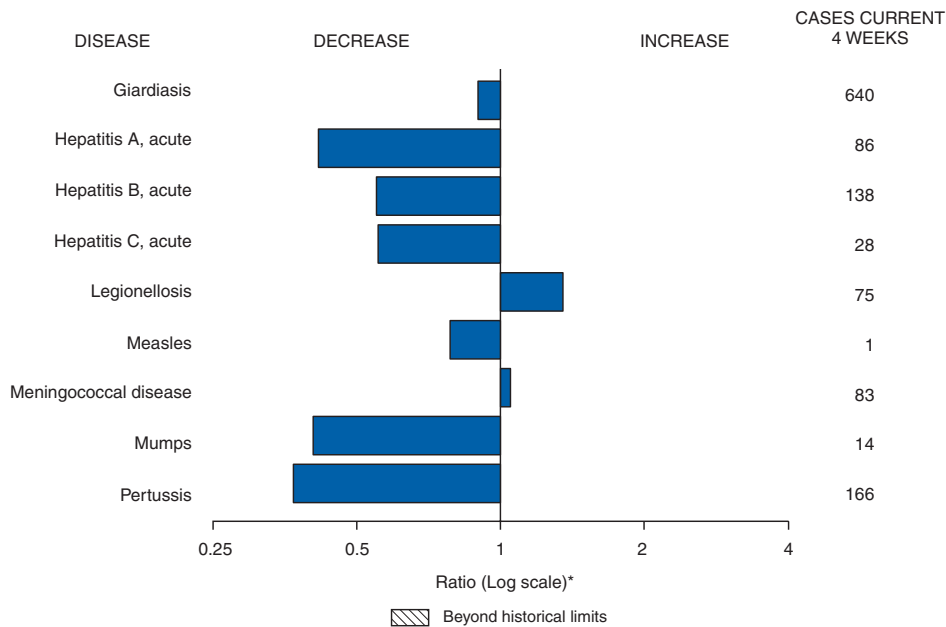
—: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.

\* Incidence data for reporting years 2007 and 2008 are provisional, whereas data for 2003, 2004, 2005, and 2006 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 and 2008 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at <http://www.cdc.gov/epo/dphsi/phs/infdis.htm>.

**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals March 22, 2008, with historical data**



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

**Notifiable Disease Data Team and 122 Cities Mortality Data Team**  
 Patsy A. Hall  
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 Lence Blanton      Pearl C. Sharp









TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending March 22, 2008, and March 24, 2007 (12th Week)\*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All serogroups				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	41	324	1,313	1,117	1,718	1	25	109	143	206	13	19	51	263	293
<b>New England</b>	1	44	302	47	134	—	1	23	1	7	—	0	3	2	11
Connecticut	—	12	214	—	24	—	0	16	—	—	—	0	1	1	2
Maine§	1	6	61	33	12	—	0	2	—	2	—	0	1	1	2
Massachusetts	—	0	31	—	48	—	0	3	—	5	—	0	2	—	5
New Hampshire	—	8	88	11	45	—	0	4	1	—	—	0	1	—	—
Rhode Island§	—	0	79	—	—	—	0	7	—	—	—	0	1	—	—
Vermont§	—	1	13	3	5	—	0	2	—	—	—	0	1	—	2
<b>Mid. Atlantic</b>	16	167	674	666	896	—	7	18	30	48	5	2	8	31	28
New Jersey	—	39	182	96	282	—	1	4	—	7	—	0	1	1	6
New York (Upstate)	7	54	224	76	118	—	1	8	3	5	3	1	3	12	6
New York City	—	5	27	4	42	—	4	9	20	30	1	0	4	3	4
Pennsylvania	9	51	324	490	454	—	1	4	7	6	1	1	5	15	12
<b>E.N. Central</b>	—	11	169	17	59	1	2	7	25	34	—	3	8	45	50
Illinois	—	0	16	—	5	—	1	6	9	18	—	1	3	11	19
Indiana	—	0	7	1	1	—	0	2	1	1	—	0	4	8	6
Michigan	—	0	5	5	3	—	0	2	5	5	—	0	2	10	9
Ohio	—	0	4	3	2	1	0	3	9	4	—	1	3	12	10
Wisconsin	—	10	149	8	48	—	0	1	1	6	—	0	1	4	6
<b>W.N. Central</b>	—	4	714	2	20	—	0	8	5	12	2	1	8	32	23
Iowa	—	1	11	2	4	—	0	1	—	2	—	0	3	8	6
Kansas	—	0	2	—	1	—	0	1	—	—	—	0	1	—	2
Minnesota	—	0	714	—	15	—	0	8	1	7	2	0	7	13	4
Missouri	—	0	4	—	—	—	0	1	1	1	—	0	3	7	8
Nebraska§	—	0	1	—	—	—	0	2	3	2	—	0	2	3	1
North Dakota	—	0	2	—	—	—	0	1	—	—	—	0	1	—	1
South Dakota	—	0	0	—	—	—	0	1	—	—	—	0	1	1	1
<b>S. Atlantic</b>	19	62	215	335	573	—	5	14	44	42	2	3	11	33	39
Delaware	5	12	34	89	95	—	0	1	—	1	—	0	1	—	—
District of Columbia	1	0	7	12	2	—	0	1	—	1	—	0	0	—	—
Florida	2	1	11	13	4	—	1	7	15	9	2	1	7	15	11
Georgia	—	0	3	1	—	—	1	3	12	4	—	0	3	3	6
Maryland§	10	34	133	201	404	—	1	5	14	13	—	0	2	3	11
North Carolina	—	0	8	2	1	—	0	4	2	4	—	0	4	3	3
South Carolina§	—	0	4	1	4	—	0	1	1	—	—	0	3	9	3
Virginia§	1	17	62	15	63	—	0	7	—	10	—	0	2	—	5
West Virginia	—	0	9	1	—	—	0	1	—	—	—	0	1	—	—
<b>E.S. Central</b>	—	0	5	—	4	—	0	3	2	7	1	1	3	17	15
Alabama§	—	0	3	—	1	—	0	1	1	1	—	0	2	—	3
Kentucky	—	0	2	—	—	—	0	1	1	1	—	0	2	4	2
Mississippi	—	0	1	—	—	—	0	1	—	1	—	0	2	4	4
Tennessee§	—	0	4	—	3	—	0	2	—	4	1	0	2	9	6
<b>W.S. Central</b>	1	1	8	3	10	—	2	55	6	15	1	2	11	25	33
Arkansas§	—	0	1	—	—	—	0	1	—	—	—	0	2	2	5
Louisiana	—	0	0	—	2	—	0	2	—	8	—	0	3	5	11
Oklahoma	—	0	0	—	—	—	0	2	1	1	1	0	4	6	4
Texas§	1	1	8	3	8	—	1	54	5	6	—	1	6	12	13
<b>Mountain</b>	—	1	3	3	2	—	1	5	6	16	1	1	4	17	24
Arizona	—	0	1	1	—	—	0	1	1	4	—	0	2	3	4
Colorado	—	0	1	2	—	—	0	2	2	9	1	0	2	3	7
Idaho§	—	0	2	—	—	—	0	2	—	—	—	0	2	2	2
Montana§	—	0	2	—	1	—	0	1	—	1	—	0	1	1	1
Nevada§	—	0	2	—	1	—	0	3	3	—	—	0	2	3	3
New Mexico§	—	0	2	—	—	—	0	1	—	1	—	0	1	3	1
Utah	—	0	2	—	—	—	0	3	—	1	—	0	2	1	6
Wyoming§	—	0	1	—	—	—	0	0	—	—	—	0	1	1	—
<b>Pacific</b>	4	3	11	44	20	—	3	9	24	25	1	4	20	61	70
Alaska	—	0	2	—	2	—	0	0	—	2	—	0	1	—	1
California	4	2	9	43	18	—	2	8	18	18	1	3	12	44	53
Hawaii	N	0	0	N	N	—	0	1	1	—	—	0	2	—	2
Oregon§	—	0	1	1	—	—	0	2	3	4	—	1	3	9	8
Washington	—	0	7	—	—	—	0	3	2	1	—	0	8	8	6
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	—	1	—	0	1	—	3
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

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

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

\* Incidence data for reporting years 2007 and 2008 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 March 22, 2008, and March 24, 2007 (12th Week)\*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	33	166	627	1,095	2,181	55	98	176	597	962	4	34	147	46	102
<b>New England</b>	—	20	45	29	365	5	9	22	50	100	—	0	1	—	1
Connecticut	—	0	5	—	17	4	4	10	34	44	—	0	0	—	—
Maine†	—	1	5	14	28	—	1	5	3	22	N	0	0	N	N
Massachusetts	—	16	33	—	287	N	0	0	N	N	—	0	1	—	1
New Hampshire	—	1	5	3	16	—	1	4	6	8	—	0	1	—	—
Rhode Island†	—	0	8	8	2	N	0	0	N	N	—	0	0	—	—
Vermont†	—	0	6	4	15	1	2	13	7	26	—	0	0	—	—
<b>Mid. Atlantic</b>	4	22	36	161	376	6	25	56	71	236	—	1	7	3	10
New Jersey	—	3	7	2	57	—	0	0	—	—	—	0	3	—	1
New York (Upstate)	3	8	24	53	191	6	9	20	66	73	—	0	1	—	—
New York City	—	2	7	15	41	—	0	5	5	16	—	0	3	1	4
Pennsylvania	1	7	22	91	87	—	13	44	—	147	—	0	3	2	5
<b>E.N. Central</b>	11	24	184	397	411	—	2	39	1	3	—	1	4	1	3
Illinois	—	2	8	10	57	N	0	0	N	N	—	1	3	—	1
Indiana	—	0	9	4	2	—	0	1	—	—	—	0	2	—	—
Michigan	2	4	16	32	93	—	1	28	—	2	—	0	1	—	1
Ohio	9	12	176	351	190	—	1	11	1	1	—	0	2	1	1
Wisconsin	—	0	24	—	69	N	0	0	N	N	—	0	0	—	—
<b>W.N. Central</b>	—	12	134	95	139	—	4	13	14	30	1	5	37	10	12
Iowa	—	2	8	16	45	—	0	3	1	2	—	0	4	—	1
Kansas	—	2	5	2	48	—	1	7	—	18	—	0	2	—	3
Minnesota	—	0	131	—	8	—	0	6	9	3	—	0	4	—	—
Missouri	—	2	16	63	16	—	0	3	—	2	1	5	29	10	8
Nebraska†	—	1	12	12	5	—	0	0	—	—	—	0	2	—	—
North Dakota	—	0	4	—	1	—	0	5	2	5	—	0	0	—	—
South Dakota	—	0	7	2	16	—	0	2	2	—	—	0	1	—	—
<b>S. Atlantic</b>	5	15	48	107	239	41	40	63	410	509	2	14	111	25	52
Delaware	—	0	2	1	1	—	0	0	—	—	—	0	2	—	4
District of Columbia	—	0	1	1	2	—	0	0	—	—	—	0	1	—	—
Florida	1	3	9	29	76	—	0	8	27	124	—	0	3	1	3
Georgia	1	0	3	2	13	16	5	31	86	49	—	0	6	3	3
Maryland†	1	2	6	15	37	7	9	18	86	78	2	1	6	7	10
North Carolina	—	4	34	35	59	9	9	19	87	93	—	5	96	11	22
South Carolina†	2	1	22	14	19	—	0	11	—	28	—	0	7	—	4
Virginia†	—	2	11	10	29	—	12	31	102	121	—	2	11	2	6
West Virginia	—	0	12	—	3	9	0	11	22	16	—	0	3	1	—
<b>E.S. Central</b>	1	6	35	47	66	—	3	7	14	27	—	5	16	3	20
Alabama†	—	1	6	15	19	—	0	0	—	—	—	1	10	2	9
Kentucky	—	0	4	6	3	—	0	3	3	6	—	0	2	—	—
Mississippi	—	3	32	18	12	—	0	1	—	—	—	0	3	—	1
Tennessee†	1	1	5	8	32	—	2	6	11	21	—	2	10	1	10
<b>W.S. Central</b>	—	20	112	40	98	2	1	23	11	15	1	1	30	3	2
Arkansas†	—	2	17	7	9	1	1	3	10	6	—	0	15	—	—
Louisiana	—	0	2	—	5	—	0	0	—	—	—	0	2	1	1
Oklahoma	—	0	26	1	—	1	0	22	1	9	—	0	20	—	—
Texas†	—	16	102	32	84	—	0	0	—	—	1	1	7	2	1
<b>Mountain</b>	11	19	40	121	309	—	2	8	8	1	—	0	4	1	1
Arizona	—	2	10	13	92	N	0	0	N	N	—	0	1	—	—
Colorado	3	5	14	22	84	—	0	0	—	—	—	0	2	—	—
Idaho†	2	0	4	6	9	—	0	4	—	—	—	0	1	—	1
Montana†	6	1	11	35	10	—	0	3	—	—	—	0	1	—	—
Nevada†	—	0	6	2	7	—	0	2	—	—	—	0	0	—	—
New Mexico†	—	1	7	2	12	—	0	2	7	—	—	0	1	1	—
Utah	—	5	27	41	84	—	0	2	—	1	—	0	0	—	—
Wyoming†	—	0	2	—	11	—	0	4	1	—	—	0	2	—	—
<b>Pacific</b>	1	17	243	98	178	1	4	10	18	41	—	0	2	—	1
Alaska	—	1	6	17	9	—	0	3	6	21	N	0	0	N	N
California	—	9	32	13	120	1	3	8	12	20	—	0	2	—	1
Hawaii	—	0	2	2	8	—	0	0	—	—	N	0	0	N	N
Oregon†	—	2	14	18	14	—	0	3	—	—	—	0	1	—	—
Washington	1	3	209	48	27	—	0	0	—	—	N	0	0	N	N
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	—	—	4	0	5	8	15	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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

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

\* Incidence data for reporting years 2007 and 2008 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 March 22, 2008, and March 24, 2007 (12th Week)\*

Reporting area	Streptococcal disease, invasive, group A					<i>Streptococcus pneumoniae</i> , invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max		
<b>United States</b>	97	87	187	1,273	1,386	22	32	146	360	440
<b>New England</b>	12	4	28	30	83	—	1	4	5	40
Connecticut	10	0	22	10	2	—	0	1	—	7
Maine§	1	0	3	9	7	—	0	1	1	—
Massachusetts	—	1	12	—	58	—	0	4	—	30
New Hampshire	—	0	4	6	7	—	0	1	4	—
Rhode Island§	—	0	1	—	—	—	0	1	—	2
Vermont§	1	0	2	5	9	—	0	1	—	1
<b>Mid. Atlantic</b>	12	16	40	235	296	1	5	38	48	59
New Jersey	—	2	11	12	59	—	1	6	9	14
New York (Upstate)	4	6	20	95	72	1	2	14	25	29
New York City	—	4	13	38	78	—	2	35	14	16
Pennsylvania	8	4	15	90	87	N	0	0	N	N
<b>E.N. Central</b>	7	15	55	282	263	2	5	19	80	64
Illinois	—	4	10	57	96	—	1	6	17	11
Indiana	—	2	10	34	24	—	0	11	8	3
Michigan	—	4	10	51	60	—	1	5	20	27
Ohio	7	4	14	83	71	2	1	5	17	18
Wisconsin	—	0	38	57	12	—	0	9	18	5
<b>W.N. Central</b>	5	5	33	86	99	4	3	22	32	25
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	3	8	13	—	0	1	2	1
Minnesota	—	0	20	20	45	3	1	21	11	11
Missouri	2	2	10	33	28	1	0	2	14	10
Nebraska§	1	0	3	13	4	—	0	3	2	2
North Dakota	—	0	3	4	7	—	0	0	—	1
South Dakota	2	0	2	8	2	—	0	1	3	—
<b>S. Atlantic</b>	20	23	49	296	299	2	5	10	52	95
Delaware	—	0	3	6	1	—	0	0	—	—
District of Columbia	—	0	3	6	4	—	0	1	1	—
Florida	2	6	16	71	60	1	1	4	15	16
Georgia	5	4	12	61	66	—	0	4	—	29
Maryland§	5	4	9	63	58	1	1	5	19	24
North Carolina	7	2	22	35	32	N	0	0	N	N
South Carolina§	—	1	7	15	28	—	1	4	13	9
Virginia§	1	3	12	29	45	—	0	3	3	16
West Virginia	—	0	3	10	5	—	0	1	1	1
<b>E.S. Central</b>	4	4	13	42	58	2	2	11	24	27
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	2	9	16	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	3	5	2
Tennessee§	4	3	13	33	42	2	2	9	19	25
<b>W.S. Central</b>	26	7	68	118	80	4	5	61	54	63
Arkansas§	—	0	1	1	9	—	0	2	3	5
Louisiana	—	0	2	1	8	—	0	3	—	17
Oklahoma	6	1	9	41	29	2	1	5	24	15
Texas§	20	5	59	75	34	2	3	56	27	26
<b>Mountain</b>	8	9	21	149	178	7	4	11	65	63
Arizona	5	4	9	61	59	6	2	8	46	32
Colorado	2	2	9	36	44	1	1	4	10	13
Idaho§	1	0	2	7	5	—	0	1	1	—
Montana§	N	0	0	N	N	—	0	1	—	—
Nevada§	—	0	1	2	2	N	0	0	N	N
New Mexico§	—	2	5	31	32	—	0	3	7	15
Utah	—	1	6	12	34	—	0	2	1	3
Wyoming§	—	0	1	—	2	—	0	0	—	—
<b>Pacific</b>	3	3	7	35	30	—	0	1	—	4
Alaska	1	0	3	10	4	N	0	0	N	N
California	—	0	0	—	—	N	0	0	N	N
Hawaii	2	2	5	25	26	—	0	1	—	4
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	4	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

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

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

\* Incidence data for reporting years 2007 and 2008 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 March 22, 2008, and March 24, 2007 (12th 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 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	54	43	97	724	812	6	8	23	107	158	100	221	286	2,155	2,197
<b>New England</b>	1	1	6	9	48	—	0	2	2	3	3	6	14	53	45
Connecticut	—	0	4	—	30	—	0	1	—	2	—	0	6	3	5
Maine§	1	0	1	4	3	—	0	1	1	—	—	0	2	1	—
Massachusetts	—	0	0	—	—	—	0	0	—	—	3	3	9	45	30
New Hampshire	—	0	0	—	—	—	0	0	—	—	—	0	3	2	4
Rhode Island§	—	0	2	2	7	—	0	1	—	1	—	0	5	2	5
Vermont§	—	0	2	3	8	—	0	1	1	—	—	0	5	—	1
<b>Mid. Atlantic</b>	8	2	6	42	54	—	0	2	5	14	18	32	45	382	359
New Jersey	—	0	0	—	—	—	0	0	—	—	1	5	10	56	46
New York (Upstate)	1	1	4	10	20	—	0	1	1	7	—	3	10	23	27
New York City	—	0	0	—	—	—	0	0	—	—	15	18	30	243	228
Pennsylvania	7	1	6	32	34	—	0	2	4	7	2	5	11	60	58
<b>E.N. Central</b>	15	12	40	211	224	1	2	12	30	35	8	15	26	155	204
Illinois	—	2	13	39	51	—	0	6	9	16	—	6	14	18	96
Indiana	—	3	22	46	35	—	0	9	5	3	1	1	6	25	14
Michigan	—	0	1	3	—	—	0	1	1	—	2	2	12	27	31
Ohio	15	6	17	123	138	1	1	3	15	16	5	3	14	74	54
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	4	11	9
<b>W.N. Central</b>	—	2	49	40	61	—	0	2	1	9	—	7	14	81	54
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	—	1
Kansas	—	0	7	2	35	—	0	1	—	2	—	0	5	6	5
Minnesota	—	0	46	—	—	—	0	1	—	5	—	1	4	21	12
Missouri	—	1	8	38	24	—	0	1	1	—	—	5	10	52	36
Nebraska§	—	0	1	—	—	—	0	0	—	—	—	0	1	2	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	2	—	0	1	—	2	—	0	3	—	—
<b>S. Atlantic</b>	25	18	43	310	345	4	4	11	49	80	22	50	152	429	411
Delaware	—	0	1	—	2	—	0	1	—	1	—	0	3	1	2
District of Columbia	—	0	2	4	4	—	0	0	—	—	—	2	12	20	37
Florida	14	11	27	185	177	2	2	7	29	42	11	17	35	178	125
Georgia	9	5	16	106	147	2	1	5	16	32	—	8	131	11	51
Maryland§	2	0	1	3	—	—	0	1	1	—	3	6	15	70	60
North Carolina	N	0	0	N	N	N	0	0	N	N	8	5	23	77	68
South Carolina§	—	0	0	—	—	—	0	0	—	—	—	1	11	18	19
Virginia§	N	0	0	N	N	N	0	0	N	N	—	4	16	54	47
West Virginia	—	1	12	12	15	—	0	1	3	5	—	0	1	—	2
<b>E.S. Central</b>	5	4	12	92	46	1	1	4	13	9	14	20	31	225	159
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	17	95	52
Kentucky	1	0	3	16	10	—	0	2	4	—	—	1	4	12	20
Mississippi	—	0	0	—	—	—	0	0	—	—	3	2	15	25	25
Tennessee§	4	3	12	76	36	1	0	3	9	9	11	8	15	93	62
<b>W.S. Central</b>	—	1	5	17	26	—	0	2	4	2	27	40	56	449	354
Arkansas§	—	0	1	3	1	—	0	1	2	—	6	2	10	22	26
Louisiana	—	1	4	14	25	—	0	2	2	2	2	11	22	77	77
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	5	16	19
Texas§	—	0	0	—	—	—	0	0	—	—	19	26	46	334	232
<b>Mountain</b>	—	1	5	3	8	—	0	2	2	6	1	9	28	42	97
Arizona	—	0	0	—	—	—	0	0	—	—	—	5	20	2	45
Colorado	—	0	0	—	—	—	0	0	—	—	1	1	6	17	12
Idaho§	N	0	0	N	N	N	0	0	N	N	—	0	1	1	—
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	3	—	1
Nevada§	N	0	0	N	N	N	0	0	N	N	—	2	6	16	25
New Mexico§	—	0	1	—	—	—	0	0	—	—	—	1	3	6	11
Utah	—	0	5	3	6	—	0	2	2	5	—	0	2	—	2
Wyoming§	—	0	2	—	2	—	0	1	—	1	—	0	1	—	1
<b>Pacific</b>	—	0	0	—	—	—	0	1	1	—	7	42	61	339	514
Alaska	N	0	0	N	N	N	0	0	N	N	—	0	1	—	2
California	N	0	0	N	N	N	0	0	N	N	2	38	58	289	485
Hawaii	—	0	0	—	—	—	0	1	1	—	—	0	2	6	1
Oregon§	N	0	0	N	N	N	0	0	N	N	1	0	2	5	4
Washington	N	0	0	N	N	N	0	0	N	N	4	3	13	39	22
American Samoa	N	0	0	N	N	N	0	1	N	N	—	0	4	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	6	2	10	28	26
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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† Includes cases of invasive pneumococcal disease caused by drug-resistant *S. pneumoniae* (DRSP) (NNDSS event code 11720).

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