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Prevalence of Self-Reported Physically Active Adults – United States, 2007

The report, *2008 Physical Activity Guidelines for Americans* (2008 Guidelines), released in October by the U.S. Department of Health and Human Services, provides new guidelines for aerobic physical activity (i.e., activity that increases breathing and heart rate) and muscle strengthening physical activity (1). Under the 2008 Guidelines, the minimum recommended aerobic physical activity required to produce substantial health benefits in adults is 150 minutes of moderate-intensity activity per week, or 75 minutes of vigorous-intensity activity per week, or an equivalent combination of moderate- and vigorous-intensity physical activity. Recommendations for aerobic physical activity in the 2008 Guidelines differ from those used in *Healthy People 2010* (HP2010) objectives, which call for adults to engage in at least 30 minutes of moderate-intensity activity, 5 days per week, or 20 minutes of vigorous-intensity activity, 3 days per week (2). To establish baseline data for the 2008 Guidelines and compare the percentage of respondents who reported meeting these guidelines with the percentage who reported meeting HP2010 objectives, CDC analyzed data from the 2007 Behavioral Risk Factor Surveillance System (BRFSS) survey. This report summarizes the results of that analysis, which indicated that, overall, 64.5% of respondents in 2007 reported meeting the 2008 Guidelines, and 48.8% of the same respondents reported meeting HP2010 objectives. Public health officials should be aware that, when applied to BRFSS data, the two sets of recommendations yield different results. Additional efforts are needed to further increase physical activity.

BRFSS is a state-based, random-digit-dialed telephone survey of the noninstitutionalized U.S. civilian population aged ≥ 18 years. Data for the 2007 BRFSS survey were collected from 430,912 respondents (median response rate: 50.6%; median cooperation rate: 72.1%*) and reported by the 50

states, District of Columbia, Puerto Rico, and U.S. Virgin Islands. Response rates were calculated using guidelines from the Council of American Survey and Research Organizations (CASRO). A total of 31,805 respondents with missing physical activity data were excluded, resulting in a final sample of 399,107.

Since 2001, in alternate years, BRFSS surveys have included the same questions regarding participation in moderate-intensity and vigorous-intensity physical activities. In 2007, to assess participation in moderate activities, respondents were asked, "When you are not working, in a usual week, do you do moderate activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate?" Respondents who answered "yes" were then asked, "How many days per week do you do these moderate activities for at least 10 minutes at a time?" Finally, they were asked, "On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?" To assess participation in vigorous-intensity activities, respondents were asked, "When you are not working, in a usual week, do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?" Respondents who answered "yes" were then asked, "How many days per week do you do these vigorous activities for at least 10 minutes at a time?" Finally, they were

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*The response rate is the percentage of persons who completed interviews among all eligible persons, including those who were not successfully contacted. The cooperation rate is the percentage of persons who completed interviews among all eligible persons who were contacted.

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asked, "On days when you do vigorous activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?"

Using the 2008 Guidelines, respondents were classified as physically active if they reported at least 150 minutes per week of moderate-intensity activity, or at least 75 minutes per week of vigorous-intensity activity, or a combination of moderate-intensity and vigorous-intensity activity (multiplied by two) totaling at least 150 minutes per week. Using the HP2010 objectives, respondents were classified as physically active if they reported at least 30 minutes of moderate activity, 5 or more days per week, or at least 20 minutes of vigorous activity, 3 or more days per week.[†] Data were analyzed by selected characteristics, age adjusted to the 2000 U.S. standard population, and weighted to provide overall estimates; 95% confidence intervals were calculated. Statistically significant differences in prevalence were determined by t-test ($p < 0.05$).

Using the 2008 Guidelines, 64.5% of U.S. adults were classified as physically active in 2007, including 68.9% of men and 60.4% of women (Table). By age group, the percentage classified as physically active ranged from 51.2% (≥ 65 years) to 74.0% (18–24 years). Among racial/ethnic populations, prevalence was lower for non-Hispanic blacks (56.5%) than for non-Hispanic whites (67.5%, $p < 0.01$). By education level, prevalence was lowest for persons with less than a high school diploma (52.2%) and highest among college graduates (70.3%). By U.S. census region,[§] prevalence was lowest among respondents in the South (62.3%) and highest among those in the West (67.8%). A smaller percentage of persons classified as obese (57.1%) were physically active than persons classified as overweight (67.3%, $p < 0.01$) or of normal weight (68.8%, $p < 0.01$).[‡]

Applying the HP2010 objectives to the same respondents, the percentage of U.S. adults overall in 2007 classified as physically active was 48.8%, including 50.7% of men and 47.0% of women (Table). Greater prevalence estimates were noted across all variables when comparing the 2008 Guidelines with the HP2010 objectives; patterns by sex, age group, race/

[†] For example, both of the following persons would be considered physically active under the 2008 Guidelines but would not be considered physically active under HP2010 objectives: a person who did moderate activity for 25 minutes, 7 days per week, and a person who did vigorous activity for 40 minutes, 2 days per week.

[§] *West:* Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming; *Midwest:* Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *Northeast:* Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; and *South:* Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Virginia, West Virginia, Tennessee, and Texas.

[‡] Normal, overweight, and obese classifications are on the basis of body mass index, which is weight (kg) / height (m)². Normal: 18.5–24.9, overweight: 25.0–29.9, and obese: ≥ 30.0 .

TABLE. Percentage of self-reported physically active* adults aged ≥ 18 years, by recommendations met and selected characteristics — Behavioral Risk Factor Surveillance System, United States, 2007[†]

Characteristic [§]	Recommendations			
	2008 Physical Activity Guidelines for Americans [¶]		Healthy People 2010 ^{**}	
	%	(95% CI ^{††})	%	(95% CI)
Total	64.5	(64.2–64.9)	48.8	(48.4–49.2)
Sex				
Men	68.9	(68.3–69.4)	50.7	(50.1–51.3)
Women	60.4	(60.0–60.9)	47.0	(46.6–47.5)
Age group (yrs)				
18–24	74.0	(72.6–75.4)	59.0	(57.5–60.5)
25–34	69.5	(68.6–70.4)	53.2	(52.2–54.2)
35–44	67.4	(66.7–68.1)	49.5	(48.8–50.3)
45–54	65.2	(64.6–65.8)	47.6	(46.9–48.3)
55–64	60.0	(59.3–60.7)	45.2	(44.5–45.9)
≥ 65	51.2	(50.7–51.8)	39.3	(38.7–39.9)
Race/Ethnicity				
White, non-Hispanic	67.5	(67.1–67.8)	51.7	(51.4–52.1)
Black, non-Hispanic	56.5	(55.4–57.7)	40.4	(39.2–41.6)
Hispanic	57.2	(55.9–58.5)	42.1	(40.8–43.4)
Other race	62.1	(60.4–63.7)	45.3	(43.7–47.0)
Education level				
Less than high school graduate	52.2	(50.9–53.5)	38.4	(37.1–39.7)
High school graduate	61.5	(60.9–62.1)	46.1	(45.5–46.8)
Some college	65.1	(64.4–65.7)	49.2	(48.6–49.9)
College graduate	70.3	(69.7–71.0)	54.0	(53.4–54.7)
Census region^{§§}				
Northeast	65.3	(64.5–66.1)	50.5	(49.7–51.4)
Midwest	65.2	(64.6–65.8)	49.9	(49.3–50.5)
South	62.3	(61.9–62.8)	46.0	(45.5–46.5)
West	67.8	(66.9–68.8)	51.9	(50.8–52.9)
Body mass index^{¶¶}				
Normal	68.8	(68.2–69.3)	54.0	(53.4–54.6)
Overweight	67.3	(66.7–67.9)	50.6	(49.9–51.2)
Obese	57.1	(56.3–57.8)	41.0	(40.2–41.8)

* Respondents who met recommendations for aerobic physical activity in the 2008 Physical Activity Guidelines for Americans or recommendations for regular physical activity in Healthy People 2010.

[†] Sample size = 399,107. Prevalence estimates were age adjusted to the 2000 U.S. standard population, using six age groups: 18–24 years, 25–34 years, 35–44 years, 45–54 years, 55–64 years, and ≥ 65 years. Estimates by age group were not age adjusted.

[§] Persons with unknown information were excluded as follows: age groups, 2,885; race/ethnicity, 3,445; education level, 723; and body mass index, 16,008.

[¶] At least 150 minutes of moderate physical activity per week, or 75 minutes of vigorous physical activity per week, or an equivalent combination of moderate and vigorous physical activity.

^{**} At least 30 minutes of moderate physical activity, 5 days per week, or at least 20 minutes of vigorous physical activity, 3 days per week.

^{††} Confidence interval.

^{§§} West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming; Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; and South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Virginia, West Virginia, Tennessee, and Texas.

^{¶¶} Body mass index = weight (kg) / height (m)². Normal: 18.5–24.9, overweight: 25.0–29.9, and obese: ≥ 30.0 .

ethnicity, education level, census region, and weight classification were similar.

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Editorial Note: The findings in this report indicate that 64.5% of U.S. adults reported meeting the minimum level of aerobic physical activity in the 2008 Guidelines using BRFSS 2007 data. When HP2010 physical activity objectives were assessed using the same respondents, 48.8% reported meeting minimum levels of physical activity, a difference of 15.7 percentage points. Prevalence patterns by demographic variables were consistent with those reported previously for physical activity (3,4). Similar to findings in this report, a 2000 study noted a greater prevalence of physically active persons by using >150 minutes per week as the criteria, compared with six other criteria for moderate activity (5). The 2008 Guidelines reflect the most recent major scientific review of the health benefits of physical activity. Officials at state and local health departments and other agencies and organizations that promote physical activity can utilize these evidence-based guidelines in developing physical activity initiatives. Findings from this report can serve as a baseline comparison with future estimates of physical activity using survey data.

Analysis of the findings in this report identified two main reasons why a higher proportion of respondents were classified as physically active based on the 2008 Guidelines than based on the HP2010 objectives: 1) removal of the frequency and duration requirement (i.e., 30 minutes of moderate activity, 5 days per week, or 20 minutes of vigorous activity, 3 days per week) and 2) addition of the criteria enabling respondents to meet the guidelines with a combination of moderate and vigorous (multiplied by two) activity. The report from the Physical Activity Guidelines Advisory Committee^{**} emphasized total volume of activity for health benefits, independent of frequency. As explained in the 2008 Guidelines, existing scientific evidence cannot determine whether the health benefits of 30 minutes of activity, 5 days per week, are any different from the benefits of 50 minutes, 3 days per week. As a result, the 2008 Guidelines allow a person to accumulate 150 minutes a week in various combinations (1). Nonetheless, the 2008 Guidelines add that aerobic activity should be performed in periods of at least 10 minutes, and preferably, those periods should be spread throughout the week.

The findings in this study are subject to at least three limitations. First, BRFSS data are self-reported and subject to recall and social-desirability bias; compared with accelerometer-measured

^{**} Available at <http://www.health.gov/paguidelines/report>.

physical activity, higher levels of self-reported physical activity were reported (6). Second, BRFSS is a landline telephone survey and excludes persons in households without telephone access or persons who use only cellular telephones. Finally, the mean CASRO response rate was 50.6%, and low response rates can result in response bias; however, BRFSS estimates generally are comparable with estimates from surveys based on face-to-face interviews. In addition, weighting adjustments that account for sex, age group, and race/ethnicity attempt to minimize nonresponse, noncoverage, and undercoverage (7,8).

Approximately one third of U.S. adults did not report meeting minimum levels of aerobic physical activity as defined by the 2008 Guidelines. Minimum levels were analyzed for this report because they provided the most direct comparison with *Healthy People 2010* objectives. However, more extensive health benefits can be attained by engaging in physical activity beyond these levels (1). Increasing physical activity among U.S. adults can be accomplished through informational, behavioral, and environmental evidence-based approaches, such as those recommended in the *Guide to Community Preventive Services*.^{††} Strong evidence of increased physical activity has been documented for communitywide campaigns, targeted health-behavior change programs, school-based physical education, nonfamily social support, and increased access to locations for physical activity combined with information outreach activities. Evidence of increased physical activity also has been documented for use of point-of-decision prompts and for community-scale and street-scale urban design and land-use policies and practices (9,10).

^{††} Available at <http://www.thecommunityguide.org/pa>.

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Neurologic Illness Associated with Occupational Exposure to the Solvent 1-Bromopropane — New Jersey and Pennsylvania, 2007–2008

1-Bromopropane (1-BP) (n-propyl bromide) is a solvent increasingly used as a substitute for ozone-depleting chlorofluorocarbons and similar regulated compounds. 1-BP is used in vapor and immersion degreasing operations and other manufacturing processes, and as a solvent in industries using aerosol-applied adhesives. In some states, 1-BP is used as a solvent in dry cleaning because of restrictions on use of perchloroethylene (tetrachloroethylene), a possible human carcinogen (1). Published studies of workers exposed to 1-BP have raised concerns about occupational health risks associated with exposure (2–5). This report describes two cases involving workers exposed to 1-BP and diagnosed with clinical manifestations of neurotoxicity. The cases, when coupled with previously reported studies of workers exposed to 1-BP, illustrate potential health risks of 1-BP exposure. Clinicians and public health professionals should be alert to potential health effects among workers exposed to 1-BP, particularly in dry cleaning and other workplaces where 1-BP use might be increasing, and effective control methods to limit exposure to 1-BP should be implemented at worksites.

Both cases involved neurotoxic effects that likely resulted from occupational exposure to 1-BP in the electronics and dry cleaning industries. The cases were reported to regional poison control centers in Pennsylvania (2007) and New Jersey (2008) by attending physicians who treated the affected workers. The cases were investigated by federal and state health agencies, and more in-depth investigations of the New Jersey case currently are being conducted by the New Jersey Department of Health and Senior Services and CDC.

Case 1. In 2007, a male aged 50 years visited an emergency department in Pennsylvania with a history of confusion,

dysarthria, dizziness, paresthesias, and ataxia for 24–48 hours. The patient had worked for 8 years at an electronics plant in Pennsylvania, where for 3 years 1-BP had been used to clean circuit boards by vapor and immersion degreasing. His duties at the plant included mechanically submerging and spraying circuit boards with 1-BP, and maintenance (draining, cleaning, and charging) of the bath tank. The patient typically did not use personal protective equipment (PPE), and ventilation was reported by the patient to be poor within the process room. Neurologic examination revealed that the patient was alert but had slowed mental activity and mild confusion. His cranial nerve function and motor strength were intact, but his gait was wide based and ataxic, and a Romberg's test was positive. Serum laboratory results were notable for an anion gap of -31 mmol/L (normal range: 5–17 mmol/L) and a chloride concentration of 146 mmol/L (normal range: 101–111 mmol/L). The patient was hospitalized. Mild sensory peripheral neuropathy was detected by electromyogram in his upper and lower extremities.

One week after the patient went to the emergency department, the Occupational Safety and Health Administration (OSHA) evaluated his workplace and found a 1-BP concentration of 178 ppm by short-term area air sampling. Two weeks after his initial visit to the emergency department, the patient's serum bromide concentration was 48 mg/dL (normal range: 0–10 mg/dL). His peripheral neuropathy and ataxia persisted 1 year after the initial visit. The patient also reported having trouble maintaining mental focus and stopped working at the electronic plant because of continuing medical problems.

Case 2. A previously healthy male aged 43 years visited his primary-care physician in New Jersey in February 2008 with a history of headache, nausea, dizziness, and malaise, which began after he had begun using 1-BP in his dry cleaning facility. Six weeks earlier, the patient had switched from using perchloroethylene to DrySolv™ (Enviro Tech International, Melrose Park, Illinois) (>95% by weight 1-BP) as the solvent in his dry cleaning machine (7). The patient also used DrySolv as a cleaner to prepare the dry cleaning machine for use. In early February 2008, he manually charged the machine using 50–60 gallons of the solvent and did not use PPE. The patient then began using DrySolv in the daily operation of the dry cleaning machine. During the next 2 days, he reported unusual fatigue and headaches and developed arthralgias, visual disturbances (difficulty focusing), paresthesias, and muscular twitching.

The patient was referred by his personal physician to an emergency department, where physical examination and computed tomography of his head were normal, except for a slight tremor in his upper extremities. Tests of the patient's serum revealed an anion gap and chloride concentration within normal ranges. A site visit to the dry cleaning facility in April

2008 by the New Jersey Department of Health and Senior Services revealed background and high peak concentrations (75 to 250 times background levels) of 1-BP during the handling of clothes. The patient continued to use 1-BP in the dry cleaning machine but adjusted temperature settings on the machine to account for the physical properties of 1-BP, improved his use of ventilation, and began using PPE.

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Editorial Note: 1-BP has received increased global attention since the 1990s as a potential alternative for ozone-depleting chlorofluorocarbons and similar regulated compounds. Since its introduction within the United States, 1-BP has been applied as a solvent in many industrial processes, including vapor degreasing, foam cushion manufacturing, and dry cleaning. The incidence of 1-BP toxicity is unknown, and the signs and symptoms are not described fully. In this report, case 1 demonstrated severe neurologic illness in a worker in the electronics industry using 1-BP as a cleaning solvent. The elevated serum bromide concentration and negative anion gap in a worker with neurologic abnormalities exposed to 1-BP provides strong evidence of occupational 1-BP toxicity. Although bromide levels were not measured in case 2, the patient's clinical presentation and course, and his exposure to 1-BP, strongly favor the conclusion that his illness was caused by 1-BP. However, the exact etiology of the neurologic illnesses of the two workers remains unclear and nonwork-related factors potentially contributing to the illnesses are not fully characterized. Additionally, personal exposure information was not available for these workers to help establish their workplace exposures to 1-BP or to other potential workplace hazards.

CDC does not have a recommended exposure limit for 1-BP, nor does OSHA have a permissible exposure limit. Manufacturers of 1-BP and professional organizations, such as the American Conference of Governmental Industrial Hygienists, have recommended occupational exposure limits ranging from 10 ppm to 100 ppm as an 8-hour time-weighted average (6). On the basis of limited exposure and human health effects data, the National Toxicology Program concluded that exposure to 1-BP is toxic to the developmental and reproductive health of animals (8). Animal toxicity studies with 1-BP and human case reports of occupational exposures to 1-BP have raised concerns that exposure to 1-BP might cause reproductive and neurologic effects (2–6). Workers exposed to 1-BP vapors from spray adhesives at

two seat-cushion–manufacturing facilities were found to have severe neurologic illnesses (4,5). CDC evaluated workers at one of those facilities and found nonspecific acute effects (e.g., headache and feeling drunk) possibly associated with central nervous system responses to 1-BP exposure (2).

In accordance with its Significant New Alternatives Program, the Environmental Protection Agency (EPA) has reviewed available scientific literature on 1-BP and promulgated a final rule to accept 1-BP as an alternative for ozone-depleting solvents in the solvent cleaning sector.* EPA also published a proposed rule not to accept 1-BP for use as an aerosol solvent vehicle for adhesives because of higher exposures and the potential for adverse health effects to workers in these settings.† These new rules do not apply to dry cleaning.

Case 2 likely represents a sentinel case of neurologic toxicity in the dry cleaning industry, and additional cases could occur as dry cleaners switch from perchloroethylene use to 1-BP. The U.S. dry cleaning and laundry industry employs an estimated 110,000 persons at approximately 30,000 establishments and is one of the largest industry sectors characterized by small businesses with fewer than 10 employees. In recent years, an estimated 85%–90% of the dry cleaning industry has used perchloroethylene as a solvent. In response to environmental and health concerns, certain states, including California and New Jersey (9,10), have passed or proposed legislation to eliminate use of perchloroethylene as the primary solvent in the dry cleaning industry. To use 1-BP as an alternative solvent, dry cleaning businesses must modify existing equipment to adjust heating/drying cycles, upgrade solvent vapor control systems, replace natural rubber seals, and provide adequate exhaust ventilation. Manufacturer literature on the use of DrySolv recommends wearing a full-facepiece organic vapor respirator if ventilation is inadequate, and chemical-resistant gloves for skin protection (7). Previous CDC research and communication efforts have emphasized application of a hierarchy of controls (e.g., engineering controls and work practices) for reducing worker exposures to perchloroethylene.§ Similar controls should be used within the dry cleaning industry to limit worker exposure to 1-BP.

Clinicians and public health officials should be alert to potential adverse health effects from exposures to 1-BP in industries where such use might increase, such as the dry

cleaning industry, and in workplaces where 1-BP use might be more established. A thorough occupational history always should be part of the clinical evaluation of persons who have unexplained or onset of nonspecific neurologic symptoms. Exposure to electronics cleaning solvents or dry cleaning solvents should prompt a more thorough inquiry concerning exposure to 1-BP. In the evaluation of a worker with occupational exposure to 1-BP and neurologic abnormalities, diagnosis of 1-BP poisoning is suggested by an elevated urinary or serum bromide concentration and a negative serum anion gap. Findings of potential 1-BP poisoning in a potentially exposed worker should prompt removal of the worker from the exposure while an evaluation of workplace exposures is conducted by a qualified professional.

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Progress in Global Measles Control and Mortality Reduction, 2000–2007

Despite the availability of a safe and effective vaccine since 1963, measles has been a major killer of children in developing countries (causing an estimated 750,000 deaths as recently as 2000), primarily because of underutilization of the vaccine (1). At the World Health Assembly in 2008, all World Health Organization (WHO) member states reaffirmed their commitment to achieving a 90% reduction in measles mortality by 2010 compared with 2000, a goal that was established in 2005 as part of the Global Immunization Vision and Strategy (2). This WHO-UNICEF comprehensive strategy for measles mortality reduction (1) focuses on 47 priority countries.* The strategy's components include 1) achieving and maintaining high coverage (>90%) with the routinely scheduled first dose of measles-containing vaccine (MCV1) among children aged 1 year; 2) ensuring that all children receive a second opportunity for measles immunization (either through a second routine dose or through periodic supplementary immunization activities [SIAs][†]); 3) implementing effective laboratory-supported disease surveillance; and 4) providing appropriate clinical management for measles cases. This report updates previously published reports (3,4) and describes immunization and surveillance activities implemented during 2007. Increased routine measles vaccine coverage and SIAs implemented during 2000–2007 resulted in a 74% decrease in the estimated number of measles deaths globally. An estimated 197,000 deaths from measles occurred in 2007; of these, 136,000 (69%) occurred in the WHO South-East Asian Region. Achievement of the 2010 goal will require full implementation of measles mortality reduction strategies, especially in the WHO South-East Asian Region.

Immunization Activities

WHO and UNICEF use data from administrative records and surveys to estimate routine MCV1 coverage among

* Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, India, Indonesia, Kenya, Laos, Liberia, Madagascar, Mali, Mozambique, Myanmar, Nepal, Niger, Nigeria, Pakistan, Papua New Guinea, Republic of the Congo, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Timor-Leste, Togo, Uganda, Tanzania, Vietnam, Yemen, and Zambia.

[†] SIAs generally are carried out using two approaches. An initial, nationwide catch-up SIA targets all children aged 9 months–14 years; it has the goal of eliminating susceptibility to measles in the general population. Periodic follow-up SIAs then target all children born since the last SIA. Follow-up SIAs generally are conducted nationwide every 2–4 years and target children aged 9–59 months; their goal is to eliminate any measles susceptibility that has developed in recent birth cohorts and to protect children who did not respond to the first measles vaccination.

children aged 1 year (5). Coverage levels achieved during measles SIAs are estimated using the reported number of doses administered and dividing by the target population.

According to WHO and UNICEF estimates, global routine MCV1 coverage has continued to improve steadily since 2000, reaching 82% in 2007; however, coverage has varied substantially by geographic region (Table 1). Of 23.3 million infants in 2007 who missed receiving their first dose of measles vaccine through routine immunization services by the age of 1 year, 15.2 million (65%) resided in eight highly populated countries: India (8.5 million children), Nigeria (2.0 million), China (1.0 million), Ethiopia (1.0 million), Indonesia (0.9 million), Pakistan (0.8 million), the Democratic Republic of the Congo (0.6 million), and Bangladesh (0.5 million)

During 2000–2007, a second opportunity[§] for measles immunization was provided in the 47 priority countries to approximately 576 million children aged 9 months–14 years through SIAs. In 2007, 20 (43%) of these 47 countries conducted SIAs, reaching approximately 91 million children; 16 (80%) of these SIAs integrated at least one other child-survival intervention (e.g., insecticide-treated bed nets, vitamin A supplements, and deworming medication) (Table 2).

Surveillance Activities

Effective surveillance for measles entails establishing case-based surveillance that includes case investigation and laboratory testing of samples from all suspected measles cases (6).[¶] In 2007, 162 (84%) of the 193 WHO member states had implemented case-based surveillance, compared with 120 (62%) countries in 2004 (the first year for which data are available). In 2007, 178 countries (92%), compared with 168 countries (88%) in 2000, reported measles surveillance data to WHO and UNICEF through the annual Joint Reporting Form. Worldwide, the number of reported measles cases decreased from 852,937 in 2000 to 279,006 in 2007 (a 67% decrease). All regions reported a decrease in reported measles cases, with the highest percentage reduction occurring in the Americas** and the African regions (93% and 85%, respectively), and the lowest in the South-East Asian Region (12%). The WHO measles and rubella laboratory network, which in 1998 consisted of fewer than 40 laboratories, by the end of

[§] Second opportunity for immunization is provided to all children, including those who were not reached with MCV1 and those who were previously vaccinated (because approximately 15% of children vaccinated with a single dose at age 9 months will fail to develop immunity to measles).

[¶] Case-based surveillance includes investigation of every suspected measles case and routine reporting of detailed epidemiologic and laboratory data for each confirmed measles case.

** The Region of the Americas interrupted indigenous measles transmission in November 2002; cases reported since 2002 are imported or linked to importation.

TABLE 1. Coverage with first-dose measles vaccine through routine immunization services among children aged 1 year* and estimated number of deaths from measles, by World Health Organization (WHO) region — worldwide, 2000 and 2007†

WHO region	2000		2007		Decrease in measles deaths 2000–2007		Proportion of estimated global decrease attributable to region/priority countries (%)
	% coverage with first-dose measles vaccine	Estimated no. of measles deaths (95% uncertainty interval§)	% coverage with first-dose measles vaccine	Estimated no. of measles deaths (95% uncertainty interval)	No.	%	
African	56	395,000 (287,000–513,000)	74	45,000 (32,000–60,000)	350,000	89	63
Americas	92	<1,000¶	93	<1,000¶	—	—	—
Eastern Mediterranean	73	96,000 (71,000–123,000)	84	10,000 (7,000–15,000)	86,000	90	16
European	91	<1,000¶	94	<1,000¶	—	—	—
South-East Asian	61	235,000 (169,000–309,000)	73	136,000 (98,000–180,000)	99,000	42	18
Western Pacific	86	25,000 (17,000–35,000)	92	7,000 (4,000–11,000)	18,000	73	3
Total	72	750,000 (543,000–982,000)	82	197,000 (141,000–267,000)	553,000	74	100
47 priority countries**	58	727,000 (530,000–947,000)	72	194,000†† (139,000–261,000)	533,000	73	96

* WHO-UNICEF estimates available at http://www.who.int/immunization_monitoring/routine/immunization_coverage/en/index4.html.

† Coverage of routine first-dose immunization and second-opportunity coverage for measles vaccine are the major contributors to decreases in estimated deaths.

§ Based on Monte Carlo simulations that account for uncertainty in key input variables (i.e., vaccination coverage and case-fatality ratios).

¶ The static natural history model used for analysis is not sufficiently precise at low incidence levels.

** Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, India, Indonesia, Kenya, Laos, Liberia, Madagascar, Mali, Mozambique, Myanmar, Nepal, Niger, Nigeria, Pakistan, Papua New Guinea, Republic of the Congo, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Timor-Leste, Togo, Uganda, Tanzania, Vietnam, Yemen, and Zambia.

†† Numbers and percentages might not sum to totals because of rounding.

2007 had expanded to 679 national and subnational laboratories providing support for measles and rubella surveillance in 164 countries.

Mortality Estimates for 2007

Despite the progress made on measles surveillance and reporting globally, measles incidence remains underreported, and complete and reliable surveillance data on the number of measles deaths are lacking for many countries, particularly those with the highest disease burden. To estimate measles mortality, WHO used the published natural history model (7) and updated it with 1) the most recent time-series of population data (8), 2) WHO-UNICEF routine immunization coverage estimates and reported coverage of SIAs, and 3) measles incidence as reported to WHO. This process produced the 2007 mortality estimates and permitted updating of previous estimates for 2000–2006.

During 2000–2007, global mortality attributed to measles was reduced by 74%, from an estimated 750,000 deaths in 2000 to 197,000 deaths in 2007 (Table 1, Figure). Approximately 90% of estimated measles deaths occurred

among children aged <5 years: 679,000 (95% uncertainty interval: 490,000–890,000) in 2000 and 177,000 (126,000–240,000) in 2007. The largest regional percentage reduction in estimated measles mortality during 2000–2007 occurred in the Eastern Mediterranean (90%) and African (89%) regions, accounting for 16% and 63% of the global reduction in measles mortality, respectively. The 47 priority countries accounted for 98% of the total estimated number of deaths globally in 2007, whereas the reduction in measles deaths among these countries accounted for 96% of the global reduction in measles deaths during 2000–2007.

During 2000–2007, approximately 11 million measles deaths worldwide were averted because of measles control activities; of these, an estimated 3.6 million deaths (33%) were averted as a result of accelerated activities (i.e., increases in routine vaccination coverage and implementation of measles SIAs).

Reported by: A Dabbagh, PhD, M Gacic-Dobo, D Featherstone, PhD, P Strelbel, MBChB, JM Okwo-Bele, MD, Dept of Immunization, Vaccines, and Biologicals, World Health Organization, Geneva, Switzerland. E Hoekstra, MD, P Salama, MD, United Nations Children's Fund, New York, New York. A Uzicanin, MD, Global Immunization Div, National Center for Immunization and Respiratory Diseases, CDC.

TABLE 2. Measles supplementary immunization activities undertaken among the 47 World Health Organization (WHO)-UNICEF priority countries,* 2007

WHO region and country	Age group	Extent	No. of children reached	% of targeted children reached†	Other interventions delivered§					
					Oral polio vaccine	Vitamin A	Insecticide-treated bednets	Deworming medication	Tetanus toxoid vaccination	
African										
Burkina Faso	9–59 mos	National	3,145,255	102		Yes				
Cameroon	9–59 mos	Subnational	1,763,167	94		Yes	Yes			
Democratic Republic of the Congo	6–59 mos	National	3,768,794	101		Yes	Yes	Yes		
Ethiopia	6–59 mos	Subnational	1,072,701	96		Yes				
Gabon	9–59 mos	National	190,035	83		Yes	Yes	Yes		
Liberia	9–59 mos	National	629,676	97		Yes	Yes	Yes		
Madagascar	9–59 mos	National	3,053,702	100		Yes	Yes	Yes		
Mali	9–59 mos	National	2,562,537	101	Yes	Yes	Yes	Yes		
Republic of the Congo	9–59 mos	National	677,390	95		Yes	Yes	Yes		
Zambia	9–59 mos	National	2,204,553	107		Yes		Yes		
Eastern Mediterranean										
Afghanistan	9–59 mos	Rollover-National¶	2,085,479	106	Yes				Yes	
Djibouti	9 mos–5 yrs	Subnational	7,475	37						
Pakistan	9 mos–15 yrs	Rollover-national	2,511,837	98						
	9 mos–13 yrs	Rollover-national	1,282,232	105						
			6,906,376	100						
			20,566,497	97						
Somalia	9 mos–15 yrs	Rollover-national	2,774,178	87		Yes				
Sudan	6 mos–14 yrs	Subnational	1,698,058	72				Yes		
	9–59 mos	Rollover-national	1,491,612	96						
South-East Asian										
Indonesia	6 mos–5 yrs	Rollover-national	10,099,534	90	Yes	Yes				
	6 mos–12 yrs	Rollover-national	3,499,242	95						
			2,863,068	106						
			2,609,301	102						
Myanmar	9 mos–5 yrs	National	5,706,351	94						
Western Pacific										
Cambodia	9–59 mos	National	1,526,530	105		Yes		Yes		
Laos	9 mos–14 yrs	National	2,086,190	96		Yes		Yes		
Vietnam	1–20 yrs	Subnational	3,729,848	97						
Total			90,511,618							

* Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, India, Indonesia, Kenya, Laos, Liberia, Madagascar, Mali, Mozambique, Myanmar, Nepal, Niger, Nigeria, Pakistan, Papua New Guinea, Republic of the Congo, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Timor-Leste, Togo, Uganda, Tanzania, Vietnam, Yemen, and Zambia.

† Values >100% indicate that the intervention reached more persons than the estimated target population.

§ Anthelmintics used for deworming. Tetanus toxoid vaccinations delivered to women of child-bearing age. Other interventions were distributed according to national plans and, in some cases, targeted only high-risk districts or age groups.

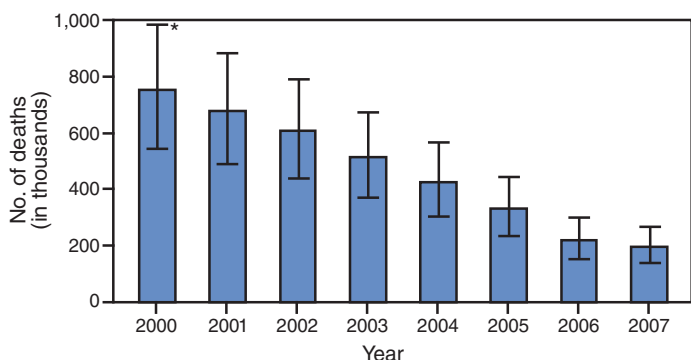
¶ Rollover-national: campaigns that were started the previous year or will continue into the next year.

Editorial Note: During 2007, further progress was made toward achieving the 2010 global measles mortality reduction goal of a 90% reduction in measles mortality compared with 2000. Increased MCV1 coverage, together with the accelerated efforts to vaccinate children through SIAs during 2000–2007, resulted in a 74% decrease in the estimated number of measles deaths globally during this period.

The largest percentage decrease in estimated measles deaths occurred in the Eastern Mediterranean Region, which appears to have already met the 2010 goal. An important contributor to the rapid reduction in measles mortality in the Eastern Mediterranean Region during 2007 is the intensification of

SIAs in the region, which resulted in more than twice the number of children reached through SIAs in 2007 compared with 2006. The African Region was the largest contributor to the global decline in measles mortality, accounting for 63% of the decline. However, a number of countries have experienced outbreaks of more than 1,000 cases in 2007 (e.g., the Democratic Republic of Congo, Nigeria, Uganda, and Tanzania) because of gaps in MCV1 coverage and children missed during SIAs. The reduction in the South-East Asian Region was substantially smaller because India, which alone accounts for 67% of the region's population, has not yet begun large-scale measles SIAs.

FIGURE. Estimated number of measles deaths — worldwide, 2000–2007



SOURCE: World Health Organization.

* 95% uncertainty interval. Based on Monte Carlo simulations that account for uncertainty in key input variables (i.e., vaccination coverage and case-fatality ratios).

The number of reported measles cases also declined by approximately two thirds worldwide during 2000–2007. However, direct comparisons between trends in estimated deaths and trends in reported cases should be made with caution because the static model used to estimate deaths does account for the cyclical nature of measles (7). Furthermore, measles incidence is grossly underreported, and the mathematical model used to estimate global measles mortality adjusts for underreporting of cases (7).

The prevention of an estimated 3.6 million additional deaths during 2000–2007 because of accelerated measles control activities highlights the potential future benefits of continuing the ongoing efforts of the Measles Initiative^{††} and international partners (e.g., the GAVI Alliance and the International Finance Facility for Immunization) to support country efforts to strengthen routine immunization and implementation of SIAs. In addition to the primary objective, measles SIAs provide the platform for delivery of other child survival interventions, which attracts high-level political support, allows for resources to be pooled, and increases community participation (9).

As countries with high measles disease burden approach the Global Immunization Vision and Strategy goal of a 90% reduction in global measles mortality by 2010, major challenges should be addressed. First, accelerated measles mortality reduction activities (e.g., SIAs coupled with further efforts to improve routine MCV1 coverage) need to be successfully

implemented in the South-East Asian Region, especially in India, which contributes substantially to the global burden of measles. Second, to sustain the current reduction in measles deaths, vaccination systems need to be improved to ensure that >90% of infants receive their MCV1 on schedule. Third, countries need to monitor accumulation of susceptible children (by evaluating routine MCV1 and SIA coverage data by birth cohort) and conduct follow-up SIAs when the number of susceptible children approaches the size of a birth cohort. Fourth, disease surveillance systems need to be strengthened at all levels to enable case-based surveillance with testing of clinical specimens from all suspected cases. Fifth, measles case management should be improved (e.g., by including use of vitamin A). Finally, further efforts are needed to ensure sustainability of measles control activities. Recent shortfalls in the donor funds available to support measles mortality reduction activities (10) make increased country responsibility and political commitment critical for both achieving and sustaining the goal of a 90% measles mortality reduction by 2010.

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^{††} The Measles Initiative comprises the American Red Cross, CDC, the United Nations Foundation, UNICEF, and WHO.

*Notice to Readers***National Influenza Vaccination Week—
December 8–14, 2008**

To help raise awareness regarding the seriousness of influenza and the importance of annual vaccination throughout the influenza season (i.e., including into December, January, and beyond), the U.S. Department of Health and Human Services, National Influenza Vaccine Summit, CDC, and other partners are conducting activities during the third annual National Influenza Vaccination Week, December 8–14, 2008.

Throughout this week, CDC will highlight the importance of preventing influenza by vaccination of persons at high risk, their close contacts, and all those who want to be protected from influenza. CDC, Families Fighting Flu, and other partners also have designated Tuesday, December 9, as Children's Flu Vaccination Day to put a special focus on the importance of influenza vaccination to prevent influenza and its complications in children. Thursday, December 11, is Senior Vaccination Day, emphasizing the importance of vaccinating older persons, and

Friday, December 12, is designated as Health-Care Worker Vaccination Day, promoting influenza vaccination of health-care workers.

Annual influenza vaccination is recommended for the following persons: children aged 6 months–18 years; pregnant women; persons aged ≥ 50 years; persons with certain chronic medical conditions; household contacts and caregivers of children aged < 5 years (including household contacts and caregivers of children aged < 6 months); children or adults with chronic health conditions; health-care workers; anyone else who wishes to decrease their risk of influenza (1).

Posters and educational materials for National Influenza Vaccination Week are available at <http://www.cdc.gov/flu/professionals/flugallery>. Additional influenza information for health-care professionals and patients is available at <http://www.cdc.gov/flu>.

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TABLE 1. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending November 29, 2008 (48th week)*

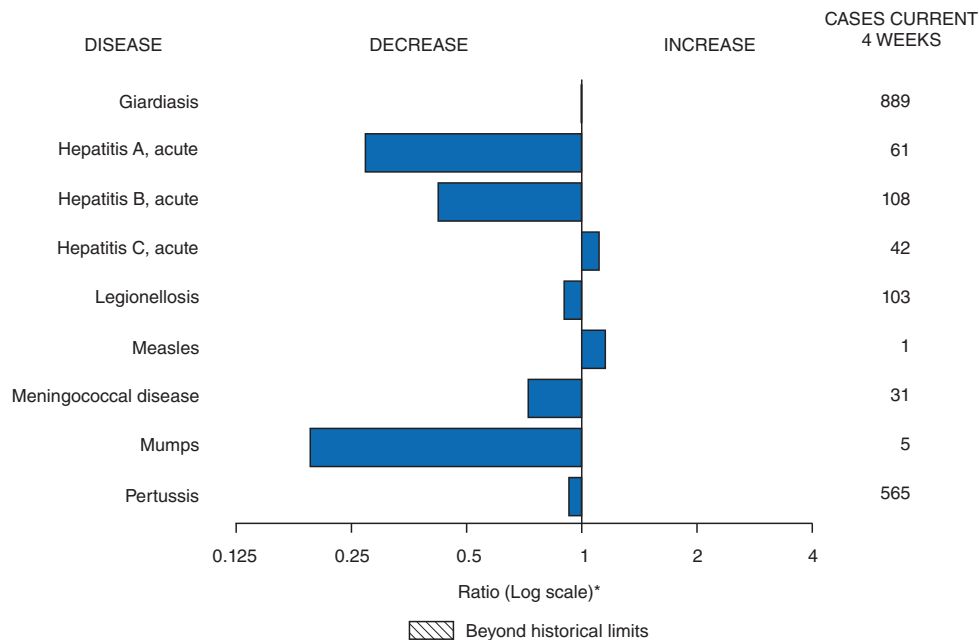
Disease	Current week	Cum 2008	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2007	2006	2005	2004	2003	
Anthrax	—	—	—	1	1	—	—	—	
Botulism:									
foodborne	—	12	1	32	20	19	16	20	
infant	2	83	2	85	97	85	87	76	PA (1), MN (1)
other (wound and unspecified)	3	21	1	27	48	31	30	33	CA (3)
Brucellosis	1	82	2	131	121	120	114	104	FL (1)
Chancroid	1	30	1	23	33	17	30	54	WA (1)
Cholera	—	2	0	7	9	8	6	2	
Cyclosporiasis§	1	119	1	93	137	543	160	75	NY (1)
Diphtheria	—	—	—	—	—	—	—	1	
Domestic arboviral diseases§,¶:									
California serogroup	—	38	0	55	67	80	112	108	
eastern equine	—	2	0	4	8	21	6	14	
Powassan	—	1	0	7	1	1	1	—	
St. Louis	—	8	0	9	10	13	12	41	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
<i>Ehrlichia chaffeensis</i>	5	777	8	828	578	506	338	321	MN (3), GA (1), TN (1)
<i>Ehrlichia ewingii</i>	—	7	—	—	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	5	404	12	834	646	786	537	362	MN (5)
undetermined	1	64	1	337	231	112	59	44	NY (1)
<i>Haemophilus influenzae</i> ,††									
invasive disease (age <5 yrs):									
serotype b	1	25	0	22	29	9	19	32	MN (1)
nonserotype b	2	148	2	199	175	135	135	117	NC (1), FL (1)
unknown serotype	1	171	4	180	179	217	177	227	AR (1)
Hansen disease§	1	67	2	101	66	87	105	95	FL (1)
Hantavirus pulmonary syndrome§	—	14	1	32	40	26	24	26	
Hemolytic uremic syndrome, postdiarrheal§	3	203	3	292	288	221	200	178	NC (1), CA (2)
Hepatitis C viral, acute	6	745	18	849	766	652	720	1,102	NY (1), PA (1), MD (1), NC (1), TN (2)
HIV infection, pediatric (age <13 years)§§	—	—	5	—	—	380	436	504	
Influenza-associated pediatric mortality§,¶¶	—	90	0	77	43	45	—	N	
Listeriosis	6	581	15	808	884	896	753	696	NY (1), KS (1), NC (1), FL (1), CA (2)
Measles***	—	132	0	43	55	66	37	56	
Meningococcal disease, invasive†††:									
A, C, Y, & W-135	2	245	5	325	318	297	—	—	MN (1), FL (1)
serogroup B	—	137	3	167	193	156	—	—	
other serogroup	—	30	1	35	32	27	—	—	
unknown serogroup	2	550	11	550	651	765	—	—	NYC (1), IN (1)
Mumps	1	354	17	800	6,584	314	258	231	FL (1)
Novel influenza A virus infections	—	1	—	4	N	N	N	N	
Plague	—	1	0	7	17	8	3	1	
Poliomyelitis, paralytic	—	—	—	—	—	1	—	—	
Polio virus infection, nonparalytic§	—	—	—	—	N	N	N	N	
Psittacosis§	1	10	0	12	21	16	12	12	PA (1)
Qfever§,§§§ total:	—	104	1	171	169	136	70	71	
acute	—	93	—	—	—	—	—	—	
chronic	—	11	—	—	—	—	—	—	
Rabies, human	—	—	0	1	3	2	7	2	
Rubella¶¶¶	—	16	—	12	11	11	10	7	
Rubella, congenital syndrome	—	—	—	—	1	1	—	1	
SARS-CoV§,****	—	—	—	—	—	—	—	8	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	3	118	1	132	125	129	132	161	NY (3)
Syphilis, congenital (age <1 yr)	—	195	8	430	349	329	353	413	
Tetanus	—	12	1	28	41	27	34	20	
Toxic-shock syndrome (staphylococcal)§	1	60	2	92	101	90	95	133	CA (1)
Trichinellosis	—	6	0	5	15	16	5	6	
Tularemia	—	91	2	137	95	154	134	129	
Typhoid fever	2	362	5	434	353	324	322	356	TX (1), CA (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	29	0	37	6	2	—	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	—	2	1	3	1	N	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	6	411	3	447	N	N	N	N	CA (6)
Yellow fever	—	—	—	—	—	—	—	—	

See Table 1 footnotes on next page.

TABLE 1. (Continued) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending November 29, 2008 (48th week)*

—: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.
 * Incidence data for reporting year 2008 are provisional, whereas data for 2003, 2004, 2005, 2006, and 2007 are finalized.
 † Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. 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. There are no reports of confirmed influenza-associated pediatric deaths for the current 2008-09 season.
 *** 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.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals November 29, 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.

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TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending November 29, 2008, and December 1, 2007 (48th week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All serotypes				
	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		
United States	286	390	1,439	24,258	25,398	8	22	136	967	1,200	4	18	53	962	978
New England	6	47	257	3,526	7,656	—	0	35	33	57	7	0	3	22	42
Connecticut	—	0	35	—	3,020	—	0	27	11	3	—	0	1	1	6
Maine [§]	3	2	73	810	491	—	0	0	—	8	—	0	1	6	7
Massachusetts	—	12	114	1,039	2,953	—	0	2	14	33	—	0	3	15	19
New Hampshire	—	11	139	1,336	882	—	0	1	4	9	—	0	0	—	3
Rhode Island [§]	—	0	0	—	177	—	0	8	—	—	—	0	0	—	3
Vermont [§]	3	2	40	341	133	—	0	1	4	4	—	0	1	—	4
Mid. Atlantic	254	197	1,010	14,194	10,481	—	4	14	226	367	1	2	6	111	120
New Jersey	—	32	209	2,701	3,042	—	0	2	—	68	—	0	2	10	18
New York (Upstate)	223	66	453	4,941	3,156	—	0	7	28	67	—	0	3	29	35
New York City	—	0	7	30	406	—	3	10	159	192	1	0	2	26	20
Pennsylvania	31	62	529	6,522	3,877	—	1	3	39	40	—	1	5	46	47
E.N. Central	1	9	135	1,166	2,075	—	2	7	120	130	1	3	9	159	156
Illinois	—	0	9	75	149	—	1	6	52	59	—	1	4	54	57
Indiana	—	0	8	38	48	—	0	2	5	10	1	0	4	25	27
Michigan	—	1	11	90	51	—	0	2	16	19	—	0	3	28	25
Ohio	—	1	5	45	32	—	0	3	29	25	—	1	4	38	35
Wisconsin	1	7	121	918	1,795	—	0	3	18	17	—	0	2	14	12
W.N. Central	1	8	740	1,180	617	1	1	9	64	54	1	2	8	90	66
Iowa	—	1	8	82	122	—	0	3	8	3	—	0	3	18	15
Kansas	—	0	1	5	8	—	0	2	9	3	—	0	1	5	5
Minnesota	1	2	731	1,035	467	1	0	8	25	28	1	0	7	24	19
Missouri	—	0	4	42	10	—	0	4	14	8	—	0	3	25	17
Nebraska [§]	—	0	2	12	7	—	0	2	8	7	—	0	1	12	5
North Dakota	—	0	9	1	3	—	0	2	—	4	—	0	1	3	2
South Dakota	—	0	1	3	—	—	0	0	—	1	—	0	1	3	3
S. Atlantic	23	68	187	3,758	4,311	3	5	15	249	243	1	3	10	144	164
Delaware	3	12	37	721	685	—	0	1	2	4	—	0	1	2	1
District of Columbia	5	2	11	161	116	—	0	2	4	2	—	0	0	—	—
Florida	3	1	10	104	27	3	1	7	56	50	1	1	3	49	61
Georgia	—	0	3	22	10	—	1	5	48	37	—	0	2	16	24
Maryland [§]	11	30	125	1,878	2,483	—	1	6	63	67	—	0	4	17	19
North Carolina	1	0	7	44	46	—	0	7	27	21	—	0	4	12	22
South Carolina [§]	—	0	2	22	29	—	0	1	9	7	—	0	3	22	16
Virginia [§]	—	11	68	738	842	—	1	7	40	54	—	0	2	21	19
West Virginia	—	1	11	68	73	—	0	0	—	1	—	0	1	5	2
E.S. Central	—	0	3	43	51	—	0	2	18	35	—	1	6	50	49
Alabama [§]	—	0	3	10	13	—	0	1	4	6	—	0	2	10	9
Kentucky	—	0	1	3	6	—	0	1	4	8	—	0	2	8	12
Mississippi	—	0	1	1	1	—	0	1	1	2	—	0	2	11	11
Tennessee [§]	—	0	3	29	31	—	0	2	9	19	—	0	3	21	17
W.S. Central	—	2	11	97	75	1	1	64	74	85	—	2	13	100	93
Arkansas [§]	—	0	0	—	1	—	0	0	—	2	—	0	2	7	9
Louisiana	—	0	1	3	2	—	0	1	3	14	—	0	3	22	25
Oklahoma	—	0	1	—	—	—	0	4	2	5	—	0	5	17	16
Texas [§]	—	2	10	94	72	1	1	60	69	64	—	1	7	54	43
Mountain	—	0	4	40	44	—	1	3	29	62	—	1	4	51	64
Arizona	—	0	2	8	2	—	0	2	14	12	—	0	2	10	12
Colorado	—	0	2	7	—	—	0	1	4	23	—	0	1	14	21
Idaho [§]	—	0	2	9	9	—	0	1	3	5	—	0	1	4	7
Montana [§]	—	0	1	4	4	—	0	0	—	3	—	0	1	5	2
Nevada [§]	—	0	2	4	14	—	0	3	3	3	—	0	1	4	6
New Mexico [§]	—	0	2	6	5	—	0	1	2	5	—	0	1	7	2
Utah	—	0	0	—	7	—	0	1	3	11	—	0	1	5	12
Wyoming [§]	—	0	1	2	3	—	0	0	—	—	—	0	1	2	2
Pacific	1	5	11	254	88	3	3	10	154	167	—	5	19	235	224
Alaska	—	0	2	5	10	—	0	2	6	2	—	0	2	5	1
California	—	3	10	193	69	1	2	8	114	119	—	3	19	168	163
Hawaii	N	0	0	N	N	—	0	1	3	2	—	0	1	5	10
Oregon [§]	—	0	5	45	6	—	0	2	4	17	—	1	3	33	28
Washington	1	0	7	11	3	2	0	3	27	27	—	0	5	24	22
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	3	1	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	3	—	0	1	3	8
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 year 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 November 29, 2008, and December 1, 2007 (48th week)*

Reporting area	Streptococcal diseases, 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		
United States	36	96	259	4,717	4,778	18	34	166	1,483	1,673
New England	—	6	31	315	362	—	1	14	71	116
Connecticut	—	0	26	96	112	—	0	11	11	13
Maine§	—	0	3	25	26	—	0	1	2	3
Massachusetts	—	3	8	138	173	—	0	5	39	78
New Hampshire	—	0	2	26	26	—	0	1	11	12
Rhode Island§	—	0	9	18	8	—	0	2	7	8
Vermont§	—	0	2	12	17	—	0	1	1	2
Mid. Atlantic	7	18	43	923	873	5	4	19	198	294
New Jersey	—	3	11	138	158	—	1	6	59	61
New York (Upstate)	5	6	17	300	261	5	2	14	98	98
New York City	—	3	10	173	216	—	0	8	41	135
Pennsylvania	2	6	16	312	238	N	0	0	N	N
E.N. Central	1	19	42	852	895	1	6	23	244	286
Illinois	—	4	16	223	265	—	1	5	48	77
Indiana	—	2	11	122	109	—	0	14	36	19
Michigan	—	3	10	159	191	—	1	5	70	74
Ohio	1	5	14	244	212	1	1	5	55	58
Wisconsin	—	1	10	104	118	—	1	4	35	58
W.N. Central	—	5	39	358	318	3	2	16	137	97
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	5	36	31	—	0	3	18	2
Minnesota	—	0	35	166	153	3	0	13	63	52
Missouri	—	2	10	83	80	—	1	2	31	25
Nebraska§	—	1	3	39	24	—	0	2	8	17
North Dakota	—	0	5	12	18	—	0	2	8	1
South Dakota	—	0	2	22	12	—	0	1	9	—
S. Atlantic	18	21	37	1,026	1,175	5	6	16	275	303
Delaware	1	0	2	9	10	—	0	0	—	—
District of Columbia	—	0	4	24	17	—	0	1	2	3
Florida	8	5	10	254	292	1	1	4	62	61
Georgia	4	4	14	223	238	2	1	5	64	73
Maryland§	—	4	8	167	197	2	1	5	54	61
North Carolina	4	2	10	130	155	N	0	0	N	N
South Carolina§	—	1	5	65	96	—	1	4	47	54
Virginia§	1	3	12	122	144	—	1	6	38	44
West Virginia	—	0	3	32	26	—	0	1	8	7
E.S. Central	2	4	9	163	196	—	2	11	93	93
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	3	38	37	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	3	20	8
Tennessee§	2	3	6	125	159	—	1	9	73	85
W.S. Central	8	9	85	427	288	2	5	66	244	247
Arkansas§	—	0	2	5	17	1	0	2	7	14
Louisiana	—	0	2	16	16	—	0	2	10	35
Oklahoma	4	2	19	108	64	—	1	7	59	54
Texas§	4	6	65	298	191	1	3	58	168	144
Mountain	—	10	22	500	536	2	4	12	206	224
Arizona	—	3	9	187	199	2	2	8	105	111
Colorado	—	3	8	137	133	—	1	4	55	44
Idaho§	—	0	2	15	18	—	0	1	5	2
Montana§	N	0	0	N	N	—	0	1	4	1
Nevada§	—	0	1	12	2	N	0	0	N	N
New Mexico§	—	2	8	92	97	—	0	3	17	38
Utah	—	1	5	51	82	—	0	3	19	28
Wyoming§	—	0	2	6	5	—	0	1	1	—
Pacific	—	3	10	153	135	—	0	2	15	13
Alaska	—	0	4	36	25	N	0	0	N	N
California	—	0	0	—	—	N	0	0	N	N
Hawaii	—	2	10	117	110	—	0	2	15	13
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	12	30	4	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	14	—	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 year 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 (NNDSS event code 11717).

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending November 29, 2008, and December 1, 2007 (48th week)*

Reporting area	<i>Streptococcus pneumoniae</i> , invasive disease, drug resistant†										Syphilis, primary and secondary				
	A					B					Previous 52 weeks				
	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			
United States	38	56	307	2,573	2,771	7	9	43	387	485	78	241	351	11,007	10,339
New England	—	1	49	100	106	—	0	8	13	13	—	6	13	280	252
Connecticut	—	0	48	55	55	—	0	7	5	4	—	0	6	30	33
Maine§	—	0	2	16	12	—	0	1	2	2	—	0	2	10	9
Massachusetts	—	0	0	—	2	—	0	0	—	2	—	4	11	201	149
New Hampshire	—	0	0	—	—	—	0	0	—	—	—	0	2	19	27
Rhode Island§	—	0	3	16	20	—	0	1	4	3	—	0	5	13	31
Vermont§	—	0	2	13	17	—	0	1	2	2	—	0	5	7	3
Mid. Atlantic	2	4	13	217	152	—	0	2	20	29	25	33	51	1,564	1,417
New Jersey	—	0	0	—	—	—	0	0	—	—	1	4	10	190	207
New York (Upstate)	1	1	6	58	50	—	0	2	6	10	5	3	13	126	127
New York City	—	1	5	64	—	—	0	0	—	—	16	22	37	1,012	835
Pennsylvania	1	2	9	95	102	—	0	2	14	19	3	5	12	236	248
E.N. Central	6	13	64	632	723	1	2	14	88	118	5	20	34	937	822
Illinois	—	0	17	71	190	—	0	4	14	45	—	5	14	243	423
Indiana	—	2	39	187	153	—	0	11	21	24	—	2	10	127	51
Michigan	—	0	3	14	3	—	0	1	2	2	2	3	19	203	107
Ohio	6	8	17	360	377	1	1	4	51	47	2	6	15	311	183
Wisconsin	—	0	0	—	—	—	0	0	—	—	1	1	4	53	58
W.N. Central	—	2	115	142	184	—	0	9	10	41	—	8	15	355	329
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	15	18
Kansas	—	1	5	58	84	—	0	1	4	9	—	0	5	26	23
Minnesota	—	0	114	—	26	—	0	9	—	25	—	2	5	96	55
Missouri	—	1	8	78	58	—	0	1	3	3	—	5	10	209	222
Nebraska§	—	0	0	—	2	—	0	0	—	—	—	0	2	8	4
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	2	6	14	—	0	1	3	4	—	0	1	1	7
S. Atlantic	27	21	53	1,112	1,209	6	4	10	193	221	29	51	215	2,479	2,359
Delaware	—	0	1	3	11	—	0	0	—	2	—	0	4	15	15
District of Columbia	—	0	3	17	20	—	0	1	1	1	2	2	8	124	167
Florida	24	13	30	661	654	6	3	6	125	118	7	20	36	928	816
Georgia	3	7	23	345	457	—	1	5	56	92	—	11	175	532	456
Maryland§	—	0	2	4	1	—	0	1	1	—	—	1	6	14	297
North Carolina	N	0	0	N	N	N	0	0	N	N	10	5	19	260	292
South Carolina§	—	0	0	—	—	—	0	0	—	—	1	2	6	82	88
Virginia§	N	0	0	N	N	N	0	0	N	N	8	4	17	239	209
West Virginia	—	1	9	82	66	—	0	2	10	8	—	0	1	2	6
E.S. Central	2	5	15	251	253	—	1	4	43	36	11	21	37	1,045	842
Alabama§	N	0	0	N	N	N	0	0	N	N	2	8	17	414	354
Kentucky	—	1	6	71	26	—	0	2	12	3	1	1	7	78	53
Mississippi	—	0	2	4	55	—	0	1	1	—	1	3	19	161	108
Tennessee§	2	3	13	176	172	—	0	3	30	33	7	9	19	392	327
W.S. Central	1	2	7	82	85	—	0	2	12	11	1	41	61	1,969	1,744
Arkansas§	1	0	2	16	6	—	0	1	3	2	—	2	19	158	114
Louisiana	—	1	6	66	79	—	0	2	9	9	1	11	30	529	490
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	5	54	59
Texas§	—	0	0	—	—	—	0	0	—	—	—	25	48	1,228	1,081
Mountain	—	1	7	35	56	—	0	2	6	13	—	9	22	404	492
Arizona	—	0	0	—	—	—	0	0	—	—	—	5	17	200	277
Colorado	—	0	0	—	—	—	0	0	—	—	—	2	7	91	48
Idaho§	N	0	0	N	N	N	0	0	N	N	—	0	2	6	1
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	3	—	5
Nevada§	N	0	0	N	N	N	0	0	N	N	—	1	6	68	99
New Mexico§	—	0	1	2	—	—	0	0	—	—	—	1	4	36	41
Utah	—	0	7	30	40	—	0	2	6	11	—	0	2	—	17
Wyoming§	—	0	1	3	16	—	0	1	—	2	—	0	1	3	4
Pacific	—	0	1	2	3	—	0	1	2	3	7	44	65	1,974	2,082
Alaska	N	0	0	N	N	N	0	0	N	N	—	0	1	1	7
California	N	0	0	N	N	N	0	0	N	N	5	39	59	1,778	1,910
Hawaii	—	0	1	2	3	—	0	1	2	3	—	0	2	18	8
Oregon§	N	0	0	N	N	N	0	0	N	N	1	0	3	24	17
Washington	N	0	0	N	N	N	0	0	N	N	1	3	9	153	140
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	4
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	1	3	11	152	155
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

* Incidence data for reporting year 2008 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).

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