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Severe Methemoglobinemia and Hemolytic Anemia from Aniline Purchased as 2C-E (4-ethyl-2,5-dimethoxyphenethylamine), a Recreational Drug, on the Internet — Oregon, 2011

In August 2011, two men in Oregon drank a liquid they believed to be 2C-E (4-ethyl-2,5-dimethoxyphenethylamine), a psychoactive stimulant used as a recreational drug, after purchasing it on the Internet. Fifteen minutes after ingestion, the men became cyanotic and subsequently were treated for refractory methemoglobinemia and hemolytic anemia. The Oregon Poison Center, Oregon Public Health Division, Drug Enforcement Administration (DEA), and Food and Drug Administration (FDA) jointly investigated to determine the cause of the poisoning and identify other cases. The Oregon Poison Center and Oregon Public Health Division promptly alerted health-care providers and public health agencies and searched for additional cases. DEA confiscated all product remaining in the men's possession, and FDA identified the substance as aniline, an industrial solvent known to cause methemoglobinemia. One patient reported purchasing the substance from the Internet site of a Chinese chemical company. No additional cases were identified by investigators. Purchase of chemicals from unregulated Internet sources poses a serious risk to purchasers from product contamination and substitution.

Case Reports

Patient A. On August 19, 2011, a man aged 33 years was taken by ambulance to a local emergency department after he collapsed in a fast food restaurant. He reported feeling lightheaded and nauseated 15 minutes after consuming a soft drink with his friend (patient B). When questioned, patient A initially said he had not ingested medications or illicit drugs. On physical examination, he appeared cyanotic with altered mental status, and his blood oxygen saturation measured by pulse oximetry was 86% on 100% supplemental oxygen by nonrebreather mask. Blood drawn for laboratory testing was chocolate-brown. Arterial blood pH was 7.43, the pCO_2 was 35 mm Hg, and the pO_2 was 222 mm Hg. His methemoglobin concentration was 66.7% (normal: 1%–3%), his hemoglobin concentration was 14.3 g/dL (normal: 13.8–17.2 g/dL), and his platelet count was 338,000/mm^3 (normal: 150,000–400,000/mm^3). The Oregon Poison Center was consulted and recommended administration of 1 mg/kg body weight methylene blue intravenously. The patient was admitted to the hospital intensive-care unit.

After the initial dose of methylene blue, a repeat methemoglobin concentration was 67.2%. A second 1 mg/kg dose was administered 4 hours after arrival. Patient A's methemoglobin concentration peaked at 79.6% at 6 hours after ingestion. The patient ultimately received a total of five 1 mg/kg doses of methylene blue during the next 2 days. By hospital day 3, his methemoglobin concentration had decreased to 11%, and his hemoglobin concentration had decreased to 10.1 g/dL.

On hospital day 5, the patient's hemoglobin concentration was 5.7 g/dL, and he reported fatigue. His blood oxygen saturation measured by pulse oximetry remained at 70%–80% despite supplemental oxygen administration. He received 2 units of packed red blood cells. Other laboratory assessment was significant for haptoglobin <30 mg/dL

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(normal: 41–165 mg/dL), lactate dehydrogenase (LDH) 2,005 U/L (normal: 105–333 U/L), and platelets 73,000/mm^3. Acute oxidant stress-induced hemolysis was suspected, and the patient was transferred to a tertiary-care intensive-care unit.

The patient received an additional unit of packed red blood cells and underwent plasmapheresis, after which his hemoglobin concentration was 5.8 g/dL. During the following 2 days, daily plasmapheresis was performed, as well as one complete exchange transfusion (*1*). During this process, serum LDH concentration decreased to 428 U/L, and the patient's hemoglobin concentration stabilized at 9.5 g/dL. On hospital day 8, a fourth plasmapheresis was performed; hemoglobin concentration remained stable, and his serum LDH concentration decreased to 158 U/L, suggesting resolution of hemolysis. Glucose-6-phosphate dehydrogenase concentrations were normal (deficiency is a risk factor for hemolytic anemia). On hospital day 12, the patient was discharged home. Subsequently, results of comprehensive toxicology screening of urine by gas chromatography/mass spectroscopy were positive for p-aminophenol, an aniline metabolite.

Patient B. A man aged 34 years (patient B) who had accompanied patient A to the emergency department also appeared cyanotic, but said he had no symptoms. When questioned, patient B also initially said he had not ingested medications or illicit drugs. However, he later reported having consumed the same soft drink as patient A. Patient B's initial blood oxygen saturation measured by pulse oximetry was 80% on 40% supplemental oxygen by nonrebreather mask, and peripheral venous blood drawn for laboratory testing was dark brown. His methemoglobin concentration drawn 45 minutes after ingestion was 49.5%, and his hemoglobin concentration was 16.4 g/dL. Methylene blue 1 mg/kg was administered intravenously, and a repeat methemoglobin concentration was 47.8%. The patient received a second dose of methylene blue, and was admitted to the intensive-care unit overnight. His methemoglobin concentration peaked at 74.4% 8 hours after ingestion.

Patient B received a total of 4 doses of methylene blue and then left the hospital against medical advice 19.5 hours after ingestion. His last methemoglobin concentration was 10%. His glucose-6-phosphate dehydrogenase concentration was not tested.

After patient A was transferred to tertiary care for chemical-induced hemolytic anemia on postexposure day 5, multiple attempts were made to contact patient B. He returned for repeat evaluation on postexposure day 6 and reported fatigue and dyspnea. His hemoglobin concentration had decreased to 10 g/dL at follow-up. A repeat methemoglobin concentration was 1.1%. Despite plans for repeat hemoglobin testing in 1–2 days, he did not return for further evaluation.

Multi-Agency Investigation

During evaluation in the emergency department, the physician questioned patient A and patient B because of concern for

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possible consumer product contamination of their soft drink by a methemoglobin-inducing substance. After initial denials, they reported buying 2C-E as a recreational chemical from an Internet site. They described ingesting 4 mL of a bitter, yellow-tinted liquid that they had mixed with a soft drink to mask the taste. This description was inconsistent with 2C-E, which is available typically as a capsule or white powder.

Further questioning implicated a company based in Nanjing, China, that produces and sells 2C-E and industrial products manufactured using aniline. Consultation with FDA confirmed that 2C-E was a federally controlled substance, and that, since the product was purchased from an international distributor, the incident was under federal jurisdiction. DEA was notified. DEA obtained the leftover product that the patients had purchased, and FDA determined the liquid was pure aniline, with no evidence of 2C-E. Aniline is a common solvent used in manufacturing processes. Ingestion of aniline can cause methemoglobinemia and hemolytic anemia through the action of its metabolites, phenylhydroxylamine and aminophenol, both strong oxidizing agents (*1–4*).

The patients said they had not shared the product with others. Nonetheless, public health and poison control investigators conducted active case-finding because of concern that aniline might have been mislabeled and sold to other buyers seeking 2C-E. A case was defined as unexplained methemoglobinemia in a person who had ingested a chemical purchased through the Internet since January, 2011. The Oregon Poison Center queried poison center directors nationally and searched for reports of aniline poisoning in the National Poison Data System. CDC was notified, and investigators conducted supplemental symptom-based case-finding using the Oregon Health Alert Network and CDC's Epidemic Information Exchange (Epi-X)* to query for cases of unexplained methemoglobinemia. No additional cases were identified.

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Editorial Note

Strong oxidizing agents, such as aniline metabolites, can cause methemoglobinemia or, at higher concentrations, acute red blood cell hemolysis. Symptoms related to increased methemoglobin concentrations reflect declining oxygen delivery. Concentrations above 50% can cause syncope. Concentrations above 70% can be lethal. During venipuncture, the blood usually appears chocolate brown, a clue to the presence of methemoglobin. Standard noninvasive pulse oximetry typically shows a reading of 85% that does not change despite administration of 100% oxygen or the antidote methylene blue.

Hydroxylamine compounds (e.g., aniline metabolites phenylhydroxylamine and aminophenol) often produce methemoglobin that is refractory to conversion back to normal hemoglobin by administration of methylene blue, and can precipitate acute hemolytic anemia (*1–4*). Paradoxically, methylene blue can be a source of oxidant stress and, in high doses, can cause hemolytic anemia. However, this is more likely with glucose-6-phosphate dehydrogenase deficiency, and patient A's concentrations were normal, whereas patient B's concentrations were not tested.

Use of novel psychoactive chemicals has continued to increase in the United States despite passage of the 1986 Controlled Substances Analogue Enforcement Act (CSAEA) (*5,6*). The phenethylamines (e.g., 2C-B, 2C-E, and 2C-I), their isomers, and their salts are illegal substances under CSAEA (*7*). To circumvent such laws, manufacturers produce substances that have chemical structures distinct from regulated substances, yet still produce psychoactive effects. These products pose challenges to both surveillance and regulation because they frequently are advertised for sale as "research chemicals" through international and domestic Internet sites.

What is already known on this topic?

Psychoactive chemicals (including the phenethylamines 2C-B, 2C-E, or 2C-I) are sold on unregulated Internet sites as "research chemicals."

What is added by this report?

This is the first published report of unintentional exposure to aniline among persons attempting to purchase psychoactive drugs sold online for recreational use from an international manufacturer. Two men in Oregon experienced methemoglobinemia and hemolytic anemia after ingesting a substance intended for misuse as a stimulant. The methemoglobinemia that developed in both proved refractory to usual doses of methylene blue, and one of the two patients required blood transfusions, multiple cycles of plasmapheresis, and exchange transfusion.

What are the implications for public health practice?

Recognition of the health danger of contaminated or adulterated ingestible products purchased on the Internet is important to the public's health. Collaboration is essential among health-care providers, poison control centers, public health officials, and law enforcement agencies to identify, treat, and trace potentially toxic substances purchased on the Internet.

* Available to participating officials designated by their public health agencies at http://www.cdc.gov/mmwr/epix/epix.html.

Purchase of psychoactive chemicals and other ingestible products from the Internet places the public at risk for obtaining products that are inherently toxic or have been made toxic by adulteration, either inadvertently or deliberately. Persons reporting emergencies involving ingested substances purchased from the Internet should telephone FDA at the 24-hour, toll-free number (1-888-INFO-FDA). Persons reporting non-emergencies should contact the FDA district office consumer complaint coordinator for their geographic area during regular business hours.[†] Communication and collaboration among health-care, public health, poison control, and law enforcement agencies are crucial to identify adverse events associated with Internet-purchased toxic chemicals and coordinate health messages for health-care providers.

This is the first published report of unintentional aniline intoxication in persons attempting to purchase psychoactive chemicals for recreational use. Whether this potentially lethal incident represents deliberate ingredient substitution or a packaging error by a vendor not subject to industry standards is unknown. This case highlights the danger to the public and the challenges facing public health agencies in an era in which virtually any chemical produced in any country is available through Internet sales.

[†] Available at http://www.fda.gov/safety/reportaproblem/consumercomplaintcoordinators/default.htm.

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CDC Grand Rounds: Dietary Sodium Reduction — Time for Choice

Excess dietary sodium is a major contributor to hypertension (high blood pressure) and a critical public health issue in the United States (*1*). Nearly one in three U.S. adults, or 68 million persons, has hypertension, and half of those do not have their condition under control (*2*). Hypertension is a major contributor to cardiovascular diseases, which are a leading cause of death, disability, and health-care costs in the United States (*3*). The average sodium intake among persons in the United States aged ≥2 years is 3,266 mg/day (excluding table salt) (*4*). Current dietary guidelines recommend that reducing consumption of sodium to <2,300 mg/day, and that blacks, persons aged ≥51 years, and persons of any age with hypertension, diabetes, or chronic kidney disease (about half of the U.S. population and the majority of adults) further reduce intake to 1,500 mg/day (*5*). Regardless of age or sex, sodium intake by most U.S. residents considerably exceeds recommended levels (Figure). Reducing sodium intake to 2,300 mg/day potentially could prevent 11 million cases of hypertension and save billions of dollars in health-care expenditures; reducing sodium intake further would yield additional benefits (*6*). To achieve those reductions and help consumers make healthful choices, expanded educational efforts and monitoring of the sodium content of the food supply are needed. Increased availability of lower sodium products and reductions in the amount of sodium in foods served or sold in the marketplace also are needed.

The causal link between sodium intake and high blood pressure levels is well-established (*7*). Numerous scientific bodies and professional health organizations, including the American Heart Association,* the American Medical Association,† and the American Public Health Association,§ support dietary sodium reduction to prevent and control high blood pressure. Decreasing systolic blood pressure by an average of 5 mm Hg within a population can lead to an estimated 14% reduction in stroke deaths and 9% reduction in coronary heart disease deaths (*8*). For persons with prehypertension (i.e., blood pressure that is elevated above normal but not high enough for medical intervention), reduction of sodium intake might be particularly beneficial because lower blood pressure typically translates to lower risk for heart disease and stroke (*9*). Nearly 30% of U.S. adults are prehypertensive (*10*).

Sodium in Foods

A major challenge to sodium intake reduction efforts is the widespread use of sodium in the U.S. food supply, leaving little to no opportunity for average consumers to adjust their intake. The majority of sodium intake (>75%) is from consuming packaged and restaurant foods (*1,11*). Only an estimated 12% of sodium consumption occurs from natural sources, and 11% results from adding salt while cooking or eating a meal (*11*). Salt and other sodium-containing ingredients are added to food by manufacturers for many reasons; salt in particular can play multiple roles in flavoring, food processing, and safety at relatively low cost (*1*). Sodium can change the properties of food in ways that are useful for food manufacturers, such as extending shelf life or altering texture. In many cases, however, sodium content exceeds the concentrations needed for food safety or essential food processing (*1*).

The U.S. Department of Agriculture (USDA) conducts food composition analyses to measure the sodium values of foods that constitute significant sources of dietary intake. Mean sodium values for the same portion of different brands of the same foods can vary substantially; for example, the sodium content of 4-ounce slices of cheese pizza (regular crust) purchased from major pizza restaurant chains can vary from 510 mg to 760 mg (*12*). This variation suggests that achieving substantial decreases in sodium levels of commonly consumed foods is feasible (*1*). Current labeling regulations are designed to ensure that measured samples of a product do not exceed labeled sodium values by more than 20%.¶ However, laboratory analyses serve as a critical adjunct to closely monitor changes in the sodium content of the food supply and complement food label data.

Consumer and Health-Care Provider Readiness for Sodium Reduction

Data from the Behavioral Risk Factor Surveillance System in 21 states indicate that U.S. adults already are taking steps to reduce their sodium intake. In 2007, >70% of U.S. adults with self-reported hypertension had been advised to reduce their salt intake, and >80% of those adults reported that they were already

*Additional information is available at http://www.heart.org/heartorg/gettinghealthy/nutritioncenter/healthydietgoals/sodium-salt-or-sodium-chloride_ucm_303290_article.jsp.

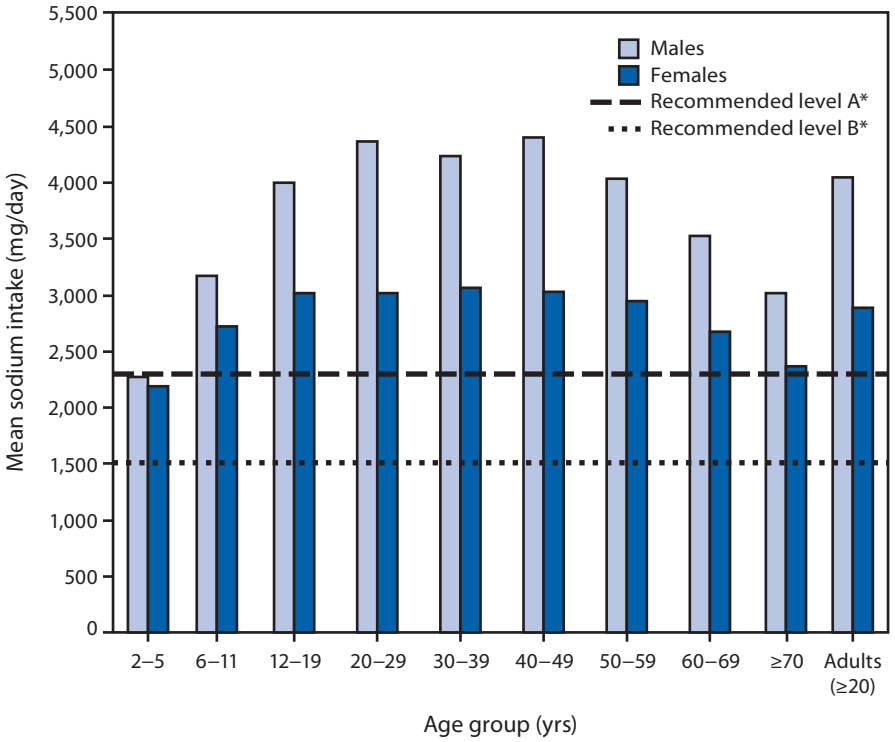
†Additional information is available at http://www.ama-assn.org/ama/pub/news/news/aha-sodium-reduction.page.

§Additional information is available at http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1412.

¶Nutrition labeling of food, 21 C.F.R. 101.9(g)(5) (2010). Available at http://edocket.access.gpo.gov/cfr_2010/aprqtr/pdf/21cfr101.9.pdf.

This is another in a series of occasional MMWR *reports titled CDC Grand Rounds. These reports are based on grand rounds presentations at CDC on high-profile issues in public health science, practice, and policy. Information about CDC Grand Rounds is available at http://www.cdc.gov/about/grand-rounds.*

FIGURE. Mean sodium intake (excluding table salt), by age and sex, and recommended levels* — National Health and Nutrition Examination Survey, United States, 2007–2008



Sources: CDC. National Health and Nutrition Examination Survey data. Available at http://www.cdc.gov/nchs/nhanes/nhanes2007-2008/nhanes07_08.htm.

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* Current dietary guidelines recommend reducing consumption of sodium to <2,300 mg/day, and that blacks, persons aged ≥51 years, and persons of any age with hypertension, diabetes, or chronic kidney disease further reduce intake to 1,500 mg/day.

reducing their intake (*13*). Data collected by a national market panel mail survey weighted to the U.S. population indicate that the majority of adult consumers understand the relationship between sodium intake and health, and 68% of consumers aged >50 years are either thinking about lowering their intake, have taken steps to lower their intake, or already have lowered their intake (*14*).

Despite the good intentions of U.S. adults, the ubiquity of sodium in processed and prepared foods makes it difficult for them to control their own sodium intake (*1*). Thus, interventions that involve food industry participation hold promise as a critical pathway to address this public health problem.

Current Strategies to Reduce Sodium Intake

In 2010, the Institute of Medicine (IOM) issued a report, "Strategies to Reduce Sodium Intake in the United States," which concluded that labeling and education efforts to bring about behavior change alone did not succeed in reducing sodium intake in the United States (*1*). The primary strategy recommended in the IOM report is to pursue broad, gradual reductions in the sodium content of packaged and prepared foods in the United States through mandatory national standards. In advance of implementing national standards, IOM supports voluntary initiatives involving collaboration between industry, government, and others as a strategy to support sodium reduction. The National Salt Reduction Initiative (NSRI)** currently uses this partnership strategy as a framework to achieve its goal to reduce dietary sodium by 20% in 5 years by decreasing sodium content in packaged and restaurant foods by 25% over the same period.

The NSRI is a partnership of more than 85 organizations and local and state health authorities, aiming to reduce U.S. dietary sodium through voluntary sodium-content reductions by the food industry. Coordinated by the New York City Health Department, the NSRI strategy is to set feasible sodium reduction targets for 62 packaged food categories and 25 restaurant food categories based on industry feedback and analysis of the NSRI nutrition databases, and then to measure industry progress over time. Targets are set for 2012 and 2014. Twenty-eight companies, including packaged food companies, supermarkets, and restaurant chains, have signed on to meet at least one target. In addition, New York City developed an evaluation process to assess changes in population sodium intake in a representative sample of adult New York City residents.†† The baseline evaluation included a 24-hour urine collection and analysis, with additional diagnostic and self-reported measures. A follow-up study will be conducted to monitor changes over time.

On the local level, New York City has introduced several innovative, policy-based strategies to reduce sodium intake. A Mayoral Executive Order in 2008 made New York City the first major U.S. city to set nutrition standards for all food purchased and served by city agencies.§§ The city also has initiated

** Additional information is available at http://www.nyc.gov/health/salt.

†† Additional information is available at http://www.nyc.gov/html/doh/html/pr2011/pr005-11.shtml.

§§ Additional information is available at http://www.nyc.gov/html/doh/html/cardio/cardio-vend-nutrition-standard.shtml.

a citywide media campaign that included subway posters and newspaper advertisements to increase public awareness about the sodium content of processed foods. Other projects include an educational initiative about sodium for the city's independent restaurants and development of retail food standards for hospitals.

Summary

Sodium reduction is an urgent public health priority that should be addressed by coordinated attention by multiple levels of government, the food industry, and other diverse stakeholders. Average daily sodium intake for U.S. adults is more than double the recommended dietary limit for the majority of this population, leading to adverse health outcomes and economic impacts. The majority of U.S. adults recognize the health consequences of a high-sodium diet and are interested in reducing their sodium intake. However, packaged and restaurant foods often contain excessive amounts of sodium, which limits the choices of U.S. consumers about how much sodium they consume in those foods. USDA and the Food and Drug Administration recently collected public comments and research to help inform future sodium reduction-related activities.¶¶ In the interim, the NSRI is a promising voluntary process to encourage public commitments by industry to sodium reduction. Reducing sodium in the food supply will increase consumer choice, has been shown to be feasible for the food industry, and will save thousands of lives and billions of health-care dollars each year.

¶¶ Additional information is available at http://www.regulations.gov/#!searchresults;rpp=10;po=0;s=fda-2011-n-0400.

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Vital Signs: Food Categories Contributing the Most to Sodium Consumption — United States, 2007–2008

On February 7, 2012, this report was posted as an MMWR *Early Release on the* MMWR *website (http://www.cdc.gov/mmwr).*

Abstract

Background: Most of the U.S. population consumes sodium in excess of daily guidelines (<2,300 mg overall and 1,500 mg for specific populations). Excessive sodium consumption raises blood pressure, which is a major risk factor for heart disease and stroke, the nation's first and fourth leading causes of death. Identifying food categories contributing the most to daily sodium consumption can help reduction.

Methods: Population proportions of sodium consumption from specific food categories and sources were estimated among 7,227 participants aged ≥2 years in the *What We Eat in America*, National Health and Nutrition Examination Survey, 2007–2008.

Results: Mean daily sodium consumption was 3,266 mg, excluding salt added at the table. Forty-four percent of sodium consumed came from 10 food categories: bread and rolls, cold cuts/cured meats, pizza, poultry, soups, sandwiches, cheese, pasta mixed dishes, meat mixed dishes, and savory snacks. For most of these categories, >70% of the sodium consumed came from foods obtained at a store. For pizza and poultry, respectively, 51% and 27% of sodium consumed came from foods obtained at fast food/pizza restaurants. Mean sodium consumption per calorie consumed was significantly greater for foods and beverages obtained from fast food/pizza or other restaurants versus stores.

Implications for Public Health Practice: Average sodium consumption is too high, reinforcing the importance of implementing strategies to reduce U.S. sodium intake. Nationwide, food manufacturers and restaurants can strive to reduce excess sodium added to foods before purchase. States and localities can implement policies to reduce sodium in foods served in institutional settings (e.g., schools, child care settings, and government cafeterias). Clinicians can counsel most patients to check food labels and select foods lower in sodium.

Introduction

High sodium consumption is related to high blood pressure, or hypertension, which in 2008 was reported as a primary or contributing cause of approximately 348,000 U.S. deaths (*1*). Thirty-one percent of adults in the United States have hypertension, and fewer than half of them have their blood pressure under control (*2*). Reducing the average daily population sodium consumption by about one third is projected to reduce blood pressure and decrease the number of new and recurrent cases of heart attack and stroke, averting up to 81,000 deaths, and saving $20 billion health-care dollars annually (*3*).

Excess sodium consumption is common and can be reduced through modifications to the food environment (*4*). Average daily sodium consumption during 2007–2008 was 3,266 mg among persons aged ≥2 years in the United States, well above the current *Dietary Guidelines for Americans* recommendations of <2,300 mg overall and 1,500 mg for specific at-risk populations comprising about half of the population (*5*). Approximately 88% of persons aged ≥2 years who should consume <2,300 mg daily and 99% of persons who should consume 1,500 mg daily consume more than these levels (*6*). Meeting these recommendations might be challenging, because >75% of sodium consumed is estimated to come from sodium added to restaurant and processed foods before purchase, whereas only 5%–6% is added at home during cooking and 5%–6% at the table (*4,7*). The Institute of Medicine (IOM) recently recommended populationwide strategies, including mandatory reductions in sodium in processed and restaurant foods with interim voluntary reductions from food manufacturers (*4*).

Identifying the major food sources of sodium is important to reducing sodium consumption. This report describes the sources of dietary sodium consumption, both specific food categories and where they were obtained among the U.S. population aged ≥2 years, overall, and by age and other demographic characteristics.

Methods

Data were analyzed from the 2007–2008 *What We Eat in America* (WWEIA), National Health and Nutrition Examination Survey (NHANES), a multistage probability sample of the U.S. noninstitutionalized population, with

oversampling of specific population subgroups including, but not limited to, non-Hispanic blacks, and Mexican-Americans.* During this period, 9,013 participants aged ≥2 years were interviewed and examined (response rate: approximately 75%). Of these, 7,227 completed two 24-hour dietary recalls. Compared with the 1,786 who did not complete both recalls, persons in the analytic sample did not differ by race-ethnicity, but were older (mean difference: 4 years, p<0.001), and a higher percentage were female (52% vs. 46%, p = 0.017).

The initial 24-hour dietary recall was administered in the NHANES Mobile Examination Center, and the second recall was administered 3–10 days later by telephone.† The 24-hour dietary recall was collected by trained interviewers using USDA's Automated Multi-Pass Method, a 5-step fully computerized recall method with food models.§ For each person, on each of the 2 days, nutrient intakes (e.g., sodium) were estimated by summing the amount of the nutrient consumed from each food or beverage reported for that day. Estimates of sodium in some foods were adjusted downward for those who reported not using salt in cooking; estimates also excluded salt added at the table and consumed from supplements and medicines. Using the detailed information from the 24-hour dietary recall, each food was assigned to a food code in the U.S. Department of Agriculture (USDA) Food and Nutrient Database for Dietary Studies (FNDDS) version 4.1. Nutrient values for each FNDDS 4.1 food code are based on the National Nutrient Database for Standard Reference, release 22.¶

To identify the top 10 ranked food categories contributing to sodium consumption, each of the approximately 7,000 food codes in FNDDS was assigned to one of approximately 100 food categories, based on the customary use and consumption of foods in the diet.** The food categories were ranked based on population proportion, defined as the sum of the amount of sodium from foods within a specific category (or obtained from a specific source) for all persons, divided by the sum of sodium from all foods for all persons and multiplied by 100 (*8,9*). Sodium density, a measure that accounts for differences in the amount of calories consumed from foods obtained from each food source (e.g., store or restaurant), was defined as mg of sodium per 1,000 kcal. The population proportion (%) of sodium consumed from a food source within a food category (e.g., pizza) was estimated from the sum of the amount of sodium from the food and source category divided by the sum of sodium consumption from all foods consumed within the specific food category.

Population proportions and other percentages, means, and standard errors were estimated using software that accounts for the complex survey design. For all estimates, the sums of two 24-hour recalls per person and 2-day dietary sample weights were used. Sample weights accounted for the probability of selection, survey nonresponse, and the proportion of weekend/weekday combinations of the two 24-hour dietary recalls.

Results

Mean daily sodium consumption was 3,266 mg. Approximately 44% of sodium consumption came from foods in the following 10 categories: bread and rolls (7.4%), cold cuts/cured meats (5.1%), pizza (4.9%), fresh and processed poultry (4.5%), soups (4.3%), sandwiches like cheeseburgers (4.0%),†† cheese (3.8%), pasta mixed dishes (e.g., spaghetti with meat sauce) (3.3%), meat mixed dishes (e.g., meat loaf with tomato sauce) (3.2%), and savory snacks (e.g., chips and pretzels) (3.1%) (Table 1). Whether analyzed by age group, sex, or racial-ethnic population, the five leading food categories contributing to sodium consumption almost always were among the top 10 ranked categories (Table 1 and Table 2). Exceptions included frankfurters and sausages, which were the third highest contributor among children aged 2–5 years (5.4% of sodium consumption) and the fifth highest among non-Hispanic blacks (5.0%). Among Mexican-Americans, burritos, tacos, and tamales were the top contributor (6.8%), and tortillas were the fifth contributor (4.7%).

Most sodium consumed (65.2%) came from foods obtained from a store (e.g., supermarket or convenience store). Restaurants were the source of 24.8% of the sodium consumed, including 13.6% from restaurants with fast food/pizza and 11.2% from restaurants with service by a waiter/waitress. The remaining 10.0% was from other specific sources (Table 3). Among children aged 2–19 years, 8.1% of sodium consumed came from foods obtained from school cafeterias or child care centers. Among both persons aged 2–19 years and ≥20 years, mean sodium density was significantly greater for foods and beverages obtained from fast food/pizza or other restaurants versus stores (Table 3).

A large percentage of participants ate foods from one or more of the 10 ranked food categories during at least one of the two 24-hour dietary recall days; 79.9% reported eating bread and rolls, 56.2% ate cheese, 50.7% ate savory snacks, and 48.3% ate poultry (Table 4). Among the other six food categories, the percentage that ate foods from those ranged from 17.6% to 33.9%. Among food sources, fast food/pizza restaurants accounted for 51.2% of the sodium consumed from pizza, 26.6% from poultry, and 84.5% from sandwiches.

* Additional information available at http://www.cdc.gov/nchs/nhanes.htm.
† Additional information available at http://www.cdc.gov/nchs/nhanes/nhanes2007-2008/drxdoc_e.htm.
§ Additional information available at http://www.ars.usda.gov/ba/bhnrc/fsrg.
¶ Additional information available at http://www.ars.usda.gov/nutrientdata.
** Additional information available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6105-table.htm.

†† Sandwiches as identified by a single code in WWEIA.

TABLE 1. Ranked population proportions of sodium consumed,* by selected food categories and age groups — *What We Eat in America (WWEIA)*, National Health and Nutrition Examination Survey, United States, 2007–2008

		Age group (yrs)								
		≥2	2–19	2–5	6–11	12–19	≥20	20–50	51–70	≥71
Rank†	Food category§	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)
1	Breads and rolls	7.4 (0.2)	6.9 (0.4)	6.5 (0.5)	7.8 (0.6)	6.5 (0.4)	7.5 (0.2)	7.2 (0.3)	7.8 (0.4)	9.6 (0.3)
2	Cold cuts/cured meats	5.1 (0.3)	4.4 (0.4)	3.4 (0.5)	4.3 (0.4)	4.9 (0.7)	5.3 (0.3)	5.5 (0.5)	4.6 (0.2)	6.0 (0.5)
3	Pizza	4.9 (0.2)	7.3 (0.4)	4.8 (0.7)	7.2 (0.6)	8.2 (0.7)	4.1 (0.2)	5.0 (0.4)	3.0 (0.4)	1.7 (0.2)
4	Poultry	4.5 (0.2)	5.5 (0.4)	5.5 (0.4)	4.7 (0.4)	6.0 (0.6)	4.2 (0.3)	4.5 (0.3)	3.9 (0.3)	2.7 (0.3)
5	Soups	4.3 (0.3)	4.0 (0.2)	5.3 (0.9)	3.6 (0.4)	3.9 (0.4)	4.4 (0.4)	4.2 (0.4)	4.6 (0.7)	5.7 (0.7)
6	Sandwiches¶	4.0 (0.3)	4.4 (0.3)	3.5 (0.3)	3.9 (0.3)	5.0 (0.5)	3.9 (0.3)	4.5 (0.3)	3.2 (0.6)	3.7 (0.5)
7	Cheese**	3.8 (0.2)	3.8 (0.3)	4.2 (0.4)	3.7 (0.3)	3.9 (0.4)	3.8 (0.2)	3.9 (0.2)	3.5 (0.2)	1.8 (0.3)
8	Pasta mixed dishes††	3.3 (0.2)	3.8 (0.4)	4.0 (0.6)	4.0 (0.5)	3.7 (0.4)	3.1 (0.2)	3.4 (0.4)	2.4 (0.5)	2.9 (0.3)
9	Meat mixed dishes	3.2 (0.3)	2.1 (0.4)	—§§	2.2 (0.5)	1.9 (0.4)	3.6 (0.3)	3.5 (0.3)	3.6 (0.7)	4.2 (0.7)
10	Savory snacks¶¶	3.1 (0.2)	4.4 (0.3)	3.4 (0.2)	4.6 (0.4)	4.6 (0.6)	2.8 (0.2)	2.8 (0.2)	3.0 (0.4)	1.6 (0.2)
Mean daily sodium consumption (mg) (SE)		**3,266(40)**	**2,957 (53)**	**2,245 (54)**	**2,944 (72)**	**3,310 (70)**	**3,372 (48)**	**3,568 (58)**	**3,239 (73)**	**2,658 (77)**
Unweighted no. of participants in sample		**7,227**	**2,544**	**662**	**901**	**981**	**4,683**	**2,280**	**1,549**	**854**

Abbreviation: SE = standard error.

* The population proportion (%) of sodium consumed is defined as the sum of the amount of sodium consumed from each specific food category for all participants divided by the sum of sodium consumed from all food categories for all participants multiplied by 100. All estimates use two observations per person, take into account the complex sampling design, and use 2-day diet sample weights to account for nonresponse and weekend/weekday recalls. Standard errors of the estimates are in parentheses.

† Rank based on population proportions of sodium consumed for overall U.S. population aged ≥ 2 years. Columns for other age groups are ordered by this ranking. Additional information regarding food categorization is available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6105-table.htm.

§ Food categories contributing ≥ 3% to overall sodium consumption within specific age groups but not listed among the top 10 contributors were as follows: persons aged 2–19 years, frankfurters and sausages (3.7%) and ready-to-eat cereal (3.2%); 2–5 years, frankfurters and sausages (5.4%), whole and reduced fat milk (4.7%), and ready-to-eat cereal (3.7%); 6–11 years, frankfurters and sausages (4.1%), and ready-to-eat cereals (3.4%); 12–19 years, burritos, tacos, and tamales (4.0%); 20–50 years, burritos, tacos, tamales (3.4%); 51–70 years, salad dressings and vegetable oils (3.5%); ≥71 years, biscuits, muffins, quick breads (3.2%).

¶ Sandwiches as identified by a single WWEIA code.

** Natural and processed cheese.

†† Pasta mixed dishes category does not include macaroni and cheese, which is its own category.

§§ Data are statistically unreliable; relative standard error ≥ 30%.

¶¶ Includes snacks such as chips, puffs, popcorn, and pretzels.

Conclusions and Comments

The results from this study indicated that the top 10 ranked food categories contributed 44% of the overall sodium consumption among persons aged ≥2 years in the United States. Most of the sodium was in foods obtained at stores; however, 25% of sodium consumption came from restaurants. Foods obtained at restaurants tend to have more sodium per calorie compared with foods obtained at stores. Additionally, two leading contributors to sodium consumption (pizza and poultry) are more often obtained from restaurants and locations other than stores. Although the results show this also is true for sandwiches, that is because sandwiches assigned single codes primarily represented sandwiches prepared at fast food/pizza restaurants. Together, these results suggest a comprehensive approach is needed that includes reductions in the sodium content in processed foods from stores, restaurants and other food service locations.

These analyses are the most current regarding the top food contributors of sodium consumption in the United States and further our understanding of sodium consumption by source. The results are consistent with previous analyses of sodium consumption per capita based on 2005–2006 or older data and somewhat different food categories, suggesting the leading food sources of sodium consumption include both frequently consumed processed foods containing moderate amounts of sodium (e.g., breads and rolls and chicken) and less frequently consumed foods containing higher amounts of sodium (e.g., cold cuts/cured meats and pizza) (*4,5,10–12*). Given that sodium and energy intake are highly correlated, the proportion of sodium obtained at schools is consistent with 1994–1996 analyses among children aged 2–18 years indicating that 8.7% of calories consumed came from schools (*13*). Although not directly comparable, the results in this report are generally consistent with previous studies suggesting persons eat more sodium per calorie from food and beverages obtained at restaurants than eaten at home (*4,14,15*). Some of the population sodium contribution from restaurants might be attributable to larger portion sizes as well as the food types consumed and the amount of sodium in the foods.

This analysis is subject to at least six limitations. First, institutionalized populations were excluded. Second, some persons did not complete two 24-hour diet recalls, but estimates were

TABLE 2. Ranked population proportions of sodium consumed* by persons aged ≥2 years, by selected food categories, sex, and selected race/ethnicities — *What We Eat in America (WWEIA)*, National Health and Nutrition Examination Survey, United States, 2007–2008

		Sex		Race/Ethnicity		
		Male	Female	non-Hispanic white	non-Hispanic black	Mexican-American
Rank†	Food category§	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)
1	Breads and rolls	7.4 (0.3)	7.4 (0.2)	7.9 (0.3)	6.7 (0.3)	5.2 (0.2)
2	Cold cuts/cured meats	5.8 (0.5)	4.3 (0.2)	5.5 (0.4)	4.6 (0.4)	4.1 (0.3)
3	Pizza	5.7 (0.3)	4.0 (0.3)	4.9 (0.2)	5.6 (0.6)	5.2 (0.2)
4	Poultry	4.5 (0.3)	4.5 (0.2)	4.1 (0.3)	7.2 (0.5)	4.5 (0.3)
5	Soups	4.3 (0.4)	4.4 (0.3)	3.6 (0.3)	3.2 (0.5)	6.2 (0.8)
6	Sandwiches¶	4.3 (0.4)	3.7 (0.3)	3.7 (0.4)	6.0 (0.7)	4.1 (0.4)
7	Cheese**	3.7 (0.1)	3.9 (0.3)	4.1 (0.2)	3.0 (0.2)	3.2 (0.2)
8	Pasta mixed dishes††	3.2 (0.2)	3.4 (0.3)	3.5 (0.2)	3.1 (0.2)	1.8 (0.2)
9	Meat mixed dishes	3.1 (0.2)	3.4 (0.5)	3.6 (0.3)	2.3 (0.2)	2.0 (0.2)
10	Savory snacks§§	2.9 (0.2)	3.4 (0.2)	3.3 (0.2)	3.2 (0.2)	2.8 (0.2)
Mean daily sodium consumption (mg) (SE)		**3,760 (57)**	**2,828 (36)**	**3,324 (49)**	**3,116 (51)**	**3,037 (49)**
Unweighted no. of participants in sample		**3,557**	**3,670**	**3,115**	**1,600**	**1,407**

Abbreviation: SE = standard error.

* The population proportion (%) of sodium consumed is defined as the sum of the amount of sodium consumed from each specific food category for all participants divided by the sum of sodium consumed from all food categories for all participants multiplied by 100. All estimates use two observations per person, take into account the complex sampling design, and use 2-day diet sample weights to account for nonresponse and weekend/weekday recalls. Standard errors of the estimates are in parentheses.

† Rank based on population proportions of sodium consumed for overall U.S. population aged ≥ 2 years. Columns for other age groups are ordered by this ranking. Additional information regarding food categorization is available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6105-table.htm.

§ Food categories contributing ≥ 3% to overall sodium consumption within specific age groups but not listed among the top 10 contributors were as follows: males, frankfurters and sausages (3.3%), and burritos, tacos, and tamales (3.2%); females, frankfurters and sausages (3.3%), burritos, tacos, and tamales (3.2%); non-Hispanic blacks, frankfurters and sausages (5.0%), salad dressings and vegetable oils (2.4%); Mexican-Americans, burritos, tacos, and tamales (6.8%), tortillas (4.7%), and eggs and eggs mixed dishes (3.8%).

¶ Sandwiches as identified by a single WWEIA code.

** Natural and processed cheese.

†† Pasta mixed dishes category does not include macaroni and cheese, which is its own category.

§§ Includes snacks such as chips, puffs, popcorn, and pretzels.

TABLE 3. Population proportions of sodium consumed* and mean sodium density,† by food source category and age group — *What We Eat in America,* National Health and Nutrition Examination Survey, United States, 2007–2008

	Food source category§				
Age group (yrs)	Store	Restaurant with fast food/pizza	Restaurant with waiter/waitress	Cafeteria at school/child care center	Other
≥2					
Population proportion, % (SE)	65.2 (1.0)	13.6 (0.7)	11.2 (0.7)	—	10.0 (0.5)
Sodium density, mg/1,000 kcal	1,519 (10)	1,848 (16)	2,090 (32)	—	1,676 (21)
2–19					
Population proportion, % (SE)	65.5 (1.1)	13.7 (0.6)	6.3 (0.7)	8.1 (1.2)	6.3 (0.5)
Sodium density, mg/1,000 kcal	1,509 (14)	1,745 (20)	1,970 (63)	1,701 (22)	1,501 (58)
≥20					
Population proportion, % (SE)	65.1 (1.3)	13.6 (0.8)	12.7 (0.8)	—	8.6 (0.4)
Sodium density, mg/1,000 kcal	1,522 (12)	1,882 (23)	2,110 (29)	—	1,712 (24)

Abbreviation: SE = standard error.

* The population proportion (%) of sodium consumed is defined as the sum of the amount of sodium consumed from each specific food source category for all participants divided by the sum of sodium consumed from all food source categories for all participants multiplied by 100. All estimates use two observations per person, take into account the complex sampling design, and use 2-day diet sample weights to account for nonresponse and weekend/weekday recalls. Standard errors of the estimates are in parentheses. The unweighted number of participants in each sample was 7,227 (2,554 children and 4,683 adults).

† A measure that accounts for differences in the amount of calories consumed from foods obtained from each source, defined as mg of sodium per 1,000 kcal.

§ Food source categories were analyzed from responses to the question, "Where did you get this (most of the ingredients for this) [food name]?" "Cafeteria at school" and "child care center" were combined in one category. Sources other than those shown were combined under "other" and included "from someone else/gift" (3.9% population proportion among those aged ≥2 years), cafeteria at school/child care center (2.1%), and 19 other sources (e.g., vending machine), including "missing," "do not know," and "other/specify" (<1%). For persons not aged 2–19 years, "cafeteria at school" and "child care center" were grouped in the "other" category because <1% reported consumption of sodium from foods obtained at these locations.

TABLE 4. Percent of persons aged ≥ 2 years who consumed the food from the specified food category* and among those persons, the proportion who obtained the food from stores, restaurants, or other sources — *What We Eat in America (WWEIA)*, National Health and Nutrition Examination Survey, United States, 2007–2008

Rank	Food category	No. of consumers§	% (SE)¶	Food source category†			
				Store % (SE)	Restaurant with fast food/pizza % (SE)	Restaurant with waiter/waitress % (SE)	Other % (SE)
1	Breads and rolls	5,672	79.9 (0.9)	76.4 (1.3)	6.7 (0.8)	8.7 (0.6)	8.2 (0.7)
2	Cold cuts/cured meats	2,469	33.9 (1.2)	78.8 (1.1)	6.5 (1.0)	5.4 (0.9)	9.3 (1.2)
3	Pizza	1,569	21.9 (0.7)	27.2 (3.1)	51.2 (3.5)	13.2 (2.1)	8.4 (1.1)
4	Poultry	3,659	48.3 (1.3)	46.0 (2.4)	26.6 (1.9)	16.7 (1.2)	10.7 (1.3)
5	Soups	1,670	22.0 (1.3)	77.4 (4.3)	—**	12.5 (3.6)	7.5 (1.1)
6	Sandwiches††	1,480	20.6 (1.1)	11.9 (1.2)	84.5 (1.4)	—	3.0 (0.8)
7	Cheese§§	3,833	56.2 (1.9)	72.4 (1.2)	10.5 (1.0)	8.2 (0.6)	8.9 (0.9)
8	Pasta mixed dishes¶¶	1,183	17.6 (0.9)	82.2 (3.2)	—	7.4 (1.6)	8.8 (1.5)
9	Meat mixed dishes	1,417	21.8 (1.4)	76.7 (3.5)	5.4 (1.2)	9.2 (2.3)	8.7 (2.0)
10	Savory snacks***	3,599	50.7 (1.5)	81.7 (1.5)	3.6 (1.0)	2.5 (0.4)	12.2 (1.2)

* Ranked by population proportions (%) of sodium consumed by persons aged ≥2 years. The population proportion (%) of sodium consumed is defined as the sum of the amount of sodium consumed from each specific food source category for all participants who consumed foods within the specified food category divided by the sum of sodium consumed from all food source categories for all participants who consumed foods within the specified food category multiplied by 100. All estimates use two observations per person, take into account the complex sampling design, and use 2-day diet sample weights to account for nonresponse and weekend/weekday recalls. Standard errors of the estimates are in parentheses. Data were limited to the food categories ranked in the top 10 in population proportion of sodium consumed by persons aged ≥2 years.

† Food source categories were analyzed from responses to the question, "Where did you get this (most of the ingredients for this) [food name]?" Sources other than those shown were combined under "other" and included "from someone else/gift" (3.9% population proportion among those aged ≥2 years), cafeteria at school/child care center (2.1%), and 19 other sources (e.g., vending machine), including "missing," "do not know," and "other/specify" (<1%).

§ No. of participants aged ≥2 who reported consumption of at least one food within the selected food category on either day of the two 24-hour dietary recall.

¶ Percentage of participants aged ≥2 years who reported consumption of at least one food within the selected food category on either day of the two 24-hour dietary recalls.

** Data are statistically unreliable, relative standard error ≥30%.

†† Sandwiches as identified by a single WWEIA code.

§§ Natural and processed cheese.

¶¶ Pasta mixed dishes category does not include macaroni and cheese, which is its own category.

*** Includes snacks such as chips, puffs, popcorn, and pretzels.

weighted to account for nonresponse. Third, ranking of food categories by contribution to sodium consumption is greatly influenced by methods of categorizing. Depending on the categorization of specific foods and the portion sizes and frequency of their consumption, the contribution to sodium consumption and ranking of foods can vary (*9*,*16*). The food categories represent how foods and beverages are consumed and should be useful to dietitians, nutritionists, and public health professionals in developing strategies and educational materials to reduce sodium consumption. Fourth, although multiple 24-hour diet recalls collected using a rigorous method were used to assess dietary consumption, the data are still subject to errors in self-reporting and food coding and composition and lack a biomarker of total sodium consumption, such as 24-hour urine collection. Fifth, nutrient information on specific brands is limited in FNDDS. Finally, the sodium contribution of foods and beverages excluded sodium consumed from salt added at the table (an estimated 5%–6% of total consumption) and from supplements and medicines (<1% of total consumption), resulting in underestimate of total sodium consumption (*4*,*17*).

The high average U.S. sodium intake reinforces the importance of the IOM recommendations to set phased targets to reduce the sodium content of processed, restaurant, and other foods (*4*). The Food and Drug Administration and USDA's Food Safety and Inspection Service recently solicited public comments on this and other strategies. §§ The IOM also recommended that the food industry voluntarily reduce the sodium content of foods (*4*). Several food manufacturers and restaurants have committed to voluntary reductions in some of their food products, some as part of the New York City-led National Salt Reduction Initiative.¶¶ In addition, to support national initiatives, IOM recommended more widespread implementation of state and local policies to reduce the amount of sodium in foods served in local restaurants and other food services (*4*). Programs such as those being piloted by CDC's *Sodium Reduction in Communities**** might complement these efforts. In addition, health-care providers can counsel patients to choose low sodium foods, consistent with IOM recommendations (*4*) and those in the *Dietary Approaches to Stop Hypertension* eating pattern (*4*).†††

§§ Additional information available at http://www.regulations.gov/#!documentDetail;D=FDA-2011-N-0400-0001.

¶¶ Additional information available at http://www.nyc.gov/html/doh/html/cardio/cardio-salt-initiative.shtml.

*** Additional information available at http://www.cdc.gov/dhdsp/programs/sodium_reduction.htm.

††† Additional information available at http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/new_dash.pdf.

Key Points

- Approximately nine of 10 persons in the United States consume more sodium than recommended.
- Recommended daily sodium consumption for all persons is <2,300 mg, and is 1,500 mg for specific groups, including non-Hispanic blacks, persons aged ≥51 years, and persons with hypertension, diabetes, and chronic kidney disease.
- Dietary sodium, excluding sodium added at the table, averages 3,266 mg/day, far greater than recommendations. The leading sources of overall sodium consumption are bread and rolls, cold cuts/cured meats, pizza, poultry, soups, sandwiches such as cheeseburgers, cheese, pasta mixed dishes such as spaghetti with meat sauce, meat mixed dishes such as meatloaf with tomato sauce, and savory snacks like chips and pretzels. Together, these account for more than 40% of sodium consumption.
- Two thirds of dietary sodium from foods and drinks comes from supermarkets, convenience stores, or other stores. One fourth comes from restaurant food, which has the highest per-calorie dietary sodium.
- Reducing the sodium content of the 10 leading sources by one fourth would reduce total dietary sodium by more than 10%. This could prevent an estimated 28,000 deaths and $7 billion in health-care expenditures annually. In particular, sustained manufacturer and restaurant reductions in sodium in foods are recommended.
- Additional information is available at http://www.cdc.gov/vitalsigns.

A reduction of 25% in sodium content across the top 10 food category contributors to sodium consumption could result in an 11% reduction (approximately 360 mg) in total daily mean sodium consumption in the United States. Reducing the mean population sodium consumption by 400 mg has been projected to avert up to 28,000 deaths from any cause and save $7 billion in health-care expenditures annually (*3*). Sodium reduction is an important component of the U.S. Department of Health and Human Services' *Million Hearts* initiative, which is co-led by CDC and the Centers for Medicare and Medicaid Services and aims to improve cardiovascular disease prevention through clinical and community interventions to prevent 1 million heart attacks and strokes over the next 5 years.[§§§]

[§§§] Additional information available at http://millionhearts.hhs.gov.

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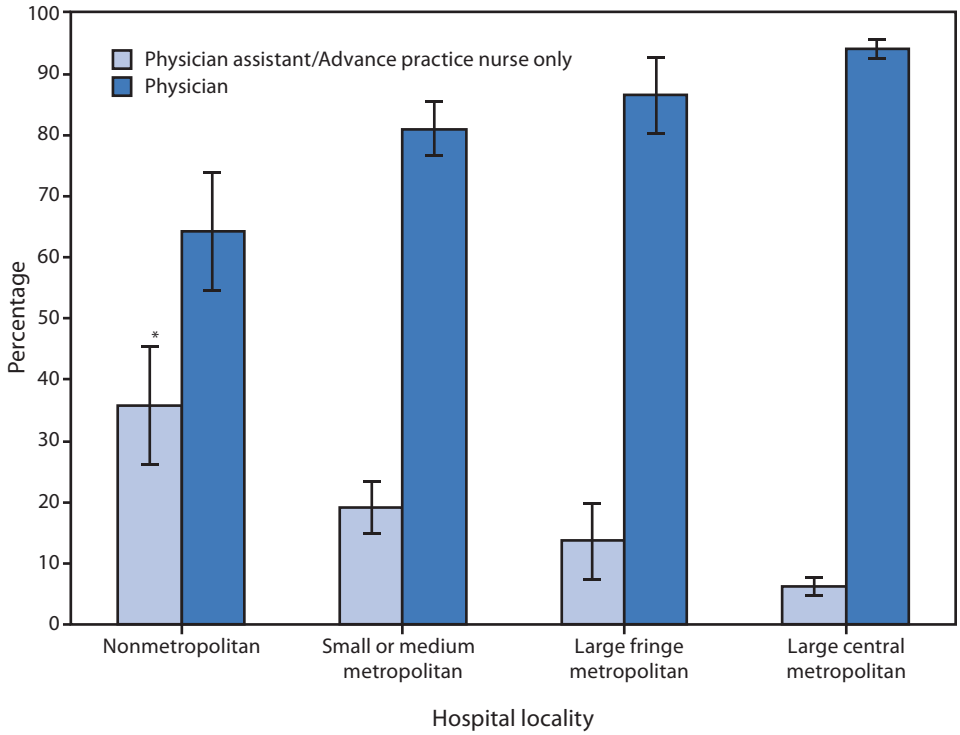
QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Hospital Outpatient Department Visits in Which a Physician Assistant or Advance Practice Nurse Was Seen, by Hospital Locality — United States, 2008–2009



* 95% confidence interval.

Patients are much more likely to see a physician assistant or advance practice nurse, such as a nurse practitioner, at visits to hospital outpatient departments in nonmetropolitan areas (36%) than at visits to hospital outpatient departments in large, metropolitan areas (6%).

Source: Hing E, Uddin S. Physician assistant and advance practice nurse care in hospital outpatient departments. NCHS data brief, no. 77. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics; 2011. Available at http://www.cdc.gov/nchs/data/databriefs/db77.htm.

Notifiable Diseases and Mortality Tables

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending February 4, 2012 (5th week)*

Disease	Current week	Cum 2012	5-year weekly average†	Total cases reported for previous years 2011	2010	2009	2008	2007	States reporting cases during current week (No.)
Anthrax	—	—	—	1	—	1	—	1	
Arboviral diseases§,¶:									
California serogroup virus disease	—	—	0	131	75	55	62	55	
Eastern equine encephalitis virus disease	—	—	—	4	10	4	4	4	
Powassan virus disease	—	—	—	16	8	6	2	7	
St. Louis encephalitis virus disease	—	—	—	5	10	12	13	9	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
Babesiosis	—	2	0	638	NN	NN	NN	NN	
Botulism, total	—	3	2	122	112	118	145	144	
foodborne	—	—	0	10	7	10	17	32	
infant	—	2	2	80	80	83	109	85	
other (wound and unspecified)	—	1	0	32	25	25	19	27	
Brucellosis	—	3	1	80	115	115	80	131	
Chancroid	—	1	1	27	24	28	25	23	
Cholera	—	—	0	31	13	10	5	7	
Cyclosporiasis§	—	3	2	146	179	141	139	93	
Diphtheria	—	—	—	—	—	—	—	—	
Haemophilus influenzae,** invasive disease (age <5 yrs):									
serotype b	2	2	1	9	23	35	30	22	NY (2)
nonserotype b	—	11	5	115	200	236	244	199	
unknown serotype	3	19	4	247	223	178	163	180	PA (1), MS (1), AK (1)
Hansen disease§	1	4	2	57	98	103	80	101	CA (1)
Hantavirus pulmonary syndrome§	—	—	0	20	20	20	18	32	
Hemolytic uremic syndrome, postdiarrheal§	—	2	1	209	266	242	330	292	
Influenza-associated pediatric mortality§,††	1	2	4	118	61	358	90	77	TX (1)
Listeriosis	4	30	10	798	821	851	759	808	PA (1), FL (1), AZ (1), CA (1)
Measles§§	—	10	1	216	63	71	140	43	
Meningococcal disease, invasive¶¶:									
A, C, Y, and W-135	1	9	5	190	280	301	330	325	AZ (1)
serogroup B	—	2	4	117	135	174	188	167	
other serogroup	—	1	1	16	12	23	38	35	
unknown serogroup	4	33	11	384	406	482	616	550	PA (2), MO (1), FL (1)
Novel influenza A virus infections***	—	—	0	8	4	43,774	2	4	
Plague	—	—	—	2	2	8	3	7	
Poliomyelitis, paralytic	—	—	—	—	—	1	—	—	
Polio virus Infection, nonparalytic§	—	—	—	—	—	—	—	—	
Psittacosis§	—	—	0	2	4	9	8	12	
Q fever, total§	—	2	2	119	131	113	120	171	
acute	—	1	1	91	106	93	106	—	
chronic	—	1	0	28	25	20	14	—	
Rabies, human	—	—	—	2	2	4	2	1	
Rubella†††	—	—	0	4	5	3	16	12	
Rubella, congenital syndrome	—	—	0	—	—	2	—	—	
SARS-CoV§	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	7	3	126	142	161	157	132	
Syphilis, congenital (age <1 yr)§§§	—	1	9	269	377	423	431	430	
Tetanus	—	—	0	11	26	18	19	28	
Toxic-shock syndrome (staphylococcal)§	—	2	1	74	82	74	71	92	
Trichinellosis	—	—	0	10	7	13	39	5	
Tularemia	—	—	0	140	124	93	123	137	
Typhoid fever	2	19	8	330	467	397	449	434	NY (1), WA (1)
Vancomycin-intermediate *Staphylococcus aureus*§	—	—	1	71	91	78	63	37	
Vancomycin-resistant *Staphylococcus aureus*§	—	—	—	—	2	1	—	2	
Vibriosis (noncholera *Vibrio* species infections)§	1	19	3	739	846	789	588	549	TN (1)
Viral hemorrhagic fever¶¶¶	—	—	0	—	1	NN	NN	NN	
Yellow fever	—	—	—	—	—	—	—	—	

See Table 1 footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending February 4, 2012 (5th week)*

—: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts.

* Case counts for reporting year 2011 and 2012 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf.

† 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/osels/ph_surveillance/nndss/phs/files/5yearweeklyaverage.pdf.

§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table except starting in 2007 for the arboviral diseases, STD data, TB data, and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/osels/ph_surveillance/nndss/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.

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

†† Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since October 2, 2011, two influenza-associated pediatric deaths occurring during the 2011-12 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.

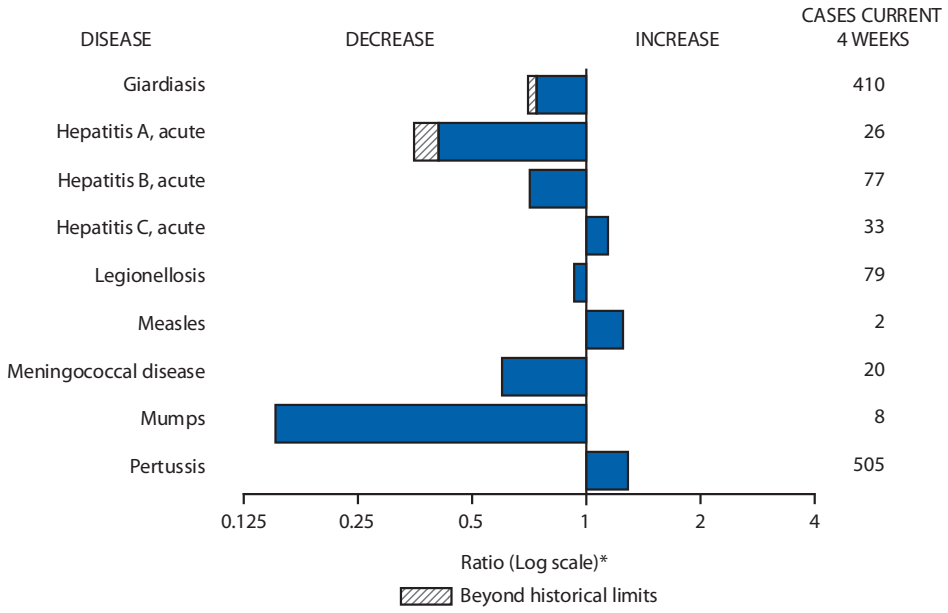
*** CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. During 2009, four cases of human infection with novel influenza A viruses, different from the 2009 pandemic influenza A (H1N1) strain, were reported to CDC. The four cases of novel influenza A virus infection reported to CDC during 2010, and the eight cases reported during 2011, were identified as swine influenza A (H3N2) virus and are unrelated to the 2009 pandemic influenza A (H1N1) virus. Total case counts are provided by the Influenza Division, National Center for Immunization and Respiratory Diseases (NCIRD).

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

§§§ Updated weekly from reports to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.

¶¶¶ There were no cases of viral hemorrhagic fever reported during the current week. See Table II for dengue hemorrhagic fever.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals February 4, 2012, 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. Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	*Chlamydia trachomatis* infection					Coccidioidomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	12,343	26,750	30,790	81,960	124,475	93	390	585	911	2,288	50	133	397	342	439
New England	685	892	1,594	2,505	3,089	—	0	1	—	—	—	6	22	11	25
Connecticut	—	240	869	—	121	—	0	0	—	—	—	1	9	4	7
Maine	61	58	100	284	288	—	0	0	—	—	—	1	4	1	4
Massachusetts	435	427	860	1,615	1,924	—	0	0	—	—	—	2	8	—	11
New Hampshire	2	58	90	12	288	—	0	1	—	—	—	1	5	2	1
Rhode Island	143	80	188	550	360	—	0	0	—	—	—	0	1	—	—
Vermont	44	26	84	44	108	—	0	0	—	—	—	1	5	4	2
Mid. Atlantic	1,885	3,216	3,954	13,022	15,126	—	0	1	—	—	11	14	43	38	47
New Jersey	121	540	1,004	2,160	2,129	—	0	0	—	—	—	0	1	1	—
New York (Upstate)	760	715	1,715	2,663	2,774	—	0	0	—	—	6	4	16	11	8
New York City	243	1,067	1,315	3,307	5,465	—	0	0	—	—	1	1	6	6	7
Pennsylvania	761	1,015	1,601	4,892	4,758	—	0	1	—	—	4	9	27	20	32
E.N. Central	1,201	4,123	4,594	11,697	22,091	—	1	5	4	4	8	32	147	87	110
Illinois	34	1,149	1,387	1,981	5,870	—	0	0	—	—	—	3	26	1	11
Indiana	237	550	720	1,706	3,277	—	0	0	—	—	—	3	14	—	19
Michigan	545	919	1,229	3,557	5,257	—	0	3	1	1	1	6	14	15	26
Ohio	241	1,020	1,182	2,848	5,270	—	0	2	3	3	7	11	95	54	35
Wisconsin	144	461	543	1,605	2,417	—	0	0	—	—	—	8	65	17	19
W.N. Central	6	1,497	1,818	1,577	7,242	—	0	2	—	—	2	16	87	25	53
Iowa	6	211	422	1,011	1,091	—	0	0	—	—	—	6	19	8	17
Kansas	—	208	281	80	961	—	0	0	—	—	—	0	11	1	—
Minnesota	—	316	401	—	1,714	—	0	0	—	—	—	0	0	—	—
Missouri	—	534	759	—	2,422	—	0	0	—	—	2	5	63	10	14
Nebraska	—	127	215	272	467	—	0	2	—	—	—	2	12	2	17
North Dakota	—	43	64	5	206	—	0	0	—	—	—	0	12	—	—
South Dakota	—	62	89	209	381	—	0	0	—	—	—	2	13	4	5
S. Atlantic	3,690	5,400	7,453	21,230	25,203	—	0	2	—	—	15	22	58	82	91
Delaware	99	86	182	344	351	—	0	0	—	—	—	0	1	1	1
District of Columbia	—	110	216	487	516	—	0	0	—	—	—	0	1	—	1
Florida	899	1,509	1,690	6,431	7,327	—	0	0	—	—	6	8	17	35	34
Georgia	653	1,023	1,569	4,117	4,677	—	0	0	—	—	1	5	11	12	19
Maryland	277	479	790	938	1,887	—	0	2	—	—	3	1	7	14	4
North Carolina	762	1,000	1,688	4,832	3,733	—	0	0	—	—	—	0	44	—	9
South Carolina	—	528	1,344	—	2,341	—	0	0	—	—	3	2	6	10	14
Virginia	856	659	1,787	3,601	3,913	—	0	1	—	—	2	2	8	9	9
West Virginia	144	81	137	480	458	—	0	0	—	—	—	0	5	1	—
E.S. Central	1,323	1,900	2,804	5,522	8,506	—	0	0	—	—	3	8	25	19	12
Alabama	632	532	1,566	1,700	2,717	—	0	0	—	—	1	2	7	7	7
Kentucky	367	301	557	1,257	853	—	0	0	—	—	1	2	17	2	3
Mississippi	—	403	845	—	2,061	—	0	0	—	—	—	1	4	3	1
Tennessee	324	600	755	2,565	2,875	—	0	0	—	—	1	2	6	7	1
W.S. Central	1,581	3,346	4,313	10,423	15,427	—	0	1	—	—	5	8	44	24	15
Arkansas	—	309	440	—	1,578	—	0	0	—	—	—	0	2	1	—
Louisiana	195	364	1,071	1,294	1,862	—	0	1	—	—	—	1	9	6	2
Oklahoma	140	130	675	489	674	—	0	0	—	—	2	2	6	4	2
Texas	1,246	2,408	3,113	8,640	11,313	—	0	0	—	—	3	5	40	13	11
Mountain	791	1,758	2,406	5,371	8,020	74	306	457	775	1,736	1	10	29	23	54
Arizona	132	548	782	2,407	2,624	71	302	454	764	1,709	1	1	4	1	3
Colorado	469	415	846	1,512	1,857	—	0	0	—	—	—	2	11	—	14
Idaho	70	85	259	276	396	—	0	0	—	—	—	1	9	10	6
Montana	72	66	88	354	318	—	0	2	—	—	—	1	6	5	3
Nevada	31	203	380	182	1,067	1	2	5	7	11	—	0	2	2	1
New Mexico	—	209	482	—	894	—	1	4	—	11	—	2	9	4	15
Utah	6	133	190	532	654	—	0	4	2	3	—	1	5	—	6
Wyoming	11	32	67	108	210	2	0	1	2	2	—	0	5	1	6
Pacific	1,181	4,010	5,428	10,613	19,771	19	89	151	132	548	5	11	21	33	32
Alaska	38	109	157	492	610	—	0	0	—	—	—	0	3	—	—
California	736	3,002	4,499	7,480	15,107	19	89	151	132	547	3	6	16	27	14
Hawaii	—	114	142	—	555	—	0	0	—	—	1	0	1	2	—
Oregon	—	273	412	1,095	1,260	—	0	1	—	1	1	2	8	4	16
Washington	407	438	611	1,546	2,239	—	0	0	—	—	—	1	9	—	2
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	16	44	—	26	—	0	0	—	—	—	0	0	—	—
Puerto Rico	256	102	348	570	541	—	0	0	—	—	N	0	0	N	N
U.S. Virgin Islands	—	16	27	—	70	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2011 and 2012 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Dengue Virus Infection									
	Dengue Fever†					Dengue Hemorrhagic Fever§				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max		
United States	—	2	16	—	25	—	0	1	—	—
New England	—	0	1	—	—	—	0	0	—	—
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	0	—	—	—	0	0	—	—
Rhode Island	—	0	0	—	—	—	0	0	—	—
Vermont	—	0	1	—	—	—	0	0	—	—
Mid. Atlantic	—	1	6	—	7	—	0	0	—	—
New Jersey	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	0	0	—	—	—	0	0	—	—
New York City	—	0	4	—	4	—	0	0	—	—
Pennsylvania	—	0	2	—	3	—	0	0	—	—
E.N. Central	—	0	2	—	4	—	0	1	—	—
Illinois	—	0	1	—	—	—	0	1	—	—
Indiana	—	0	1	—	1	—	0	0	—	—
Michigan	—	0	1	—	1	—	0	0	—	—
Ohio	—	0	1	—	—	—	0	0	—	—
Wisconsin	—	0	1	—	2	—	0	0	—	—
W.N. Central	—	0	2	—	—	—	0	0	—	—
Iowa	—	0	1	—	—	—	0	0	—	—
Kansas	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	1	—	—	—	0	0	—	—
Missouri	—	0	0	—	—	—	0	0	—	—
Nebraska	—	0	0	—	—	—	0	0	—	—
North Dakota	—	0	1	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—
S. Atlantic	—	1	8	—	7	—	0	1	—	—
Delaware	—	0	2	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—
Florida	—	1	7	—	4	—	0	0	—	—
Georgia	—	0	1	—	1	—	0	0	—	—
Maryland	—	0	2	—	—	—	0	0	—	—
North Carolina	—	0	1	—	1	—	0	0	—	—
South Carolina	—	0	1	—	—	—	0	0	—	—
Virginia	—	0	1	—	1	—	0	1	—	—
West Virginia	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	0	3	—	—	—	0	0	—	—
Alabama	—	0	1	—	—	—	0	0	—	—
Kentucky	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	0	—	—	—	0	0	—	—
Tennessee	—	0	2	—	—	—	0	0	—	—
W.S. Central	—	0	2	—	—	—	0	0	—	—
Arkansas	—	0	0	—	—	—	0	0	—	—
Louisiana	—	0	1	—	—	—	0	0	—	—
Oklahoma	—	0	0	—	—	—	0	0	—	—
Texas	—	0	1	—	—	—	0	0	—	—
Mountain	—	0	1	—	2	—	0	0	—	—
Arizona	—	0	1	—	1	—	0	0	—	—
Colorado	—	0	0	—	—	—	0	0	—	—
Idaho	—	0	0	—	—	—	0	0	—	—
Montana	—	0	0	—	—	—	0	0	—	—
Nevada	—	0	1	—	—	—	0	0	—	—
New Mexico	—	0	1	—	1	—	0	0	—	—
Utah	—	0	1	—	—	—	0	0	—	—
Wyoming	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	4	—	5	—	0	0	—	—
Alaska	—	0	0	—	—	—	0	0	—	—
California	—	0	2	—	3	—	0	0	—	—
Hawaii	—	0	4	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—
Washington	—	0	1	—	2	—	0	0	—	—
Territories										
American Samoa	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	16	83	—	103	—	0	3	—	1
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2011 and 2012 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Dengue Fever includes cases that meet criteria for Dengue Fever with hemorrhage, other clinical and unknown case classifications.
§ DHF includes cases that meet criteria for dengue shock syndrome (DSS), a more severe form of DHF.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Ehrlichiosis/Anaplasmosis†														
	Ehrlichia chaffeensis					*Anaplasma phagocytophilum*					Undetermined				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	2	9	93	5	9	2	15	57	6	9	—	2	9	2	2
New England	—	0	1	—	—	—	3	28	1	3	—	0	1	—	—
Connecticut	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Maine	—	0	1	—	—	—	0	3	1	1	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	1	18	—	—	—	0	0	—	—
New Hampshire	—	0	1	—	—	—	0	4	—	—	—	0	1	—	—
Rhode Island	—	0	1	—	—	—	0	15	—	2	—	0	1	—	—
Vermont	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Mid. Atlantic	—	1	5	—	1	2	6	35	4	3	—	0	2	—	—
New Jersey	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	0	4	—	—	2	3	35	3	2	—	0	2	—	—
New York City	—	0	2	—	1	—	1	5	1	1	—	0	0	—	—
Pennsylvania	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
E.N. Central	—	0	5	—	1	—	0	2	—	1	—	0	6	—	2
Illinois	—	0	4	—	—	—	0	2	—	—	—	0	1	—	1
Indiana	—	0	0	—	—	—	0	0	—	—	—	0	4	—	1
Michigan	—	0	2	—	—	—	0	0	—	—	—	0	2	—	—
Ohio	—	0	1	—	1	—	0	1	—	—	—	0	1	—	—
Wisconsin	—	0	0	—	—	—	0	1	—	1	—	0	1	—	—
W.N. Central	—	1	19	1	—	—	0	8	—	—	—	0	7	—	—
Iowa	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
Kansas	—	0	2	—	—	—	0	1	—	—	—	0	1	—	—
Minnesota	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Missouri	—	1	19	1	—	—	0	7	—	—	—	0	7	—	—
Nebraska	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
North Dakota	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
South Dakota	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
S. Atlantic	2	3	33	4	7	—	1	8	1	2	—	0	2	2	—
Delaware	—	0	2	—	1	—	0	1	—	—	—	0	0	—	—
District of Columbia	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
Florida	—	0	3	—	1	—	0	3	—	—	—	0	0	—	—
Georgia	1	0	3	3	1	—	0	2	1	—	—	0	1	1	—
Maryland	—	0	3	—	2	—	0	2	—	—	—	0	1	1	—
North Carolina	1	0	17	1	2	—	0	6	—	2	—	0	0	—	—
South Carolina	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
Virginia	—	1	13	—	—	—	0	3	—	—	—	0	1	—	—
West Virginia	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
E.S. Central	—	1	8	—	—	—	0	2	—	—	—	0	3	—	—
Alabama	—	0	2	—	—	—	0	1	—	—	N	0	0	N	N
Kentucky	—	0	3	—	—	—	0	0	—	—	—	0	0	—	—
Mississippi	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
Tennessee	—	0	5	—	—	—	0	1	—	—	—	0	3	—	—
W.S. Central	—	0	30	—	—	—	0	3	—	—	—	0	0	—	—
Arkansas	—	0	13	—	—	—	0	3	—	—	—	0	0	—	—
Louisiana	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	25	—	—	—	0	1	—	—	—	0	0	—	—
Texas	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
Mountain	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Arizona	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Colorado	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
Idaho	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
Montana	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
Nevada	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
New Mexico	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
Utah	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Wyoming	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	0	—	—	—	0	1	—	—	—	0	2	—	—
Alaska	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
California	—	0	0	—	—	—	0	0	—	—	—	0	2	—	—
Hawaii	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
Oregon	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Territories															
American Samoa	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
Puerto Rico	N	0	0	N	N	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2011 and 2012 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Cumulative total *E. ewingii* cases reported for year 2011 = 14, and 0 case reports for 2012.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive† All ages, all serotypes				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	110	278	449	759	1,195	2,841	6,009	6,726	20,090	29,208	32	65	96	261	359
New England	2	27	64	24	114	66	108	178	275	374	1	4	9	11	23
Connecticut	—	4	10	7	20	—	45	101	—	146	—	1	4	7	7
Maine	1	3	10	7	8	6	5	18	37	10	—	0	2	2	5
Massachusetts	—	12	29	—	67	52	47	80	184	194	—	2	4	—	8
New Hampshire	—	2	8	3	7	1	2	7	4	7	—	0	2	1	1
Rhode Island	—	0	10	2	6	7	7	35	50	15	1	0	2	1	1
Vermont	1	3	19	5	6	—	0	6	—	2	—	0	2	—	1
Mid. Atlantic	29	54	90	133	223	425	745	916	3,203	3,484	9	15	28	76	68
New Jersey	—	0	0	—	—	28	150	232	602	623	—	2	6	1	13
New York (Upstate)	16	21	50	38	66	128	115	319	478	424	6	3	14	16	11
New York City	6	16	29	62	85	59	241	315	767	1,230	—	4	10	22	11
Pennsylvania	7	15	30	33	72	210	264	492	1,356	1,207	3	5	14	37	33
E.N. Central	13	47	84	122	222	347	1,056	1,271	3,213	5,990	4	11	22	30	67
Illinois	—	10	19	3	44	5	290	391	508	1,501	—	3	11	1	20
Indiana	—	6	13	2	29	66	132	169	444	911	—	2	6	2	7
Michigan	1	10	21	34	49	152	235	371	1,022	1,481	—	1	4	5	8
Ohio	12	15	30	61	62	75	314	403	860	1,647	4	4	7	21	22
Wisconsin	—	8	19	22	38	49	90	118	379	450	—	1	4	1	10
W.N. Central	9	20	52	78	97	4	313	377	308	1,411	1	2	10	6	11
Iowa	1	4	15	22	26	4	37	108	204	176	—	0	1	—	—
Kansas	—	2	9	2	9	—	42	65	23	187	—	0	2	1	—
Minnesota	—	0	0	—	—	—	44	61	—	190	—	0	0	—	—
Missouri	6	8	23	34	34	—	149	204	—	674	1	1	5	3	7
Nebraska	2	3	11	17	18	—	28	52	63	108	—	0	2	2	4
North Dakota	—	0	12	—	—	—	4	9	—	22	—	0	6	—	—
South Dakota	—	1	8	3	10	—	11	20	18	54	—	0	1	—	—
S. Atlantic	31	52	105	193	222	973	1,490	1,947	5,775	6,890	11	14	31	74	86
Delaware	—	0	3	—	1	29	15	35	79	81	—	0	2	—	—
District of Columbia	—	1	5	1	6	—	38	105	202	205	—	0	1	—	—
Florida	25	23	69	86	126	223	374	472	1,650	1,911	4	4	12	19	30
Georgia	—	11	51	62	37	190	312	461	1,232	1,464	2	2	6	12	20
Maryland	5	6	14	25	20	86	118	176	293	515	4	2	6	15	11
North Carolina	N	0	0	N	N	250	334	548	1,480	1,284	—	1	7	6	6
South Carolina	—	2	8	10	7	—	152	421	—	688	—	1	5	10	4
Virginia	1	5	12	9	25	177	122	353	780	646	—	2	8	7	15
West Virginia	—	0	8	—	—	18	14	29	59	96	1	0	5	5	—
E.S. Central	2	3	9	14	9	343	514	789	1,518	2,421	4	3	12	21	23
Alabama	2	3	9	14	9	164	166	408	490	875	—	1	3	5	7
Kentucky	N	0	0	N	N	84	77	151	331	226	—	1	4	4	5
Mississippi	N	0	0	N	N	—	111	258	—	603	2	0	3	5	2
Tennessee	N	0	0	N	N	95	149	222	697	717	2	2	8	7	9
W.S. Central	4	5	15	27	20	336	877	1,175	2,722	4,134	—	2	10	12	22
Arkansas	4	3	8	11	3	—	87	138	—	466	—	0	3	2	3
Louisiana	—	2	10	16	17	54	120	255	370	532	—	1	4	5	10
Oklahoma	—	0	0	—	—	32	33	196	119	242	—	1	9	5	9
Texas	N	0	0	N	N	250	589	832	2,233	2,894	—	0	1	—	—
Mountain	2	22	41	30	99	92	202	323	686	1,054	1	5	10	17	36
Arizona	1	2	6	5	10	39	86	132	466	370	—	1	6	6	15
Colorado	—	7	23	10	27	47	39	89	166	278	—	1	4	—	10
Idaho	1	3	9	5	18	—	3	14	3	10	1	0	2	1	2
Montana	—	2	5	2	2	1	1	4	6	12	—	0	1	1	1
Nevada	—	1	7	4	7	4	39	103	20	193	—	0	2	2	2
New Mexico	—	1	6	1	9	—	33	73	—	157	—	1	3	4	5
Utah	—	3	9	2	24	1	5	10	21	25	—	0	3	2	1
Wyoming	—	0	5	1	2	—	0	3	4	9	—	0	1	1	—
Pacific	18	47	156	138	189	255	633	757	2,390	3,450	1	3	9	14	23
Alaska	—	2	7	5	7	8	19	31	66	99	1	0	3	1	4
California	12	33	51	106	135	193	520	610	2,043	2,871	—	1	5	4	6
Hawaii	—	1	3	1	1	—	12	24	—	67	—	0	3	2	3
Oregon	2	6	20	17	34	—	26	60	76	128	—	1	6	7	10
Washington	4	6	126	9	12	54	50	79	205	285	—	0	1	—	—
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	5	—	—	—	0	0	—	—
Puerto Rico	—	0	4	—	6	7	6	14	19	27	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	2	10	—	14	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Case counts for reporting year 2011 and 2012 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Data for *H. influenzae* (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Hepatitis (viral, acute), by type														
	A					B					C				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	9	21	40	54	121	19	47	97	152	260	13	19	36	63	82
New England	—	1	5	2	10	—	1	8	—	13	—	1	5	2	7
Connecticut	—	0	3	2	5	—	0	4	—	1	—	0	4	2	6
Maine	—	0	2	—	—	—	0	2	—	—	—	0	3	—	—
Massachusetts	—	0	3	—	2	—	0	6	—	11	—	0	2	—	1
New Hampshire	—	0	0	—	—	—	0	1	—	1	N	0	0	N	N
Rhode Island	—	0	1	—	1	U	0	0	U	U	U	0	0	U	U
Vermont	—	0	2	—	2	—	0	0	—	—	—	0	1	—	—
Mid. Atlantic	2	3	7	8	19	—	5	8	8	22	1	2	5	8	5
New Jersey	—	0	0	—	—	—	0	1	2	—	—	0	1	1	—
New York (Upstate)	2	1	4	4	3	—	1	4	1	6	1	1	4	1	4
New York City	—	1	4	2	10	—	1	5	2	6	—	0	1	—	—
Pennsylvania	—	1	4	2	6	—	2	4	3	10	—	1	3	6	1
E.N. Central	2	3	7	6	24	7	5	37	19	54	1	2	8	4	20
Illinois	—	1	4	1	5	—	1	6	—	13	—	0	2	—	1
Indiana	—	0	1	—	4	—	1	4	2	5	—	1	5	2	13
Michigan	2	1	6	5	5	—	1	6	4	14	1	1	4	2	5
Ohio	—	1	2	—	8	7	1	30	13	19	—	0	1	—	—
Wisconsin	—	0	1	—	2	—	0	3	—	3	—	0	1	—	1
W.N. Central	2	1	7	4	5	—	2	9	5	14	—	0	4	1	—
Iowa	—	0	1	—	1	—	0	1	—	—	—	0	0	—	—
Kansas	—	0	1	—	—	—	0	2	—	3	—	0	1	1	—
Minnesota	—	0	7	—	—	—	0	7	—	—	—	0	2	—	—
Missouri	1	0	1	2	2	—	1	5	4	7	—	0	0	—	—
Nebraska	1	0	1	2	—	—	0	2	1	3	—	0	1	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	2	—	0	0	—	1	—	0	0	—	—
S. Atlantic	3	4	11	10	24	8	12	57	45	63	5	5	14	20	16
Delaware	—	0	1	—	1	—	0	2	1	—	U	0	0	U	U
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Florida	1	1	8	4	6	3	4	7	14	24	3	1	3	7	5
Georgia	1	1	5	1	7	1	2	7	6	14	1	1	3	1	3
Maryland	—	0	4	1	4	2	1	4	12	8	—	1	3	1	2
North Carolina	—	0	3	2	2	1	2	9	5	7	—	1	7	3	4
South Carolina	—	0	2	—	1	—	1	3	1	5	—	0	1	—	—
Virginia	1	0	3	1	3	1	1	4	6	5	1	0	3	1	2
West Virginia	—	0	2	1	—	—	0	43	—	—	—	0	7	7	—
E.S. Central	—	1	6	1	2	3	10	17	46	41	1	5	10	16	13
Alabama	—	0	2	—	—	—	2	6	7	6	—	0	3	1	—
Kentucky	—	0	2	—	2	2	3	9	18	16	—	2	8	9	8
Mississippi	—	0	1	—	—	—	1	4	2	3	U	0	0	U	U
Tennessee	—	0	5	1	—	1	4	8	19	16	1	1	5	6	5
W.S. Central	—	3	7	8	3	1	6	14	11	16	3	1	5	5	9
Arkansas	—	0	2	—	—	—	1	4	—	2	—	0	0	—	—
Louisiana	—	0	2	—	1	—	0	2	1	8	—	0	1	—	4
Oklahoma	—	0	2	—	—	1	1	9	2	1	—	1	4	—	3
Texas	—	3	7	8	2	—	3	11	8	5	3	0	3	5	2
Mountain	—	1	5	6	11	—	1	4	8	12	—	1	5	2	6
Arizona	—	0	2	2	4	—	0	3	1	1	U	0	0	U	U
Colorado	—	0	2	2	5	—	0	2	—	2	—	0	2	—	2
Idaho	—	0	1	1	—	—	0	1	—	1	—	0	2	—	2
Montana	—	0	1	—	1	—	0	0	—	—	—	0	1	—	—
Nevada	—	0	3	1	—	—	0	3	7	6	—	0	2	2	—
New Mexico	—	0	1	—	1	—	0	2	—	—	—	0	2	—	—
Utah	—	0	1	—	—	—	0	1	—	2	—	0	2	—	2
Wyoming	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
Pacific	—	3	11	9	23	—	3	8	10	25	2	2	10	5	6
Alaska	—	0	1	—	—	—	0	1	—	1	U	0	0	U	U
California	—	3	7	6	20	—	2	7	5	20	—	1	4	2	2
Hawaii	—	0	2	—	1	—	0	1	1	1	U	0	0	U	U
Oregon	—	0	2	1	1	—	0	4	3	3	—	0	2	1	3
Washington	—	0	4	2	1	—	0	3	1	—	2	0	8	2	1
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	5	—	1	—	2	8	—	5	—	0	3	—	1
Puerto Rico	—	0	1	—	—	—	0	2	—	—	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Legionellosis					Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	17	68	166	140	178	92	402	1,593	964	790	12	24	48	76	123
New England	—	4	40	3	16	1	81	503	36	254	—	1	7	1	9
Connecticut	—	1	11	2	3	—	36	234	3	107	—	0	2	—	1
Maine	—	0	3	—	—	—	13	67	15	17	—	0	2	—	—
Massachusetts	—	3	24	—	10	—	17	106	—	83	—	0	6	—	6
New Hampshire	—	0	3	—	1	—	10	90	3	39	—	0	1	—	—
Rhode Island	—	0	9	1	1	1	1	31	1	1	—	0	2	—	—
Vermont	—	0	2	—	1	—	6	70	14	7	—	0	1	1	2
Mid. Atlantic	6	15	76	28	44	78	196	760	783	314	3	6	13	11	33
New Jersey	—	0	0	—	—	39	2	144	511	1	—	0	0	—	—
New York (Upstate)	2	6	27	11	12	21	56	211	50	27	1	1	4	2	3
New York City	—	3	14	4	17	—	1	14	—	6	1	4	11	7	24
Pennsylvania	4	5	41	13	15	18	110	535	222	280	1	1	5	2	6
E.N. Central	5	13	51	30	33	—	21	263	11	67	—	3	10	5	14
Illinois	—	2	11	1	4	—	1	21	—	3	—	1	5	—	5
Indiana	1	2	8	4	6	—	1	12	—	—	—	0	2	1	1
Michigan	—	2	15	—	7	—	1	12	6	—	—	0	4	1	1
Ohio	4	7	34	25	16	—	1	6	4	3	—	0	4	2	6
Wisconsin	—	0	1	—	—	—	17	221	1	61	—	0	2	1	1
W.N. Central	—	1	8	4	3	—	1	16	2	2	1	1	5	4	2
Iowa	—	0	2	—	—	—	0	13	1	1	—	0	3	1	—
Kansas	—	0	2	—	—	—	0	2	—	—	—	0	2	—	—
Minnesota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Missouri	—	1	5	4	2	—	0	2	—	1	1	0	2	3	1
Nebraska	—	0	2	—	—	—	0	2	1	—	—	0	1	—	1
North Dakota	—	0	1	—	—	—	0	9	—	—	—	0	0	—	—
South Dakota	—	0	1	—	1	—	0	2	—	—	—	0	1	—	—
S. Atlantic	5	11	30	45	21	11	62	181	115	147	4	8	25	33	42
Delaware	1	0	4	3	—	3	13	48	29	46	—	0	3	—	—
District of Columbia	—	0	3	1	—	—	0	3	1	2	—	0	2	—	3
Florida	3	4	13	24	10	1	3	8	11	3	1	2	6	14	9
Georgia	—	1	4	3	3	1	0	5	5	1	—	1	6	4	8
Maryland	—	2	15	3	3	2	21	116	39	55	1	2	15	8	9
North Carolina	—	1	7	4	2	1	0	12	1	5	1	0	7	1	4
South Carolina	—	0	5	2	—	—	0	6	1	1	—	0	1	2	—
Virginia	1	1	7	5	3	3	15	75	22	34	1	1	8	4	9
West Virginia	—	0	5	—	—	—	0	13	6	—	—	0	1	—	—
E.S. Central	—	2	11	2	7	—	1	5	1	—	—	1	4	—	2
Alabama	—	0	2	—	1	—	0	2	—	—	—	0	3	—	1
Kentucky	—	1	4	—	3	—	0	1	1	—	—	0	2	—	—
Mississippi	—	0	3	—	1	—	0	1	—	—	—	0	1	—	—
Tennessee	—	1	8	2	2	—	0	4	—	—	—	0	3	—	1
W.S. Central	—	3	8	2	5	—	1	3	—	1	1	1	5	5	2
Arkansas	—	0	2	—	—	—	0	0	—	—	—	0	1	—	—
Louisiana	—	0	3	—	1	—	0	1	—	—	—	0	1	—	—
Oklahoma	—	0	3	—	1	—	0	0	—	—	—	0	3	3	—
Texas	—	2	7	2	3	—	1	3	—	1	1	0	5	2	2
Mountain	—	2	9	7	10	2	1	5	5	1	1	1	5	2	8
Arizona	—	1	4	3	3	—	0	4	1	—	—	0	4	—	2
Colorado	—	0	4	—	5	—	0	1	—	—	—	0	3	—	3
Idaho	—	0	1	1	—	1	0	2	2	—	—	0	1	—	—
Montana	—	0	1	—	—	—	0	3	—	—	—	0	1	—	—
Nevada	—	0	2	1	1	—	0	1	—	—	1	0	2	2	2
New Mexico	—	0	2	—	—	—	0	2	—	1	—	0	1	—	1
Utah	—	0	2	1	1	—	0	1	1	—	—	0	1	—	—
Wyoming	—	0	2	1	—	1	0	1	1	—	—	0	0	—	—
Pacific	1	5	17	19	39	—	3	8	11	4	2	3	11	15	11
Alaska	—	0	0	—	—	—	0	3	—	—	—	0	2	1	—
California	1	4	11	15	35	—	1	7	11	3	2	2	7	13	7
Hawaii	—	0	2	—	1	N	0	0	N	N	—	0	1	—	—
Oregon	—	0	3	4	1	—	0	2	—	1	—	0	4	1	3
Washington	—	0	13	—	2	—	0	5	—	—	—	0	2	—	1
Territories															
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	1	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	N	0	0	N	N	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Meningococcal disease, invasive† All serogroups					Mumps					Pertussis				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	5	12	30	45	92	2	7	19	15	34	164	304	701	1,125	1,807
New England	—	0	3	—	3	—	0	2	—	1	—	16	32	57	43
Connecticut	—	0	1	—	1	—	0	0	—	—	—	1	5	2	8
Maine	—	0	1	—	—	—	0	2	—	—	—	3	19	14	5
Massachusetts	—	0	2	—	2	—	0	1	—	1	—	4	10	—	20
New Hampshire	—	0	1	—	—	—	0	0	—	—	—	2	13	2	6
Rhode Island	—	0	1	—	—	—	0	2	—	—	—	0	5	5	4
Vermont	—	0	3	—	—	—	0	1	—	—	—	1	16	34	—
Mid. Atlantic	2	1	4	8	9	—	0	7	—	5	66	39	162	280	154
New Jersey	—	0	0	—	—	—	0	2	—	5	—	4	10	6	13
New York (Upstate)	—	0	4	1	1	—	0	3	—	—	57	13	134	163	45
New York City	—	0	2	3	6	—	0	6	—	—	—	3	42	11	—
Pennsylvania	2	0	2	4	2	—	0	1	—	—	9	13	29	100	96
E.N. Central	—	2	6	4	12	—	2	12	4	11	21	67	214	305	454
Illinois	—	0	3	—	2	—	1	10	—	4	—	19	122	45	85
Indiana	—	0	2	—	2	—	0	2	1	—	—	4	21	3	43
Michigan	—	0	1	—	3	—	0	2	2	1	6	10	38	33	113
Ohio	—	0	2	4	3	—	0	2	1	5	12	13	35	74	160
Wisconsin	—	0	1	—	2	—	0	1	—	1	3	13	58	150	53
W.N. Central	1	1	3	3	8	—	0	3	1	6	5	21	119	80	99
Iowa	—	0	1	—	1	—	0	2	—	—	—	4	9	9	27
Kansas	—	0	1	—	1	—	0	1	—	1	1	2	10	6	16
Minnesota	—	0	0	—	—	—	0	1	—	—	—	0	110	—	—
Missouri	1	0	3	3	3	—	0	3	1	4	4	7	27	64	44
Nebraska	—	0	2	—	3	—	0	1	—	1	—	1	5	1	10
North Dakota	—	0	1	—	—	—	0	3	—	—	—	0	10	—	—
South Dakota	—	0	1	—	—	—	0	0	—	—	—	0	7	—	2
S. Atlantic	1	2	8	6	12	2	1	4	4	1	24	26	67	103	212
Delaware	—	0	1	—	—	—	0	0	—	—	—	0	5	4	3
District of Columbia	—	0	1	—	—	—	0	1	—	—	—	0	2	1	1
Florida	1	1	5	4	4	1	0	2	2	—	13	6	17	39	32
Georgia	—	0	1	—	1	—	0	2	—	—	—	3	8	9	31
Maryland	—	0	2	2	1	—	0	1	1	—	2	2	10	15	18
North Carolina	—	0	3	—	3	—	0	2	—	—	1	3	35	5	59
South Carolina	—	0	1	—	2	—	0	1	—	—	—	2	9	1	24
Virginia	—	0	2	—	1	—	0	4	—	1	3	6	25	18	44
West Virginia	—	0	3	—	—	1	0	1	1	—	5	0	15	11	—
E.S. Central	—	0	3	—	5	—	0	1	—	2	1	9	15	45	69
Alabama	—	0	2	—	4	—	0	1	—	1	—	2	11	2	17
Kentucky	—	0	2	—	—	—	0	0	—	—	—	3	9	25	31
Mississippi	—	0	1	—	1	—	0	1	—	1	1	0	4	3	4
Tennessee	—	0	2	—	—	—	0	1	—	—	—	2	7	15	17
W.S. Central	—	1	5	1	8	—	1	12	1	4	4	19	79	25	46
Arkansas	—	0	2	—	1	—	0	2	—	—	—	1	5	1	5
Louisiana	—	0	2	1	3	—	0	0	—	—	—	0	3	—	4
Oklahoma	—	0	2	—	1	—	0	2	—	—	—	0	11	—	—
Texas	—	0	2	—	3	—	1	12	1	4	4	18	76	24	37
Mountain	1	1	4	2	6	—	0	2	2	1	5	40	82	139	255
Arizona	1	0	1	1	2	—	0	0	—	—	—	12	46	84	99
Colorado	—	0	1	—	1	—	0	1	1	—	—	7	25	17	60
Idaho	—	0	1	—	2	—	0	2	—	—	—	3	12	10	15
Montana	—	0	2	1	—	—	0	1	1	—	1	1	32	9	15
Nevada	—	0	1	—	—	—	0	0	—	—	4	0	4	8	7
New Mexico	—	0	1	—	—	—	0	1	—	1	—	4	24	6	8
Utah	—	0	2	—	1	—	0	0	—	—	—	6	15	2	50
Wyoming	—	0	0	—	—	—	0	1	—	—	—	0	3	3	1
Pacific	—	3	10	21	29	—	0	11	3	3	38	60	239	91	475
Alaska	—	0	1	—	—	—	0	1	—	—	—	0	3	6	11
California	—	2	9	14	23	—	0	11	3	—	—	36	78	14	424
Hawaii	—	0	1	—	1	—	0	1	—	1	1	1	9	9	6
Oregon	—	0	4	7	3	—	0	1	—	2	2	5	23	9	20
Washington	—	0	3	—	2	—	0	1	—	—	35	11	194	53	14
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	1	3	—	2	—	2	14	—	1
Puerto Rico	—	0	0	—	—	—	0	1	1	—	—	0	1	—	1
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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† Data for meningococcal disease, invasive caused by serogroups A, C, Y, and W-135; serogroup B; other serogroup; and unknown serogroup are available in Table I.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Rabies, animal					Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	27	56	99	129	268	278	872	1,855	1,723	2,373	23	86	206	162	184
New England	3	5	16	30	8	1	36	107	37	119	—	3	13	2	8
Connecticut	—	2	10	13	2	—	8	30	18	34	—	1	4	2	4
Maine	2	1	6	11	1	1	2	8	7	12	—	0	3	—	—
Massachusetts	—	0	0	—	—	—	19	44	—	57	—	1	9	—	2
New Hampshire	—	0	3	2	1	—	3	8	5	11	—	0	3	—	2
Rhode Island	—	0	6	2	—	—	1	62	—	—	—	0	2	—	—
Vermont	1	0	2	2	4	—	1	8	7	5	—	0	3	—	—
Mid. Atlantic	7	16	35	18	66	15	74	172	144	199	1	9	28	20	23
New Jersey	—	0	0	—	—	—	0	3	3	—	—	0	1	1	—
New York (Upstate)	7	7	20	18	24	10	25	67	34	39	1	3	13	3	10
New York City	—	0	3	—	1	1	19	42	48	64	—	2	6	6	1
Pennsylvania	—	8	21	—	41	4	31	113	59	96	—	3	16	10	12
E.N. Central	—	2	17	2	4	14	88	184	123	297	1	15	51	28	42
Illinois	—	0	6	—	3	—	27	80	16	108	—	4	14	4	8
Indiana	—	0	7	—	—	—	8	27	6	27	—	1	10	—	9
Michigan	—	1	6	1	1	2	14	42	33	50	—	3	19	19	11
Ohio	—	1	5	1	—	12	20	46	62	77	1	3	10	5	5
Wisconsin	N	0	0	N	N	—	12	46	6	35	—	3	21	—	9
W.N. Central	—	1	7	6	1	17	40	103	98	116	6	11	40	29	14
Iowa	—	0	0	—	—	—	8	19	9	30	—	2	15	5	3
Kansas	—	0	4	4	1	3	8	27	33	20	—	2	8	3	2
Minnesota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Missouri	—	0	2	2	—	11	16	46	44	48	4	5	32	14	5
Nebraska	—	0	3	—	—	3	4	13	9	10	2	1	7	4	4
North Dakota	—	0	3	—	—	—	0	15	—	—	—	0	4	—	—
South Dakota	—	0	0	—	—	—	3	10	3	8	—	1	4	3	—
S. Atlantic	11	17	53	28	172	144	273	730	724	716	7	13	28	41	40
Delaware	—	0	0	—	—	—	3	12	6	11	—	0	2	1	—
District of Columbia	—	0	0	—	—	—	1	6	—	3	—	0	1	—	1
Florida	10	0	4	12	120	65	107	203	331	281	6	3	9	20	6
Georgia	—	0	0	—	—	2	40	134	73	118	—	2	8	3	7
Maryland	—	6	13	10	10	11	18	45	65	58	—	1	3	3	7
North Carolina	—	0	0	—	—	53	30	251	127	109	1	2	11	4	9
South Carolina	N	0	0	N	N	5	26	71	60	61	—	0	4	1	—
Virginia	—	11	27	—	42	8	19	54	54	75	—	3	9	9	10
West Virginia	1	0	30	6	—	—	0	18	8	—	—	0	2	—	—
E.S. Central	—	3	11	7	11	18	64	190	141	182	—	4	18	14	12
Alabama	—	2	7	6	6	7	19	70	40	58	—	0	15	2	2
Kentucky	—	0	2	1	1	5	11	30	27	28	—	1	5	3	3
Mississippi	—	0	1	—	—	—	22	66	39	35	—	0	4	4	1
Tennessee	—	1	4	—	4	6	15	51	35	61	—	1	11	5	6
W.S. Central	6	1	21	28	—	20	132	250	125	206	2	10	45	7	7
Arkansas	1	0	10	1	—	5	13	52	28	32	—	1	6	3	1
Louisiana	—	0	0	—	—	1	14	44	36	50	—	0	1	—	—
Oklahoma	—	0	21	4	—	13	12	31	23	19	2	1	10	3	2
Texas	5	0	7	23	—	1	92	157	38	105	—	7	45	1	4
Mountain	—	1	4	9	—	13	45	93	101	203	3	11	27	12	21
Arizona	N	0	0	N	N	8	15	35	48	71	—	1	7	1	2
Colorado	—	0	0	—	—	—	9	23	11	43	—	3	9	1	10
Idaho	—	0	1	—	—	—	3	8	4	19	—	1	8	2	4
Montana	N	0	0	N	N	1	2	10	7	3	—	1	4	—	—
Nevada	—	0	2	—	—	3	3	7	7	16	—	0	7	—	1
New Mexico	—	0	4	9	—	—	6	22	9	30	—	1	3	3	3
Utah	—	0	2	—	—	—	6	15	13	20	—	1	7	2	1
Wyoming	—	0	0	—	—	1	1	9	2	1	3	0	7	3	—
Pacific	—	4	13	1	6	36	92	173	230	335	3	9	28	9	17
Alaska	—	0	2	1	2	—	1	6	7	7	—	0	1	—	—
California	—	3	12	—	2	24	72	141	182	253	—	4	14	2	12
Hawaii	—	0	0	—	—	1	6	14	10	34	—	0	2	—	—
Oregon	—	0	2	—	2	—	6	12	15	32	1	1	11	3	4
Washington	—	0	0	—	—	11	9	40	16	9	2	2	19	4	1
Territories															
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	3	—	0	0	—	—
Puerto Rico	—	0	6	—	2	—	3	12	3	13	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Shigellosis					Spotted Fever Rickettsiosis (including RMSF)†									
						Confirmed					Probable				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	111	245	353	746	786	1	3	15	8	8	7	30	140	30	26
New England	—	4	21	2	17	—	0	1	—	—	—	0	1	—	—
Connecticut	—	1	4	2	2	—	0	0	—	—	—	0	0	—	—
Maine	—	0	8	—	1	—	0	0	—	—	—	0	1	—	—
Massachusetts	—	3	20	—	13	—	0	0	—	—	—	0	1	—	—
New Hampshire	—	0	1	—	—	—	0	1	—	—	—	0	1	—	—
Rhode Island	—	0	3	—	—	—	0	0	—	—	—	0	1	—	—
Vermont	—	0	1	—	1	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	27	17	45	131	45	—	0	2	1	—	1	1	7	4	2
New Jersey	—	0	24	49	—	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	26	5	32	33	13	—	0	1	—	—	—	0	2	—	—
New York City	—	7	28	42	22	—	0	0	—	—	—	0	3	2	2
Pennsylvania	1	2	13	7	10	—	0	2	1	—	1	0	3	2	—
E.N. Central	10	14	40	113	81	—	0	2	1	—	1	2	10	1	3
Illinois	—	4	16	—	30	—	0	1	—	—	—	1	4	—	2
Indiana	—	0	4	—	8	—	0	1	1	—	1	0	5	1	—
Michigan	—	3	11	18	16	—	0	1	—	—	—	0	1	—	—
Ohio	10	6	27	95	27	—	0	2	—	—	—	0	2	—	1
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
W.N. Central	1	5	18	29	54	—	0	4	—	—	—	4	29	3	2
Iowa	—	0	3	—	2	—	0	0	—	—	—	0	2	—	—
Kansas	1	1	5	15	13	—	0	0	—	—	—	0	0	—	—
Minnesota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Missouri	—	3	14	12	37	—	0	3	—	—	—	4	29	3	2
Nebraska	—	0	2	2	1	—	0	3	—	—	—	0	1	—	—
North Dakota	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
South Dakota	—	0	2	—	1	—	0	1	—	—	—	0	0	—	—
S. Atlantic	24	75	134	161	252	1	1	9	5	4	3	6	57	15	10
Delaware	—	0	2	—	—	—	0	1	—	—	—	0	4	1	—
District of Columbia	1	0	5	1	5	—	0	1	—	—	—	0	1	—	—
Florida	14	50	98	104	157	—	0	1	—	1	1	0	2	4	—
Georgia	3	13	24	34	40	1	1	8	5	1	—	0	0	—	—
Maryland	1	2	7	7	6	—	0	1	—	1	1	0	2	2	1
North Carolina	3	3	19	7	29	—	0	4	—	1	—	0	49	3	6
South Carolina	—	1	54	2	6	—	0	2	—	—	—	0	2	—	1
Virginia	2	2	7	6	9	—	0	1	—	—	1	3	14	5	2
West Virginia	—	0	2	—	—	—	0	0	—	—	—	0	1	—	—
E.S. Central	20	19	51	123	43	—	0	2	—	—	1	4	25	3	4
Alabama	2	6	21	37	20	—	0	1	—	—	—	1	8	1	2
Kentucky	16	4	22	64	2	—	0	1	—	—	—	0	2	—	—
Mississippi	—	4	24	14	6	—	0	0	—	—	—	0	2	—	1
Tennessee	2	4	11	8	15	—	0	2	—	—	1	4	20	2	1
W.S. Central	23	54	121	110	107	—	0	3	—	—	—	2	52	1	1
Arkansas	5	2	7	8	3	—	0	3	—	—	—	1	52	—	—
Louisiana	—	4	21	12	16	—	0	0	—	—	—	0	2	1	—
Oklahoma	6	3	28	26	7	—	0	1	—	—	—	0	25	—	—
Texas	12	43	98	64	81	—	0	1	—	—	—	0	4	—	1
Mountain	1	14	41	29	76	—	0	3	—	4	1	1	7	2	4
Arizona	1	5	27	20	34	—	0	3	—	4	—	0	6	—	4
Colorado	—	1	8	1	13	—	0	0	—	—	—	0	1	—	—
Idaho	—	0	3	1	3	—	0	0	—	—	1	0	1	1	—
Montana	—	1	15	3	2	—	0	0	—	—	—	0	1	—	—
Nevada	—	0	4	1	6	—	0	0	—	—	—	0	1	—	—
New Mexico	—	2	7	2	13	—	0	0	—	—	—	0	0	—	—
Utah	—	1	4	1	5	—	0	0	—	—	—	0	1	1	—
Wyoming	—	0	1	—	—	—	0	0	—	—	—	0	2	—	—
Pacific	5	20	44	48	111	—	0	2	1	—	—	0	1	1	—
Alaska	—	0	2	2	—	N	0	0	N	N	N	0	0	N	N
California	4	15	41	41	96	—	0	2	1	—	—	0	1	1	—
Hawaii	—	1	3	—	7	N	0	0	N	N	N	0	0	N	N
Oregon	—	1	4	4	6	—	0	0	—	—	—	0	0	—	—
Washington	1	1	9	1	2	—	0	0	—	—	—	0	0	—	—
Territories															
American Samoa	—	0	0	—	1	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	—	—	N	0	0	N	N	N	0	0	N	N
Puerto Rico	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

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† Illnesses with similar clinical presentation that result from Spotted fever group rickettsia infections are reported as Spotted fever rickettsioses. Rocky Mountain spotted fever (RMSF) caused by *Rickettsia rickettsii*, is the most common and well-known spotted fever.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	*Streptococcus pneumoniae*,† invasive disease										Syphilis, primary and secondary				
	All ages					Age <5									
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	147	247	464	1,270	1,822	12	20	41	84	103	60	265	317	600	1,148
New England	2	14	31	50	118	—	1	4	—	2	2	7	23	13	33
Connecticut	1	6	20	27	58	—	0	3	—	—	—	0	12	—	2
Maine	—	2	8	12	20	—	0	1	—	—	—	0	2	—	2
Massachusetts	—	0	3	—	4	—	0	2	—	2	2	5	10	12	21
New Hampshire	1	1	8	3	13	—	0	1	—	—	—	0	3	—	3
Rhode Island	—	1	6	—	19	—	0	1	—	—	—	0	7	1	5
Vermont	—	1	6	8	4	—	0	2	—	—	—	0	2	—	—
Mid. Atlantic	22	16	52	168	119	1	1	10	7	4	5	30	53	71	165
New Jersey	—	0	16	42	—	—	0	2	4	—	—	4	13	—	18
New York (Upstate)	19	1	27	76	11	1	1	10	3	4	2	4	9	11	13
New York City	3	12	24	50	108	—	0	9	—	—	—	14	24	27	101
Pennsylvania	N	0	0	N	N	N	0	0	N	N	3	7	17	33	33
E.N. Central	30	64	122	293	372	—	3	10	14	22	6	30	48	35	154
Illinois	N	0	0	N	N	—	0	0	—	—	6	11	24	24	63
Indiana	1	15	36	31	81	—	1	4	1	2	—	3	8	6	19
Michigan	5	13	26	63	74	—	0	2	3	7	—	4	12	1	26
Ohio	22	28	43	158	167	—	1	7	7	10	—	8	17	4	40
Wisconsin	2	8	23	41	50	—	0	2	3	3	—	1	5	—	6
W.N. Central	4	2	28	21	17	—	0	2	1	1	—	6	13	2	35
Iowa	N	0	0	N	N	N	0	0	N	N	—	0	3	2	—
Kansas	N	0	0	N	N	N	0	0	N	N	—	0	4	—	1
Minnesota	—	0	0	—	—	—	0	0	—	—	—	2	8	—	16
Missouri	N	0	0	N	N	—	0	0	—	—	—	2	8	—	17
Nebraska	4	2	9	21	17	—	0	2	1	1	—	0	2	—	1
North Dakota	—	0	25	—	—	—	0	1	—	—	—	0	0	—	—
South Dakota	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
S. Atlantic	48	65	143	364	593	8	5	15	29	36	23	69	100	186	240
Delaware	—	1	5	6	11	—	0	0	—	—	3	0	4	7	3
District of Columbia	—	1	5	1	7	—	0	1	1	1	—	3	8	19	15
Florida	24	21	55	139	254	4	2	8	12	16	5	23	36	77	111
Georgia	10	19	38	102	157	1	2	5	8	12	7	15	48	31	26
Maryland	5	9	29	33	88	1	1	3	2	5	3	9	20	13	29
North Carolina	N	0	0	N	N	N	0	0	N	N	5	8	21	28	18
South Carolina	3	8	22	54	76	—	0	3	1	2	—	4	11	—	19
Virginia	N	0	0	N	N	—	0	0	—	—	—	4	12	11	19
West Virginia	6	1	48	29	—	2	0	4	5	—	—	0	2	—	—
E.S. Central	7	23	45	114	165	—	2	4	8	16	3	15	30	23	50
Alabama	N	0	0	N	N	N	0	0	N	N	—	4	11	7	18
Kentucky	2	4	12	22	32	—	0	3	—	5	3	2	8	7	7
Mississippi	N	0	0	N	N	—	0	0	—	—	—	3	22	—	6
Tennessee	5	19	39	92	133	—	2	3	8	11	—	5	11	9	19
W.S. Central	17	31	122	130	171	1	3	10	12	7	11	36	50	117	133
Arkansas	3	4	14	20	31	—	0	4	2	2	—	4	10	—	15
Louisiana	—	2	11	21	35	—	0	2	2	1	—	7	25	15	10
Oklahoma	N	0	0	N	N	—	0	0	—	—	—	1	6	2	3
Texas	14	24	108	89	105	1	3	9	8	4	11	23	38	100	105
Mountain	15	26	72	121	251	1	2	8	8	14	3	12	20	16	51
Arizona	12	12	45	91	141	1	1	5	7	8	2	4	10	9	18
Colorado	—	9	23	10	52	—	0	4	—	1	—	2	6	4	11
Idaho	N	0	0	N	N	—	0	0	—	—	1	0	4	2	3
Montana	N	0	0	N	N	N	0	0	N	N	—	0	1	—	3
Nevada	N	0	0	N	N	N	0	0	N	N	—	2	9	—	11
New Mexico	—	4	12	17	31	—	0	2	1	1	—	1	4	—	3
Utah	—	1	8	—	23	—	0	3	—	4	—	0	2	1	2
Wyoming	3	0	3	3	4	—	0	0	—	—	—	0	0	—	—
Pacific	2	2	11	9	16	1	0	2	5	1	7	57	74	137	287
Alaska	2	2	11	9	16	1	0	2	5	1	1	0	2	2	—
California	N	0	0	N	N	N	0	0	N	N	3	44	62	114	240
Hawaii	—	0	1	—	—	—	0	1	—	—	—	0	3	—	—
Oregon	N	0	0	N	N	N	0	0	N	N	—	4	14	5	14
Washington	N	0	0	N	N	N	0	0	N	N	3	6	11	16	33
Territories															
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	5	4	15	19	11
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
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† Includes drug resistant and susceptible cases of invasive *Streptococcus pneumoniae* disease among children <5 years and among all ages. Case definition: Isolation of *S. pneumoniae* from a normally sterile body site (e.g., blood or cerebrospinal fluid).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 4, 2012, and February 5, 2011 (5th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011	Current week	Previous 52 weeks		Cum 2012	Cum 2011
		Med	Max				Med	Max				Med	Max		
United States	157	260	344	978	1,265	—	0	60	—	1	—	0	31	—	—
New England	7	20	50	47	138	—	0	3	—	—	—	0	1	—	—
Connecticut	1	5	16	27	26	—	0	2	—	—	—	0	1	—	—
Maine	3	4	11	5	25	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	8	18	—	51	—	0	2	—	—	—	0	1	—	—
New Hampshire	—	1	7	—	12	—	0	0	—	—	—	0	0	—	—
Rhode Island	—	0	6	1	2	—	0	1	—	—	—	0	0	—	—
Vermont	3	1	9	14	22	—	0	1	—	—	—	0	0	—	—
Mid. Atlantic	23	21	54	214	90	—	0	11	—	—	—	0	6	—	—
New Jersey	7	0	44	142	—	—	0	1	—	—	—	0	2	—	—
New York (Upstate)	N	0	0	N	N	—	0	5	—	—	—	0	4	—	—
New York City	—	0	0	—	—	—	0	4	—	—	—	0	1	—	—
Pennsylvania	16	19	41	72	90	—	0	2	—	—	—	0	1	—	—
E.N. Central	42	64	114	286	381	—	0	13	—	—	—	0	6	—	—
Illinois	—	18	38	72	73	—	0	6	—	—	—	0	5	—	—
Indiana	13	5	20	35	27	—	0	2	—	—	—	0	1	—	—
Michigan	5	18	44	68	130	—	0	7	—	—	—	0	1	—	—
Ohio	24	21	47	111	151	—	0	3	—	—	—	0	3	—	—
Wisconsin	—	0	1	—	—	—	0	1	—	—	—	0	1	—	—
W.N. Central	3	11	32	34	78	—	0	9	—	1	—	0	7	—	—
Iowa	N	0	0	N	N	—	0	2	—	—	—	0	2	—	—
Kansas	3	7	21	28	39	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	1	—	—	—	0	1	—	—	—	0	1	—	—
Missouri	—	3	14	5	35	—	0	2	—	1	—	0	2	—	—
Nebraska	—	0	2	—	1	—	0	4	—	—	—	0	3	—	—
North Dakota	—	0	7	—	1	—	0	1	—	—	—	0	1	—	—
South Dakota	—	1	6	1	2	—	0	0	—	—	—	0	1	—	—
S. Atlantic	20	37	66	144	148	—	0	10	—	—	—	0	5	—	—
Delaware	—	0	2	—	1	—	0	1	—	—	—	0	0	—	—
District of Columbia	—	0	2	—	3	—	0	3	—	—	—	0	3	—	—
Florida	14	17	38	95	79	—	0	5	—	—	—	0	2	—	—
Georgia	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
Maryland	N	0	0	N	N	—	0	5	—	—	—	0	3	—	—
North Carolina	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
South Carolina	—	0	9	—	—	—	0	0	—	—	—	0	0	—	—
Virginia	6	10	27	20	27	—	0	2	—	—	—	0	0	—	—
West Virginia	—	7	32	29	38	—	0	1	—	—	—	0	0	—	—
E.S. Central	5	5	15	21	28	—	0	11	—	—	—	0	5	—	—
Alabama	5	5	14	19	24	—	0	2	—	—	—	0	0	—	—
Kentucky	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
Mississippi	—	0	2	2	4	—	0	5	—	—	—	0	4	—	—
Tennessee	N	0	0	N	N	—	0	3	—	—	—	0	1	—	—
W.S. Central	50	56	142	167	145	—	0	4	—	—	—	0	3	—	—
Arkansas	3	5	26	7	13	—	0	1	—	—	—	0	0	—	—
Louisiana	—	2	6	7	7	—	0	1	—	—	—	0	2	—	—
Oklahoma	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Texas	47	47	137	153	125	—	0	3	—	—	—	0	3	—	—
Mountain	6	22	68	62	232	—	0	11	—	—	—	0	5	—	—
Arizona	5	4	50	10	73	—	0	7	—	—	—	0	4	—	—
Colorado	—	7	32	22	67	—	0	2	—	—	—	0	2	—	—
Idaho	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Montana	—	2	15	—	50	—	0	1	—	—	—	0	0	—	—
Nevada	N	0	0	N	N	—	0	4	—	—	—	0	2	—	—
New Mexico	—	1	8	12	7	—	0	1	—	—	—	0	0	—	—
Utah	1	4	26	16	34	—	0	1	—	—	—	0	1	—	—
Wyoming	—	0	1	2	1	—	0	1	—	—	—	0	1	—	—
Pacific	1	2	9	3	25	—	0	18	—	—	—	0	7	—	—
Alaska	1	1	4	2	10	—	0	0	—	—	—	0	0	—	—
California	—	0	4	—	7	—	0	18	—	—	—	0	7	—	—
Hawaii	—	1	4	1	8	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
Washington	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
Territories															
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	2	4	—	1	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	2	10	9	21	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

* Case counts for reporting year 2011 and 2012 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.

† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.

§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/ncphi/disss/nndss/phs/infdis.htm.

TABLE III. Deaths in 122 U.S. cities,* week ending February 4, 2012 (5th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	583	408	134	22	9	10	48
Boston, MA	162	97	46	9	5	5	15
Bridgeport, CT	37	23	14	—	—	—	4
Cambridge, MA	15	12	2	1	—	—	—
Fall River, MA	22	17	5	—	—	—	—
Hartford, CT	66	46	15	2	2	1	12
Lowell, MA	21	14	5	2	—	—	2
Lynn, MA	9	7	2	—	—	—	—
New Bedford, MA	18	13	4	—	1	—	2
New Haven, CT	35	24	9	1	—	1	4
Providence, RI	55	44	8	2	—	1	—
Somerville, MA	2	2	—	—	—	—	—
Springfield, MA	41	29	10	2	—	—	3
Waterbury, CT	37	30	4	3	—	—	1
Worcester, MA	63	50	10	—	1	2	5
Mid. Atlantic	2,869	1,947	637	180	58	46	153
Albany, NY	38	26	11	1	—	—	2
Allentown, PA	33	25	4	3	1	—	2
Buffalo, NY	71	48	10	8	—	5	5
Camden, NJ	20	15	5	—	—	—	1
Elizabeth, NJ	16	11	4	1	—	—	4
Erie, PA	68	48	18	1	—	1	3
Jersey City, NJ	9	7	2	—	—	—	1
New York City, NY	1,115	796	233	53	18	14	53
Newark, NJ	36	21	11	2	1	1	4
Paterson, NJ	15	9	4	—	2	—	3
Philadelphia, PA	1,063	647	261	100	31	24	48
Pittsburgh, PA§	57	42	13	2	—	—	4
Reading, PA	37	32	3	1	1	—	3
Rochester, NY	67	55	10	—	1	1	4
Schenectady, NY	30	19	9	1	1	—	1
Scranton, PA	35	32	3	—	—	—	2
Syracuse, NY	101	74	19	6	2	—	7
Trenton, NJ	12	6	6	—	—	—	—
Utica, NY	20	14	6	—	—	—	2
Yonkers, NY	26	20	5	1	—	—	4
E.N. Central	2,252	1,493	538	136	43	42	173
Akron, OH	56	37	15	1	1	2	11
Canton, OH	30	20	8	2	—	—	2
Chicago, IL	251	163	58	21	5	4	26
Cincinnati, OH	109	70	24	2	5	8	9
Cleveland, OH	237	170	51	12	3	1	21
Columbus, OH	407	269	104	22	4	8	33
Dayton, OH	151	110	34	5	—	2	12
Detroit, MI	163	88	47	16	7	5	9
Evansville, IN	47	36	9	2	—	—	3
Fort Wayne, IN	85	60	19	2	3	1	4
Gary, IN	10	5	5	—	—	—	—
Grand Rapids, MI	59	38	11	7	1	2	3
Indianapolis, IN	204	122	55	17	9	1	17
Lansing, MI	37	26	8	3	—	—	1
Milwaukee, WI	109	68	27	9	2	3	7
Peoria, IL	48	33	9	4	2	—	6
Rockford, IL	69	43	20	5	—	1	2
South Bend, IN	42	30	9	2	—	1	—
Toledo, OH	78	60	14	2	1	1	7
Youngstown, OH	60	45	11	2	—	2	—
W.N. Central	687	444	165	50	14	13	57
Des Moines, IA	78	61	13	2	—	2	6
Duluth, MN	29	21	5	2	1	—	4
Kansas City, KS	37	20	12	4	1	—	6
Kansas City, MO	88	56	21	7	2	2	4
Lincoln, NE	42	35	7	—	—	—	3
Minneapolis, MN	53	35	15	1	—	2	8
Omaha, NE	98	64	23	7	1	3	9
St. Louis, MO	102	45	33	14	6	4	3
St. Paul, MN	58	41	9	6	1	—	5
Wichita, KS	102	66	27	7	2	—	9
S. Atlantic	1,152	760	276	61	30	24	79
Atlanta, GA	128	91	25	7	1	4	11
Baltimore, MD	143	90	33	9	6	4	10
Charlotte, NC	119	79	28	6	2	4	11
Jacksonville, FL	14	7	6	1	—	—	—
Miami, FL	133	94	26	8	4	1	4
Norfolk, VA	65	45	16	1	2	1	6
Richmond, VA	51	33	15	1	2	—	3
Savannah, GA	59	44	11	2	1	1	6
St. Petersburg, FL	57	41	12	4	—	—	7
Tampa, FL	244	154	66	10	7	7	11
Washington, D.C.	120	70	32	11	5	2	8
Wilmington, DE	19	12	6	1	—	—	2
E.S. Central	925	629	208	44	18	25	76
Birmingham, AL	176	116	36	9	3	11	17
Chattanooga, TN	69	52	14	—	1	2	4
Knoxville, TN	131	94	25	6	4	2	19
Lexington, KY	63	44	10	4	3	2	—
Memphis, TN	218	148	58	7	2	3	24
Mobile, AL	64	42	10	9	2	1	1
Montgomery, AL	44	29	14	—	1	—	1
Nashville, TN	160	104	41	9	2	4	10
W.S. Central	1,194	771	270	88	41	24	101
Austin, TX	88	61	17	5	1	4	7
Baton Rouge, LA	71	34	13	15	9	—	—
Corpus Christi, TX	68	44	19	3	1	1	13
Dallas, TX	227	133	63	19	7	5	23
El Paso, TX	102	74	17	5	3	3	4
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	93	57	10	9	15	2	12
Little Rock, AR	87	59	19	6	1	2	6
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	278	185	63	21	3	6	23
Shreveport, LA	39	29	8	1	—	1	4
Tulsa, OK	141	95	41	4	1	—	9
Mountain	1,198	804	274	67	33	19	70
Albuquerque, NM	136	94	29	6	5	2	14
Boise, ID	53	45	5	1	—	2	1
Colorado Springs, CO	89	56	26	3	3	1	3
Denver, CO	76	52	18	4	1	1	3
Las Vegas, NV	301	203	76	15	5	2	14
Ogden, UT	33	24	7	1	1	—	2
Phoenix, AZ	161	92	37	14	9	8	10
Pueblo, CO	38	23	12	2	1	—	—
Salt Lake City, UT	150	97	36	10	5	2	14
Tucson, AZ	161	118	28	11	3	1	9
Pacific	1,823	1,260	402	100	32	29	166
Berkeley, CA	12	6	4	1	—	1	2
Fresno, CA	126	96	23	2	3	2	13
Glendale, CA	20	15	5	—	—	—	7
Honolulu, HI	78	61	11	3	3	—	10
Long Beach, CA	65	38	20	2	2	3	9
Los Angeles, CA	274	189	57	15	6	7	29
Pasadena, CA	25	22	1	1	1	—	3
Portland, OR	130	77	41	12	—	—	6
Sacramento, CA	219	150	49	16	3	1	19
San Diego, CA	179	120	40	9	6	4	15
San Francisco, CA	118	76	34	5	1	2	14
San Jose, CA	238	176	40	13	4	5	21
Santa Cruz, CA	44	33	7	3	—	1	3
Seattle, WA	120	81	28	8	1	2	9
Spokane, WA	60	40	15	5	—	—	2
Tacoma, WA	115	80	27	5	2	1	4
Total¶	**12,683**	**8,516**	**2,904**	**748**	**278**	**232**	**923**

U: Unavailable. —: No reported cases.

* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of >100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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Recommended Immunization Schedules for Persons Aged 0 Through 18 Years — United States, 2012

Each year, the Advisory Committee on Immunization Practices (ACIP) publishes immunization schedules for persons aged 0 through 18 years. These schedules summarize recommendations for currently licensed vaccines for children aged 0 through 6 years and 7 through 18 years and include recommendations in effect as of December 23, 2011.

Vaccination providers are being advised to use all three schedules (Figure 1, Figure 2, and Figure 3) and their respective footnotes together and not separately.

A parent-friendly schedule for children and adolescents is available online at http://www.cdc.gov/vaccines/recs/schedules/child-schedule.htm#printable.

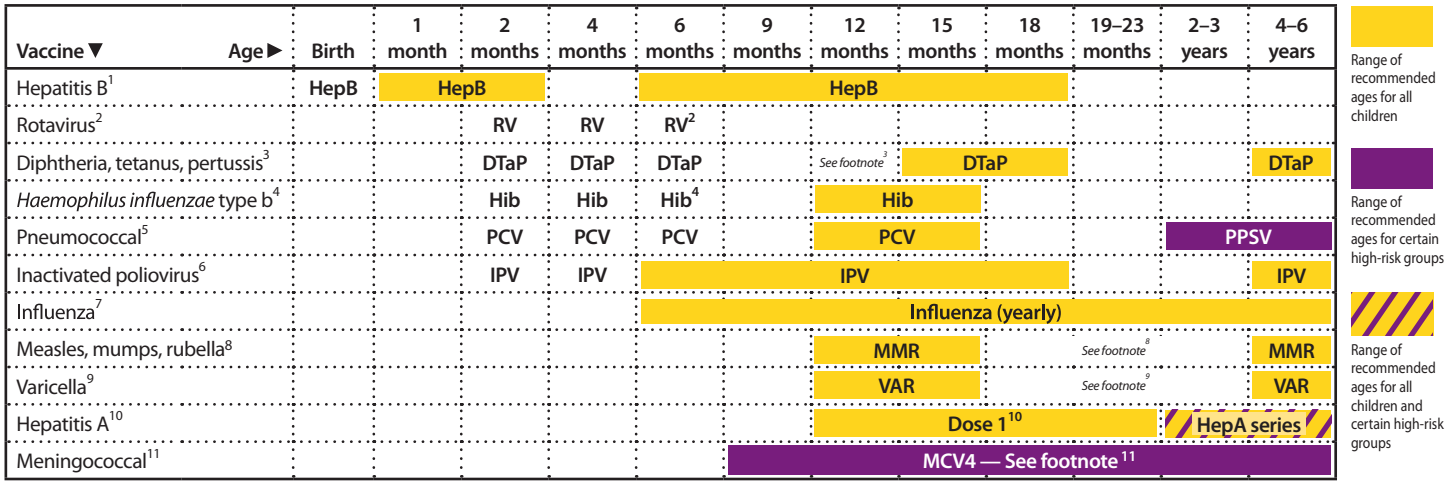
Changes to the previous schedules include the following:

- Updates to Figure 1 ("Recommended immunization schedule for persons aged 0 through 6 years"):
  - — Quadrivalent meningococcal conjugate vaccine (MCV4) purple bar has been extended to reflect licensure of MCV4-D (Menactra) use in children as young as age 9 months.
  - — A wording change has been introduced in the hepatitis A (HepA) vaccine yellow bar; wording now states, "Dose 1." A new yellow and purple bar has been added to reflect HepA vaccine recommendations for children aged 2 years and older.
- Guidance is provided for administration of hepatitis B (HepB) vaccine in infants with birthweights <2,000 grams and ≥2,000 grams. Clarification is provided for doses after administration of the birth dose of HepB vaccine.
- Rotavirus (RV) vaccine footnotes have been condensed.
- *Haemophilus influenzae* type b (Hib) conjugate vaccine footnotes have been condensed, and use of Hiberix for the booster (final) dose has been clarified. Guidance for use of Hib vaccine in persons aged 5 years and older in the catch-up schedule has been updated.
- Pneumococcal vaccine footnotes have been condensed.
- Guidance is provided for use of measles, mumps, and rubella (MMR) vaccine in infants aged 6 through 11 months. Footnotes in the catch-up schedule have been condensed.
- HepA vaccine footnotes have been updated to clarify that the second dose of HepA vaccine should be administered 6–18 months after dose 1.
- MCV4 footnotes have been updated to reflect recent recommendations published in *MMWR*.
- Influenza vaccine footnotes have been updated to provide guidance on live, attenuated influenza vaccine (LAIV) contraindications.
- Influenza vaccine footnotes also have been updated to clarify dosing for children aged 6 months through 8 years for the 2011–12 and 2012–13 seasons.
- Figure 2 ("Recommended immunization schedule for persons aged 7 through 18 years") has been updated to include number of doses for each vaccine. Information regarding the recommended age (16 years) for the booster dose of MCV4 has been added.
- Tdap vaccine recommendations for children aged 7 through 10 years have been updated.
- Human papillomavirus (HPV) vaccine footnotes have been updated to include routine recommendations for vaccination of males.
- Varicella (VAR) vaccine footnotes have been condensed.
- Inactivated poliovirus vaccine (IPV) footnotes have been updated to include upper age limit for routine vaccination. IPV footnotes in the catch-up schedule have been condensed, and relevant wording added to Figure 3 ("Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind").
- In the catch-up immunization schedule, HepA vaccine and HepB vaccine footnotes have been removed. Relevant wording has been added to Figure 3.
- MCV4 vaccine has been added to Figure 3 along with corresponding footnotes.

The recommended immunization schedules for persons aged 0 through 18 years and the catch-up immunization schedule for 2012 are approved by the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, and the American Academy of Family Physicians.

Suggested citation: Centers for Disease Control and Prevention. Recommended immunization schedules for persons aged 0–18 years—United States, 2012. MMWR 2012;61(5).

FIGURE 1. Recommended immunization schedule for persons aged 0 through 6 years — United States, 2012 (for those who fall behind or start late, see the catch-up schedule [Figure 3])



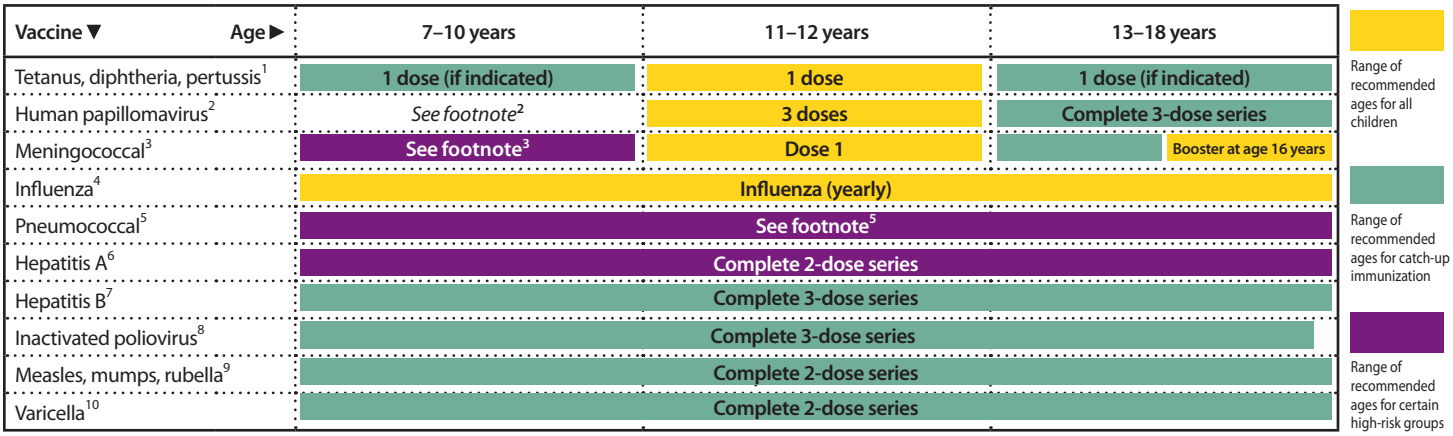
This schedule includes recommendations in effect as of December 23, 2011. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Vaccination providers should consult the relevant Advisory Committee on Immunization Practices (ACIP) statement for detailed recommendations, available online at http://www.cdc.gov/vaccines/pubs/acip-list.htm. Clinically significant adverse events that follow vaccination should be reported to the Vaccine Adverse Event Reporting System (VAERS) online (http://www.vaers.hhs.gov) or by telephone (800-822-7967).

1. **Hepatitis B (HepB) vaccine.** (Minimum age: birth)
   At birth:
   - Administer monovalent HepB vaccine to all newborns before hospital discharge.
   - For infants born to hepatitis B surface antigen (HBsAg)–positive mothers, administer HepB vaccine and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) 1 to 2 months after receiving the last dose of the series.
   - If mother's HBsAg status is unknown, within 12 hours of birth administer HepB vaccine for infants weighing ≥2,000 grams, and HepB vaccine plus HBIG for infants weighing <2,000 grams. Determine mother's HBsAg status as soon as possible and, if she is HBsAg-positive, administer HBIG for infants weighing ≥2,000 grams (no later than age 1 week).

   Doses after the birth dose:
   - The second dose should be administered at age 1 to 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks.
   - Administration of a total of 4 doses of HepB vaccine is permissible when a combination vaccine containing HepB is administered after the birth dose.
   - Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine starting as soon as feasible (Figure 3).
   - The minimum interval between dose 1 and dose 2 is 4 weeks, and between dose 2 and 3 is 8 weeks. The final (third or fourth) dose in the HepB vaccine series should be administered no earlier than age 24 weeks and at least 16 weeks after the first dose.
2. **Rotavirus (RV) vaccines.** (Minimum age: 6 weeks for both RV-1 [Rotarix] and RV-5 [Rota Teq])
   - The maximum age for the first dose in the series is 14 weeks, 6 days; and 8 months, 0 days for the final dose in the series. Vaccination should not be initiated for infants aged 15 weeks, 0 days or older.
   - If RV-1 (Rotarix) is administered at ages 2 and 4 months, a dose at 6 months is not indicated.
3. **Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine.** (Minimum age: 6 weeks)
   - The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.
4. ***Haemophilus influenzae* type b (Hib) conjugate vaccine.** (Minimum age: 6 weeks)
   - If PRP-OMP (PedvaxHIB or Comvax [HepB-Hib]) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.
   - Hiberix should only be used for the booster (final) dose in children aged 12 months through 4 years.
5. **Pneumococcal vaccines.** (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPSV])
   - Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.
   - For children who have received an age-appropriate series of 7-valent PCV (PCV7), a single supplemental dose of 13-valent PCV (PCV13) is recommended for:
     — All children aged 14 through 59 months
     — Children aged 60 through 71 months with underlying medical conditions.
   - Administer PPSV at least 8 weeks after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant. See *MMWR* 2010:59(No. RR-11), available at http://www.cdc.gov/mmwr/pdf/rr/rr5911.pdf.
6. **Inactivated poliovirus vaccine (IPV).** (Minimum age: 6 weeks)
   - If 4 or more doses are administered before age 4 years, an additional dose should be administered at age 4 through 6 years.
   - The final dose in the series should be administered on or after the fourth birthday and at least 6 months after the previous dose.
7. **Influenza vaccines.** (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])
   - For most healthy children aged 2 years and older, either LAIV or TIV may be used. However, LAIV should not be administered to some children, including 1) children with asthma, 2) children 2 through 4 years who had wheezing in the past 12 months, or 3) children who have any other underlying medical conditions that predispose them to influenza complications. For all other contraindications to use of LAIV, see *MMWR* 2010;59(No. RR-8), available at http://www.cdc.gov/mmwr/pdf/rr/rr5908.pdf.
   - For children aged 6 months through 8 years:
     — For the 2011–12 season, administer 2 doses (separated by at least 4 weeks) to those who did not receive at least 1 dose of the 2010–11 vaccine. Those who received at least 1 dose of the 2010–11 vaccine require 1 dose for the 2011–12 season.
     — For the 2012–13 season, follow dosing guidelines in the 2012 ACIP influenza vaccine recommendations.
8. **Measles, mumps, and rubella (MMR) vaccine.** (Minimum age: 12 months)
   - The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.
   - Administer MMR vaccine to infants aged 6 through 11 months who are traveling internationally. These children should be revaccinated with 2 doses of MMR vaccine, the first at ages 12 through 15 months and at least 4 weeks after the previous dose, and the second at ages 4 through 6 years.
9. **Varicella (VAR) vaccine.** (Minimum age: 12 months)
   - The second dose may be administered before age 4 years, provided at least 3 months have elapsed since the first dose.
   - For children aged 12 months through 12 years, the recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
10. **Hepatitis A (HepA) vaccine.** (Minimum age: 12 months)
    - Administer the second (final) dose 6 to18 months after the first.
    - Unvaccinated children 24 months and older at high risk should be vaccinated. See *MMWR* 2006;55(No. RR-7), available at http://www.cdc.gov/mmwr/pdf/rr/rr5507.pdf.
    - A 2-dose HepA vaccine series is recommended for anyone aged 24 months and older, previously unvaccinated, for whom immunity against hepatitis A virus infection is desired.
11. **Meningococcal conjugate vaccines, quadrivalent (MCV4).** (Minimum age: 9 months for Menactra [MCV4-D], 2 years for Menveo [MCV4-CRM])
    - For children aged 9 through 23 months 1) with persistent complement component deficiency; 2) who are residents of or travelers to countries with hyperendemic or epidemic disease; or 3) who are present during outbreaks caused by a vaccine serogroup, administer 2 primary doses of MCV4-D, ideally at ages 9 months and 12 months or at least 8 weeks apart.
    - For children aged 24 months and older with 1) persistent complement component deficiency who have not been previously vaccinated; or 2) anatomic/functional asplenia, administer 2 primary doses of either MCV4 at least 8 weeks apart.
    - For children with anatomic/functional asplenia, if MCV4-D (Menactra) is used, administer at a minimum age of 2 years and at least 4 weeks after completion of all PCV doses.
    - See *MMWR* 2011;60:72–6, available at http://www.cdc.gov/mmwr/pdf/wk/mm6003.pdf, and Vaccines for Children Program resolution No. 6/11-1, available at http://www.cdc.gov/vaccines/programs/vfc/downloads/resolutions/06-11mening-mcv.pdf, and *MMWR* 2011;60:1391–2, available at http://www.cdc.gov/mmwr/pdf/wk/mm6040.pdf, for further guidance, including revaccination guidelines.

This schedule is approved by the Advisory Committee on Immunization Practices (http://www.cdc.gov/vaccines/recs/acip), the American Academy of Pediatrics (http://www.aap.org), and the American Academy of Family Physicians (http://www.aafp.org).

FIGURE 2. Recommended immunization schedule for persons aged 7 through 18 years — United States, 2012 (for those who fall behind or start late, see the schedule below and the catch-up schedule [Figure 3])



This schedule includes recommendations in effect as of December 23, 2011. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Vaccination providers should consult the relevant Advisory Committee on Immunization Practices (ACIP) statement for detailed recommendations, available online at http://www.cdc.gov/vaccines/pubs/acip-list.htm. Clinically significant adverse events that follow vaccination should be reported to the Vaccine Adverse Event Reporting System (VAERS) online (http://www.vaers.hhs.gov) or by telephone (800-822-7967).

1. **Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine.** (Minimum age: 10 years for Boostrix and 11 years for Adacel)
   - Persons aged 11 through 18 years who have not received Tdap vaccine should receive a dose followed by tetanus and diphtheria toxoids (Td) booster doses every 10 years thereafter.
   - Tdap vaccine should be substituted for a single dose of Td in the catch-up series for children aged 7 through 10 years. Refer to the catch-up schedule if additional doses of tetanus and diphtheria toxoid–containing vaccine are needed.
   - Tdap vaccine can be administered regardless of the interval since the last tetanus and diphtheria toxoid–containing vaccine.
2. **Human papillomavirus (HPV) vaccines (HPV4 [Gardasil] and HPV2 [Cervarix]).** (Minimum age: 9 years)
   - Either HPV4 or HPV2 is recommended in a 3-dose series for females aged 11 or 12 years. HPV4 is recommended in a 3-dose series for males aged 11 or 12 years.
   - The vaccine series can be started beginning at age 9 years.
   - Administer the second dose 1 to 2 months after the first dose and the third dose 6 months after the first dose (at least 24 weeks after the first dose).
   - See *MMWR* 2010;59:626–32, available at http://www.cdc.gov/mmwr/pdf/wk/mm5920.pdf.
3. **Meningococcal conjugate vaccines, quadrivalent (MCV4).**
   - Administer MCV4 at age 11 through 12 years with a booster dose at age 16 years.
   - Administer MCV4 at age 13 through 18 years if patient is not previously vaccinated.
   - If the first dose is administered at age 13 through 15 years, a booster dose should be administered at age 16 through 18 years with a minimum interval of at least 8 weeks after the preceding dose.
   - If the first dose is administered at age 16 years or older, a booster dose is not needed.
   - Administer 2 primary doses at least 8 weeks apart to previously unvaccinated persons with persistent complement component deficiency or anatomic/functional asplenia, and 1 dose every 5 years thereafter.
   - Adolescents aged 11 through 18 years with human immunodeficiency virus (HIV) infection should receive a 2-dose primary series of MCV4, at least 8 weeks apart.
   - See *MMWR* 2011;60:72–76, available at http://www.cdc.gov/mmwr/pdf/wk/mm6003.pdf, and Vaccines for Children Program resolution No. 6/11-1, available at http://www.cdc.gov/vaccines/programs/vfc/downloads/resolutions/06-11mening-mcv.pdf, for further guidelines.
4. **Influenza vaccines (trivalent inactivated influenza vaccine [TIV] and live, attenuated influenza vaccine [LAIV]).**
   - For most healthy, nonpregnant persons, either LAIV or TIV may be used, except LAIV should not be used for some persons, including those with asthma or any other underlying medical conditions that predispose them to influenza complications. For all other contraindications to use of LAIV, see *MMWR* 2010;59(No.RR-8), available at http://www.cdc.gov/mmwr/pdf/rr/rr5908.pdf.
   - Administer 1 dose to persons aged 9 years and older.
   - For children aged 6 months through 8 years:
     — For the 2011–12 season, administer 2 doses (separated by at least 4 weeks) to those who did not receive at least 1 dose of the 2010–11 vaccine. Those who received at least 1 dose of the 2010–11 vaccine require 1 dose for the 2011–12 season.
     — For the 2012–13 season, follow dosing guidelines in the 2012 ACIP influenza vaccine recommendations.
5. **Pneumococcal vaccines (pneumococcal conjugate vaccine [PCV] and pneumococcal polysaccharide vaccine [PPSV]).**
   - A single dose of PCV may be administered to children aged 6 through 18 years who have anatomic/functional asplenia, HIV infection or other immunocompromising condition, cochlear implant, or cerebral spinal fluid leak. See *MMWR* 2010:59(No. RR-11), available at http://www.cdc.gov/mmwr/pdf/rr/rr5911.pdf.
   - Administer PPSV at least 8 weeks after the last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant. A single revaccination should be administered after 5 years to children with anatomic/functional asplenia or an immunocompromising condition.
6. **Hepatitis A (HepA) vaccine.**
   - HepA vaccine is recommended for children older than 23 months who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A virus infection is desired. See *MMWR* 2006;55(No. RR-7), available at http://www.cdc.gov/mmwr/pdf/rr/rr5507.pdf.
   - Administer 2 doses at least 6 months apart to unvaccinated persons.
7. **Hepatitis B (HepB) vaccine.**
   - Administer the 3-dose series to those not previously vaccinated.
   - For those with incomplete vaccination, follow the catch-up recommendations (Figure 3).
   - A 2-dose series (doses separated by at least 4 months) of adult formulation Recombivax HB is licensed for use in children aged 11 through 15 years.
8. **Inactivated poliovirus vaccine (IPV).**
   - The final dose in the series should be administered at least 6 months after the previous dose.
   - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
   - IPV is not routinely recommended for U.S. residents aged18 years or older.
9. **Measles, mumps, and rubella (MMR) vaccine.**
   - The minimum interval between the 2 doses of MMR vaccine is 4 weeks.
10. **Varicella (VAR) vaccine.**
    - For persons without evidence of immunity (see *MMWR* 2007;56[No. RR-4], available at http://www.cdc.gov/mmwr/pdf/rr/rr5604.pdf), administer 2 doses if not previously vaccinated or the second dose if only 1 dose has been administered.
    - For persons aged 7 through 12 years, the recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
    - For persons aged 13 years and older, the minimum interval between doses is 4 weeks.

This schedule is approved by the Advisory Committee on Immunization Practices (http://www.cdc.gov/vaccines/recs/acip), the American Academy of Pediatrics (http://www.aap.org), and the American Academy of Family Physicians (http://www.aafp.org).

FIGURE 3. Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind — United States, 2012

The figure below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. **Always use this table in conjunction with the accompanying childhood and adolescent immunization schedules (Figures 1 and 2) and their respective footnotes.**

Vaccine	Minimum age for dose 1	Minimum interval between doses			
		Dose 1 to dose 2	Dose 2 to dose 3	Dose 3 to dose 4	Dose 4 to dose 5
Persons aged 4 months through 6 years					
Hepatitis B	Birth	4 weeks	8 weeks and at least 16 weeks after first dose; minimum age for the final dose is 24 weeks		
Rotavirus[1]	6 weeks	4 weeks	4 weeks[1]		
Diphtheria, tetanus, pertussis[2]	6 weeks	4 weeks	4 weeks	6 months	6 months[2]
Haemophilus influenzae type b[3]	6 weeks	4 weeks if first dose administered at younger than age 12 months 8 weeks (as final dose) if first dose administered at age 12–14 months No further doses needed if first dose administered at age 15 months or older	4 weeks[3] if current age is younger than 12 months 8 weeks (as final dose)[3] if current age is 12 months or older and first dose administered at younger than age 12 months and second dose administered at younger than 15 months No further doses needed if previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months	
Pneumococcal[4]	6 weeks	4 weeks if first dose administered at younger than age 12 months 8 weeks (as final dose for healthy children) if first dose administered at age 12 months or older or current age 24 through 59 months No further doses needed for healthy children if first dose administered at age 24 months or older	4 weeks if current age is younger than 12 months 8 weeks (as final dose for healthy children) if current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	
Inactivated poliovirus[5]	6 weeks	4 weeks	4 weeks	6 months[5] minimum age 4 years for final dose	
Meningococcal[6]	9 months	8 weeks[6]			
Measles, mumps, rubella[7]	12 months	4 weeks			
Varicella[8]	12 months	3 months			
Hepatitis A	12 months	6 months			
Persons aged 7 through 18 years					
Tetanus, diphtheria/tetanus, diphtheria, pertussis[9]	7 years[9]	4 weeks	4 weeks if first dose administered at younger than age 12 months 6 months if first dose administered at 12 months or older	6 months if first dose administered at younger than age 12 months	
Human papillomavirus[10]	9 years		Routine dosing intervals are recommended[10]		
Hepatitis A	12 months	6 months			
Hepatitis B	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)		
Inactivated poliovirus[5]	6 weeks	4 weeks	4 weeks[5]	6 months[5]	
Meningococcal[6]	9 months	8 weeks[6]			
Measles, mumps, rubella[7]	12 months	4 weeks			
Varicella[8]	12 months	3 months if person is younger than age 13 years 4 weeks if person is aged 13 years or older			

1. **Rotavirus (RV) vaccines (RV-1 [Rotarix] and RV-5 [Rota Teq]).**
   - The maximum age for the first dose in the series is 14 weeks, 6 days; and 8 months, 0 days for the final dose in the series. Vaccination should not be initiated for infants aged 15 weeks, 0 days or older.
   - If RV-1 was administered for the first and second doses, a third dose is not indicated.
2. **Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine.**
   - The fifth dose is not necessary if the fourth dose was administered at age 4 years or older.
3. ***Haemophilus influenzae* type b (Hib) conjugate vaccine.**
   - Hib vaccine should be considered for unvaccinated persons aged 5 years or older who have sickle cell disease, leukemia, human immunodeficiency virus (HIV) infection, or anatomic/functional asplenia.
   - If the first 2 doses were PRP-OMP (PedvaxHIB or Comvax) and were administered at age 11 months or younger, the third (and final) dose should be administered at age 12 through 15 months and at least 8 weeks after the second dose.
   - If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a final dose at age 12 through 15 months.
4. **Pneumococcal vaccines.** (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPSV])
   - For children aged 24 through 71 months with underlying medical conditions, administer 1 dose of PCV if 3 doses of PCV were received previously, or administer 2 doses of PCV at least 8 weeks apart if fewer than 3 doses of PCV were received previously.
   - A single dose of PCV may be administered to certain children aged 6 through 18 years with underlying medical conditions. See age-specific schedules for details.
   - Administer PPSV to children aged 2 years or older with certain underlying medical conditions. See *MMWR* 2010:59(No. RR-11), available at http://www.cdc.gov/mmwr/pdf/rr/rr5911.pdf.
5. **Inactivated poliovirus vaccine (IPV).**
   - A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose.
   - In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk for imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).
   - IPV is not routinely recommended for U.S. residents aged 18 years or older.
6. **Meningococcal conjugate vaccines, quadrivalent (MCV4).** (Minimum age: 9 months for Menactra [MCV4-D]; 2 years for Menveo [MCV4-CRM])
   - See Figure 1 ("Recommended immunization schedule for persons aged 0 through 6 years") and Figure 2 ("Recommended immunization schedule for persons aged 7 through 18 years") for further guidance.
7. **Measles, mumps, and rubella (MMR) vaccine.**
   - Administer the second dose routinely at age 4 through 6 years.
8. **Varicella (VAR) vaccine.**
   - Administer the second dose routinely at age 4 through 6 years. If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
9. **Tetanus and diphtheria toxoids (Td) and tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccines.**
   - For children aged 7 through 10 years who are not fully immunized with the childhood DTaP vaccine series, Tdap vaccine should be substituted for a single dose of Td vaccine in the catch-up series; if additional doses are needed, use Td vaccine. For these children, an adolescent Tdap vaccine dose should not be given.
   - An inadvertent dose of DTaP vaccine administered to children aged 7 through 10 years can count as part of the catch-up series. This dose can count as the adolescent Tdap dose, or the child can later receive a Tdap booster dose at age 11–12 years.
10. **Human papillomavirus (HPV) vaccines (HPV4 [Gardasil] and HPV2 [Cervarix]).**
    - Administer the vaccine series to females (either HPV2 or HPV4) and males (HPV4) at age 13 through 18 years if patient is not previously vaccinated.
    - Use recommended routine dosing intervals for vaccine series catch-up; see Figure 2 ("Recommended immunization schedule for persons aged 7 through 18 years").

Clinically significant adverse events that follow vaccination should be reported to the Vaccine Adverse Event Reporting System (VAERS) online (http://www.vaers.hhs.gov) or by telephone (800-822-7967). Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for vaccination, is available from CDC online (http://www.cdc.gov/vaccines) or by telephone (800-CDC-INFO [800-232-4636]).