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National Black HIV/AIDS Awareness Day — February 7, 2011

February 7 is National Black HIV/AIDS Awareness Day, an observance intended to raise awareness of the disproportionate impact of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) on the black population in the United States and to encourage prevention measures, such as HIV testing. Estimates of HIV incidence for 2006 indicated that blacks had a rate of 83.7 per 100,000 population, compared with 11.5 for whites (*1*). Two of the three goals of the National HIV/AIDS Strategy are to reduce new HIV infections and HIV disparities (*2*).

In 2006, male-to-male sexual contact was associated with an estimated 63% of new HIV infections among black males (*3*). Among black females, high-risk heterosexual contact was associated with an estimated 83% of new infections (*3*). Data from CDC's National HIV Behavioral System show that, in 2008, 59% of HIV-infected black men who have sex with men (MSM) did not know they were infected, compared with 26% of white MSM (*4*).

Additional information regarding National Black HIV/AIDS Awareness Day is available at http://www.cdc.gov/features/blackhivaidsawareness. Additional information regarding blacks and HIV/AIDS is available at http://www.cdc.gov/hiv/topics/aa/index.htm.

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Disparities in Diagnoses of HIV Infection Between Blacks/African Americans and Other Racial/Ethnic Populations — 37 States, 2005–2008

Blacks/African Americans have been affected disproportionately by human immunodeficiency virus (HIV) infection since early in the epidemic (*1*). Despite representing a smaller proportion (13.6%) of the U.S. population, blacks/African Americans accounted for half of the HIV diagnoses in adolescents and adults in 37 states during 2005–2008 (*2*). Data from the National HIV Surveillance System were used to estimate numbers, percentages, and rates of HIV diagnoses in blacks/African Americans during 2005–2008. Those data were reported to CDC through June 2009 from 37 states with mature (in operation since at least January 2005) HIV surveillance systems. This report describes the results of those analyses, which indicated that during 2005–2008, blacks/African Americans were diagnosed with HIV infection more frequently

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than any other racial/ethnic population. During 2008, black/African American males and females were diagnosed with HIV infection at eight and 19 times the rates for white males and females and two and four times the rates for Hispanic/Latino males and females, respectively. In addition, the number of HIV diagnoses made each year among black/African American males increased during 2005–2008. The reduction of HIV-related health disparities has been identified as one of the three goals in the National HIV/AIDS Strategy (*3*). Reducing HIV risk behaviors and increasing access to testing and referral to health care can help eliminate disparities between blacks/African Americans and other racial/ethnic populations in the rates at which HIV infection is diagnosed.

HIV infection is notifiable in all 50 states, the District of Columbia, and six U.S. dependent areas. However, nationwide HIV surveillance with uniform reporting was not implemented fully until 2008.* For this analysis, data representing HIV diagnoses made during 2005–2008 (the latest data available) were drawn from 37 states† that have long-term, confidential HIV infection reporting. The numbers and percentages of HIV diagnoses during 2005–2008 among adults and adolescents were calculated by year of diagnosis, race/ethnicity,§ sex, age group, transmission category, and U.S Census region of residence.¶ To calculate annual rates of HIV diagnoses per 100,000 adults and adolescents in each racial/ethnic group, yearly population estimates were obtained for the 37 states from the U.S. Census Bureau. Trends in annual rates of HIV diagnoses were assessed by race/ethnicity and sex. Surveillance data were statistically adjusted for reporting delays and missing risk-factor information, but not for incomplete reporting (*2*).

During 2005–2008, blacks/African Americans accounted for 13.6% of the population in the 37 states and 50.3% of the 156,812 diagnoses of HIV infection during that period. Whites accounted for 67.9% of the population and 29.4% of diagnoses. Hispanics/Latinos accounted for 13.4% of the population and 17.8% of diagnoses (Table 1). Blacks/

* Additional information is available at http://www.cdc.gov/hiv/surveillance/resources/reports/2008report/technicalnotes.htm.

† Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New Mexico, New York, Nevada, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

§ For ethnicity, persons are categorized as "Hispanic or Latino" or "not Hispanic or Latino." Persons categorized as Hispanic/Latino might be of any race and are referred to in this report as Hispanic/Latino. For race, persons are categorized as "American Indian/Alaska Native," "black/African American," "Asian," "Native Hawaiian or other Pacific Islander," "white," or "multiple races." Persons categorized by race are all non-Hispanic/Latino.

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

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African Americans accounted for the largest percentage of HIV diagnoses in each age group. During 2005–2008, most (56.1%) HIV diagnoses were among persons aged 25–44 years; in this age group, blacks/African Americans accounted for 46.4% of HIV diagnoses. By region of residence, blacks/African Americans accounted for the majority of diagnoses in the South (55.7%).

Among adolescent and adult males, blacks/African Americans accounted for the largest percentage of diagnoses of HIV infection (44.8%) during 2005–2008 (Table 1). HIV transmissions in black/African American males were classified most frequently as male-to-male sexual contact (61.1%), followed by heterosexual contact (23.1%), injection drug use (IDU) (11.9%), and both male-to-male sexual contact and IDU (3.6%) (Table 2). Males aged 13–24 years accounted

TABLE 1. Diagnoses* of human immunodeficiency virus (HIV) infection, by race/ethnicity and selected characteristics — National HIV Surveillance System, 37 states, 2005–2008

	Black/African American		Hispanic/Latino†		White		Other§		
Characteristic	No.	(%)	No.	(%)	No.	(%)	No.	(%)	Total no.
Males									
Transmission category									
Male-to-male sexual contact	31,703	(38.5)	15,550	(18.9)	32,698	(39.7)	2,349	(2.9)	**82,299**
Injection drug use	6,173	(54.8)	2,758	(24.5)	2,109	(18.7)	220	(2.0)	**11,260**
Male-to-male sexual contact and injection drug use	1,852	(36.8)	895	(17.8)	2,141	(42.5)	146	(2.9)	**5,034**
Heterosexual contact¶	11,990	(70.7)	2,770	(16.3)	1,856	(11.0)	337	(2.0)	**16,953**
Other**	200	(44.6)	67	(15.0)	161	(35.8)	21	(4.6)	**449**
Age group (yrs)									
13–24	11,410	(61.5)	3,152	(17.0)	3,579	(19.3)	423	(2.3)	**18,564**
25–34	12,657	(41.9)	7,380	(24.4)	9,184	(30.4)	975	(3.2)	**30,195**
35–44	13,620	(38.3)	6,902	(19.4)	14,012	(39.4)	990	(2.8)	**35,524**
45–54	10,010	(44.4)	3,322	(14.7)	8,734	(38.7)	494	(2.2)	**22,559**
55–64	3,295	(46.0)	958	(13.4)	2,761	(38.5)	149	(2.1)	**7,163**
≥65	927	(46.6)	325	(16.4)	696	(35.0)	41	(2.1)	**1,989**
U.S. Census region††									
Northeast	10,866	(42.1)	7,300	(28.3)	6,577	(25.5)	1,062	(4.1)	**25,805**
Midwest	5,575	(41.8)	1,040	(7.8)	6,393	(47.9)	342	(2.6)	**13,350**
South	34,601	(50.1)	11,368	(16.5)	21,883	(31.7)	1,221	(1.8)	**69,073**
West	876	(11.3)	2,332	(30.0)	4,112	(52.9)	446	(5.7)	**7,766**
Total (males)	**51,918**	**(44.8)**	**22,040**	**(19.0)**	**38,965**	**(33.6)**	**3,071**	**(2.6)**	**115,994**
Females									
Transmission category									
Injection drug use	3,765	(55.7)	945	(14.0)	1,889	(27.9)	165	(2.4)	**6,764**
Heterosexual contact¶	22,917	(68.0)	4,816	(14.3)	5,132	(15.2)	818	(2.4)	**33,683**
Other**	201	(54.1)	51	(13.8)	90	(24.2)	29	(7.8)	**371**
Age group (yrs)									
13–24	4,290	(66.6)	914	(14.2)	1,082	(16.8)	158	(2.4)	**6,444**
25–34	6,927	(65.2)	1,601	(15.1)	1,781	(16.7)	323	(3.0)	**10,631**
35–44	7,666	(65.8)	1,642	(14.1)	2,073	(17.8)	268	(2.3)	**11,648**
45–54	5,565	(65.9)	1,138	(13.5)	1,575	(18.6)	173	(2.0)	**8,451**
55–64	1,916	(66.8)	395	(13.8)	494	(17.2)	63	(2.2)	**2,868**
≥65	520	(67.0)	121	(15.6)	107	(13.8)	28	(3.6)	**776**
U.S. Census region††									
Northeast	6,179	(60.0)	2,494	(24.2)	1,295	(12.6)	338	(3.3)	**10,306**
Midwest	2,265	(60.9)	240	(6.4)	1,063	(28.6)	153	(4.1)	**3,721**
South	18,027	(70.9)	2,712	(10.7)	4,296	(16.9)	409	(1.6)	**25,443**
West	412	(30.5)	366	(27.2)	458	(34.0)	112	(8.3)	**1,348**
Total (females)	**26,883**	**(65.9)**	**5,812**	**(14.2)**	**7,112**	**(17.4)**	**1,012**	**(2.5)**	**40,818**
Total	**78,801**	**(50.3)**	**27,852**	**(17.8)**	**46,077**	**(29.4)**	**4,083**	**(2.6)**	**156,812**

* Estimated numbers resulted from statistical adjustment that accounted for reporting delays and missing risk-factor information, but not for incomplete reporting.
† Hispanics/Latinos might be of any race.
§ Includes American Indian/Alaska Native, Asian, Native Hawaiian/Other Pacific Islander, and multiple races.
¶ Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.
** Includes hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified.
†† *Northeast:* Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *Midwest:* Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *South:* Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; *West:* Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

TABLE 2. Diagnoses* of human immunodeficiency virus (HIV) infection among blacks/African Americans, by sex, transmission category, and age group at time of diagnosis — National HIV Surveillance System, 37 states, 2005–2008

Age group (yrs)	Males												Females							
	Male-to-male sexual contact		Injection drug use (IDU)		Male-to-male sexual contact and IDU		Heterosexual contact†		Other§		Total		IDU		Heterosexual contact†		Other§		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
13–24	9,798	(30.9)	367	(5.9)	341	(18.4)	897	(7.5)	8	(3.8)	**11,410**	**(22.0)**	368	(9.8)	3,916	(17.1)	5	(2.5)	**4,290**	**(16.0)**
25–34	9,098	(28.7)	856	(13.9)	482	(26.0)	2,200	(18.4)	21	(10.3)	**12,657**	**(24.4)**	732	(19.4)	6,167	(26.9)	28	(14.0)	**6,927**	**(25.8)**
35–44	7,504	(23.7)	1,785	(28.9)	525	(28.3)	3,759	(31.4)	47	(23.5)	**13,620**	**(26.2)**	1,156	(30.7)	6,475	(28.3)	35	(17.6)	**7,666**	**(28.5)**
45–54	4,055	(12.8)	2,179	(35.3)	398	(21.5)	3,330	(27.8)	47	(23.7)	**10,010**	**(19.3)**	1,059	(28.1)	4,454	(19.4)	52	(25.9)	**5,565**	**(20.7)**
55–64	1,026	(3.2)	798	(12.9)	94	(5.1)	1,345	(11.2)	32	(16.2)	**3,295**	**(6.3)**	359	(9.5)	1,509	(6.6)	48	(23.7)	**1,916**	**(7.1)**
≥65	221	(0.7)	189	(3.1)	13	(0.7)	459	(3.8)	45	(22.4)	**927**	**(1.8)**	91	(2.4)	396	(1.7)	33	(16.3)	**520**	**(1.9)**
Total¶	**31,703**	**(61.1)**	**6,173**	**(11.9)**	**1,852**	**(3.6)**	**11,990**	**(23.1)**	**200**	**(0.4)**	**51,918**	**(100.0)**	**3,765**	**(14.0)**	**22,917**	**(85.2)**	**201**	**(0.7)**	**26,883**	**(100.0)**

* Estimated numbers resulted from statistical adjustment that accounted for reporting delays and missing risk-factor information, but not for incomplete reporting.
† Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.
§ Includes hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified.
¶ Row percentages shown for transmission category totals.

for the largest percentage (30.9%) of HIV diagnoses among black/African American males with infection attributed to male-to-male sexual contact, followed by males aged 25–34 years (28.7%) and 35–44 years (23.7%) (Table 2). Among adolescent and adult males, blacks/African Americans accounted for 50.1% of HIV diagnoses in the South and for the largest percentage (42.1%) of diagnoses in the Northeast (Table 1).

Among females, blacks/African Americans accounted for the largest percentage of diagnoses of HIV infection (65.9%) during 2005–2008 (Table 1). Most black/African American females diagnosed with HIV were exposed through heterosexual contact (85.2%), and the next greatest percentage by IDU (14.0%) (Table 2). Among black/African American females with infection attributed to heterosexual contact or to IDU, the largest percentages of diagnoses were in those aged 35–44 years (Table 2). Among females, blacks/African Americans accounted for the majority of HIV diagnoses in the South (70.9%), Midwest (60.9%), and Northeast (60.0%) (Table 1).

In 2008, among males and females of all racial/ethnic populations, black males had the highest HIV diagnosis rate (131.9 per 100,000). Trend analyses for 2005–2008 indicated that rates of HIV diagnoses increased among black/African American males (Figure). Trends in other race/ethnicity and sex groups were relatively stable (Figure).

What is already known on this topic?

Blacks/African Americans have been affected disproportionately with human immunodeficiency virus (HIV) infection since early in the epidemic.

What is added by this report?

Disparities persist, with blacks/African Americans accounting for half of HIV diagnoses in adolescents and adults in 37 states during 2005–2008, despite representing a smaller proportion (13.6%) of the population.

What are the implications for public health practice?

Efforts to ensure annual HIV testing for black/African American gay, bisexual, and other men who have sex with men (MSM) and persons at high risk (e.g., multiple partners or unprotected sex) for infection should be strengthened. HIV testing and prevention programs should develop novel strategies to ensure routine and ongoing testing among young black/African American MSM.

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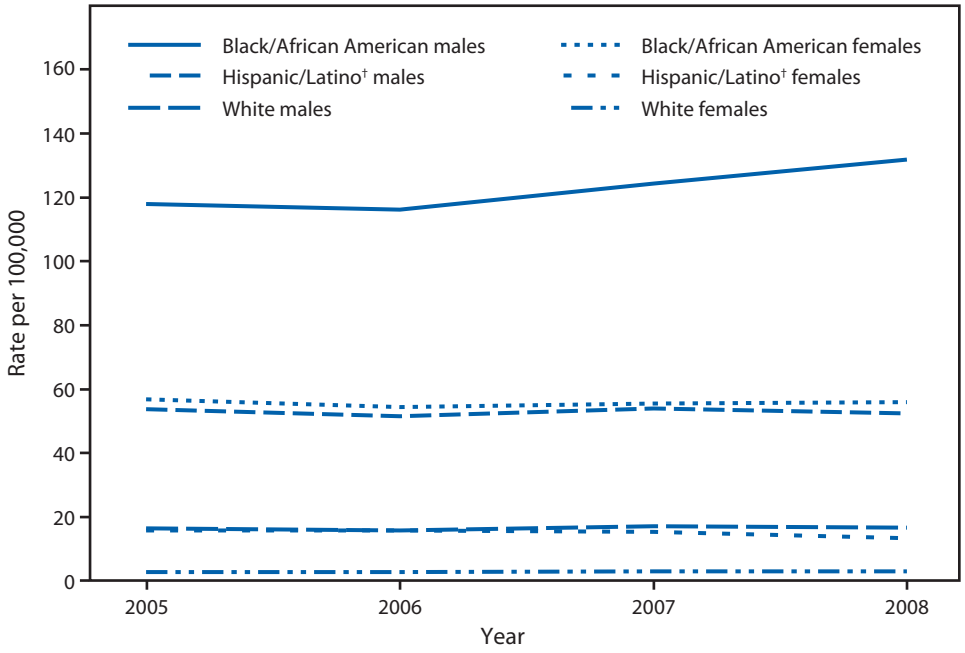
Editorial Note

During 2005–2008, HIV infection was diagnosed more often among black/African American men and women than among men and women of any other racial/ethnic population, with rates increasing among black/African American men. In nearly every demographic and transmission category, the largest percentages of HIV diagnoses were among blacks/African Americans, with the disparity most pronounced among persons aged 13–24 years, women, and persons with infection attributed to heterosexual contact. A recent study of estimated lifetime risk for diagnosis of HIV infection found that blacks/African Americans had the highest lifetime risk for receiving an HIV diagnosis (one in 22), compared with whites (one in 170) and Hispanics/Latinos (one in 52) (*4*). Correlations have been found between higher rates of HIV infection among blacks/African Americans and social and contextual factors such as disproportionately higher prevalence rates of other sexually transmitted infections and poverty. In addition, environmental factors such as housing conditions and social support are key drivers for infection. Comprehensive approaches to address disparities should take into account patient-specific behavioral

risk factors, such as having multiple sex partners and unprotected sex, in addition to underlying factors, such as poverty, unequal access to health care, incarceration, lack of education, stigma, homophobia, sexism, and racism (*5,6*).

HIV testing is a key pillar of a comprehensive approach to reduce disparities in rates of HIV diagnoses. CDC recommends routine HIV screening in all health-care settings for persons aged 13–64 years (*7*). The higher rates of diagnoses among blacks/African Americans suggest that adolescents and adults from this population who are at higher risk for HIV infection might benefit from more frequent testing to facilitate earlier diagnosis. Persons infected with HIV who know their status can be referred to medical care and treatment that can improve the quality and length of their lives and to prevention services that can reduce the risk for further transmission (*8*).

FIGURE. Rates of diagnosis of human immunodeficiency virus (HIV) infection among persons aged ≥13 years, by year of diagnosis, race/ethnicity, and sex — National HIV Surveillance System, 37 states, 2005–2008*



* Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.
† Hispanics/Latinos might be of any race.

Men who have sex with men (MSM) comprise the largest group of blacks/African Americans living with HIV in the United States (*2*). In a recent study of gay, bisexual, and other MSM who resided in 21 cities, 59% of black/African American MSM infected with HIV were unaware of their infection (*9*). Among MSM aged 18–29 years, HIV prevalence was highest among black/African American MSM (*9*). Black/African American gay, bisexual, and other MSM should be tested at least annually. Efforts to ensure annual HIV testing for black/African American MSM should be strengthened, and HIV testing and prevention programs should develop novel strategies to ensure routine and ongoing testing among young black/African American MSM. Strategies to reduce HIV infection and decrease the racial/ethnic disparities must include MSM as a high-priority population.

The findings in this report are subject to at least two limitations. First, the estimates of HIV diagnoses are from 37 states and thus do not represent all HIV diagnoses in the United States. HIV surveillance data from several high-morbidity areas (e.g., California, the District of Columbia, and Illinois) are not yet available; however, the racial/ethnic disparities described in this report are consistent with disparities observed among persons diagnosed with acquired immunodeficiency syndrome (AIDS) from all 50 states (*2*). Finally, the statistical adjustment procedures applied to HIV surveillance data to account for reporting delay are subject to a degree of uncertainty that might result in overestimation or underestimation of the rates (*2*). However, this uncertainty would be applied similarly across the various racial/ethnic categories and would not affect data for blacks/African Americans disproportionately.

The National HIV/AIDS Strategy emphasizes the importance of improving the effectiveness of HIV prevention efforts in the black/African American community and recommends that prevention efforts be aligned with the morbidity and disparity of HIV among blacks/African Americans and resources targeted appropriately (*3*). To address disparities in the prevalence and incidence of HIV infection, CDC conducts research and supports programs for HIV prevention among blacks/African Americans in the United States. These efforts include the Act Against AIDS communications campaign,** which addresses complacency, lack of knowledge, and misperceptions about HIV in the United States. In addition, in 2010, CDC announced a second 3-year expanded HIV testing program that supplements an initiative started in 2007 to increase HIV testing among blacks/African Americans.†† Ongoing and increased HIV testing and efforts to ensure referral and access

** Additional information is available at http://www.cdc.gov/hiv/aaa.
†† Additional information is available at http://www.nineandahalfminutes.org.

to HIV-related primary medical care are warranted. Lack of knowledge of HIV status and missed opportunities to diagnose HIV in routine clinical settings (*7*) are contributing factors to the HIV epidemic among blacks/African Americans.

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Increase in Newly Diagnosed HIV Infections Among Young Black Men Who Have Sex with Men — Milwaukee County, Wisconsin, 1999–2008

During 2001–2006, new human immunodeficiency virus (HIV) diagnoses among black men aged 13–24 years who have sex with men (MSM) in 33 states increased by 93% (*1*). The Wisconsin Division of Public Health (WDPH) recently reported to CDC a 144% increase during 2000–2008 in HIV diagnoses among black MSM aged 15–29 years in Milwaukee County. In October 2009, the City of Milwaukee Health Department (MHD), WDPH, and CDC investigated whether the increase in HIV infections among young black MSM in Milwaukee represented increased HIV transmission or simply better identification of prevalent infections. This report describes the results of that investigation, which indicated that a new "social networks" HIV testing strategy and the recent expansion of better targeted HIV testing efforts accounted for few diagnoses among young black MSM and occurred after HIV diagnoses increased, respectively. Therefore, although some diagnoses were made because of intensified testing, an increase in HIV transmission likely occurred. Moreover, an increase in syphilis diagnoses among young black MSM in Milwaukee preceded the increase in HIV diagnoses, which suggests that changes in risk behavior or sexual networks might explain the increase. These findings highlight the need for new or improved interventions promoting prevention education, early HIV detection, and entry to care for young HIV-infected and at-risk black MSM in Milwaukee.

CDC, MHD, and WDPH reviewed the timing of recently implemented HIV testing strategies and examined data from two sources: 1) name-based, confidential HIV surveillance data (collected in Wisconsin since 1985) and 2) HIV testing data from publicly funded test sites. HIV diagnoses that were not reported previously were considered new diagnoses. Trends were analyzed comparing the number of new HIV diagnoses (counted by year in which the diagnosis was made), number of tests performed in publicly funded test sites, and the proportion of those tests that were positive among black and nonblack (white and Hispanic) MSM, stratified by age group (15–19, 20–24, 25–29, and ≥30 years). Because of small numbers, year-to-year differences were highly variable, so CDC compared aggregate data for the years 1999–2001 (before diagnoses increased and before new testing strategies were adopted) and 2006–2008 (after diagnoses increased and after new testing strategies were adopted). WDPH determined whether the new social networks testing strategy or traditional testing strategies were associated with cases identified.

The trends in HIV diagnoses also were compared with trends in diagnoses of primary or secondary syphilis in young black MSM in Milwaukee because HIV and syphilis are both transmitted through unprotected sex. Primary and secondary syphilis occur within a few months of infection, so increases in primary and secondary syphilis suggest increases in HIV incidence also might have occurred. CDC compared primary and secondary syphilis incidence for 1999–2001 and 2006–2008 using WDPH surveillance data. Because syphilis surveillance data in Milwaukee do not document HIV coinfection, CDC also reviewed MHD partner services records, in which coinfection is recorded routinely, for all primary and secondary syphilis cases among black MSM aged 15–29 years diagnosed during January 2006–June 2009. The latter period was chosen to maximize the number of cases considered (the period for trend analyses ended in 2008 because of concerns about delayed reporting of more recent diagnoses to surveillance).

During 2006–2008, WDPH intensified HIV testing statewide. Beginning in 2006, a new social networks testing strategy encouraged MSM who were diagnosed recently with HIV to recruit MSM within their social networks for HIV testing. In 2007, WDPH intensified targeted HIV testing to black MSM by urging publicly funded test sites trained in the social networks testing strategy to administer ≥45% of all tests to black and Hispanic MSM. The extent to which these strategies detected infections among previously undiagnosed black MSM was unclear.

Comparing 1999–2001 and 2006–2008, new HIV diagnoses increased among black MSM aged 15–19, 20–24, and 25–29 years (by 143%, 245%, and 78%, respectively) (Table). In contrast, new diagnoses increased less among nonblack MSM aged 20–24 years (by 14%) and 25–29 years (by 45%),* and they decreased among black and nonblack MSM aged ≥30 years (by 40% and 1%, respectively). Comparing 1999–2001 and 2006–2008, the percentage increase in the number of HIV tests among young black MSM aged 15–19, 20–24, and 25–29 years ranged from 90% to 372%, whereas the percentage increase in the number of HIV tests among nonblack MSM in each of these age groups ranged from 44% to 63%. Along with the increased number of tests conducted, increased HIV positivity among black MSM aged 15–19 and 20–24 years and nonblack MSM aged 25–29 years also contributed to the trend of increasing diagnoses in these groups.

* Because no diagnoses occurred during 1999–2001 among nonblack MSM aged 15–19 years, change in diagnoses or positivity could not be calculated.

TABLE. Trends in HIV diagnoses, testing, and HIV test positivity among black and nonblack men who have sex with men, by age group — Milwaukee County, Wisconsin, 1999–2008*†

	No. of HIV diagnoses			No. of tests performed in publicly funded test sites			HIV positivity in publicly funded test sites (%)§		
Age group (yrs)	1999–2001	2006–2008	% change	1999–2001	2006–2008	% change	1999–2001	2006–2008	% change
15–19									
Black	7	17	143	42	180	329	4.8	9.4	98.3
Nonblack	0	<5	—	127	199	57	0.0	<2.5	—
20–24									
Black	11	38	245	82	387	372	2.4	5.9	143.7
Nonblack	7	8	14	460	663	44	1.5	1.2	-20.7
25–29									
Black	9	16	78	91	173	90	8.8	8.1	-7.9
Nonblack	11	16	45	481	786	63	1.5	2.0	39.9
≥30 yrs									
Black	60	36	-40	259	423	63	6.2	6.9	11.0
Nonblack	72	71	-1	1,912	2,464	29	2.2	1.4	-35.3
Total	**177**	—	—	**3,454**	**5,275**	**53**	**2.4**	**2.7**	**12.2**

Sources: Wisconsin Enhanced HIV/AIDS Reporting System (number of diagnoses) and Wisconsin Division of Public Health (number of tests and positivity).
* Percentage change reflects the difference between the two 3-year periods.
† The nonblack subgroup consisted of Hispanic and white men.
§ HIV test positivity is calculated as the percentage of positive tests of all tests completed in publicly funded test sites. Positivity from other sites could not be calculated because data were not available.

During 2006–2008, the new social networks testing strategy resulted in new HIV diagnoses only among black MSM. However, within the 15–19, 20–24, and 25–29 year age groups, this strategy accounted for only 11.8%, 5.3%, and 6.3% of new diagnoses, respectively. Moreover, the effort to expand and better target testing in publicly funded test sites began after increases in HIV diagnoses and positivity were observed among black MSM aged 15–29 years (Figure). Although data were unavailable to describe testing trends in privately funded test sites during this period, the proportion of new diagnoses in these test sites decreased from 56% to 24% among black MSM and from 22% to 4% among nonblack MSM from 1999–2001 to 2006–2008; the number of diagnoses among black MSM aged 15–29 years in privately funded sites increased from 15 to 17 during these periods.†

An increase in syphilis diagnoses was noted first in 2005, 1 year before the increase in HIV diagnoses was first noted (Figure). Comparing 1999–2001 to 2006–2008, the number of syphilis diagnoses increased from one to 19 among black MSM and from zero to four among nonblack MSM aged 15–29 years. Investigators reviewed records of the 22 black MSM aged 15–29 years with primary or secondary syphilis diagnosed and reported to MHD during January 2006–June 2009. Of the 22 men, five had only syphilis diagnosed, nine had concurrent diagnoses of HIV and syphilis, six contracted syphilis after HIV diagnosis, and two contracted HIV after syphilis diagnosis.

† Trends in the proportions of tests conducted in privately funded test sites were assessed by taking the difference between the total number of diagnoses and the number diagnosed in publicly funded test sites. For this analysis, this difference was used as a proxy for number of tests in privately funded sites.

Reported by

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Editorial Note

Increases in both HIV and syphilis diagnoses were confirmed among young black MSM in Milwaukee County during 1999–2008. More complete ascertainment of prevalent infection among young black MSM likely was aided by the expansion and improved targeting of HIV testing that occurred in Milwaukee County during the period of observation. However, expanded and better targeted testing began after HIV diagnoses and positivity began to increase and, therefore, could not have accounted for the observed increase. Further, if increased testing primarily identified MSM who had been HIV-infected but undiagnosed for a number of years, an increase in diagnoses mainly in older MSM would have been expected. Instead, diagnoses were observed to have decreased among black MSM aged ≥30 years, and both diagnoses and positivity increased among black MSM aged 15–19 years. Moreover, the proportion of all black MSM HIV diagnoses accounted for by MSM aged 15–19 years increased from 8% to 16% from 1999–2001 to 2006–2008, but nonblack MSM aged 15–19 years accounted for <5% of nonblack MSM

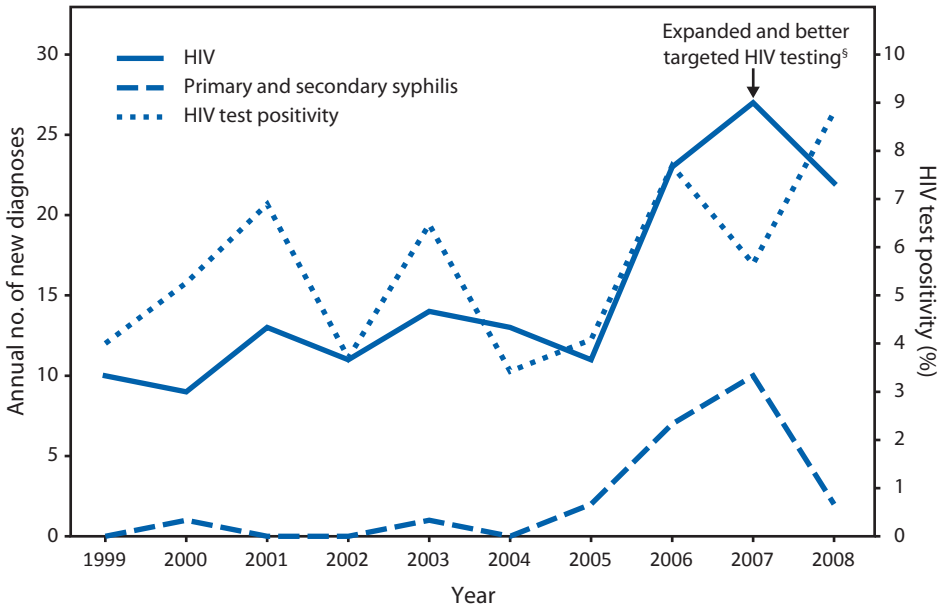
HIV diagnoses during both periods. Assuming that sexual exposure to HIV has had less time to occur in the 15–19 year age group than in any other age group, diagnoses in this group are more likely to represent recent infection.

Other evidence also suggests that increased HIV diagnoses at least partly resulted from increased transmission. The social networks testing strategy, one of the most efficient and effective means for identifying undiagnosed MSM (*2*), identified very few new cases. Antecedent increases in primary and secondary syphilis diagnoses also suggest changes in risk behaviors or sexual networks among young black MSM that could have facilitated the spread of HIV (*3*). An increase in HIV transmission among young black MSM in Milwaukee County is consistent with a report of increased HIV incidence among MSM nationwide (*4*).

The findings in this report are subject to at least three limitations. First, HIV testing data were not available to assess HIV testing trends in privately funded test sites. An increase in HIV testing by private providers might have increased diagnoses, given CDC's 2006 recommendation of at least annual HIV testing for persons at high risk for HIV (*5*). However, the number of diagnoses from privately funded test sites during 2006–2008 was relatively small, and the proportion of diagnoses occurring in privately funded test sites declined from 1999–2001 to 2006–2008. Therefore, increased testing in privately funded sites is unlikely to have accounted for the observed increase in diagnoses among young black MSM. Second, increased syphilis screening might have contributed to the increase in syphilis cases. However, screening likely did not account for all of the increase because primary and secondary syphilis are symptomatic, prompting presentation for care and subsequent diagnosis. Finally, the lack of HIV incidence data limits conclusions regarding the timing of infection among young MSM.

The results of this investigation suggest that increased HIV diagnoses during 1999–2008 might be attributable to increased HIV transmission during the period among young MSM in Milwaukee County and that young black MSM remain the group most affected by HIV. In 2008, black MSM aged 15–29 years accounted for 71% of new diagnoses among black MSM in Milwaukee County. Nationwide, in 2006, black MSM aged 13–29 years accounted for an estimated 52% of new HIV infections among black MSM, and they accounted for nearly as many infections as Hispanic and white MSM in this age group combined (*6*). The concentration of infections among these young men underscores the need for interventions to

FIGURE. Number of new diagnoses of HIV and primary and secondary syphilis and HIV test positivity among black men aged 15–29 years who have sex with men — Milwaukee County, Wisconsin, 1999–2008*†



Abbreviation: HIV = human immunodeficiency virus.
Sources: Wisconsin Enhanced HIV/AIDS Reporting System (number of diagnoses) and Wisconsin Division of Public Health (test positivity).
* HIV diagnoses were reported by publicly and nonpublicly funded providers.
† HIV test positivity is calculated as the percentage of positive tests of all tests completed in publicly funded test sites. Positivity from other sites could not be calculated because data were not available.
§ In 2007, the Wisconsin Division of Public Health urged publicly funded test sites to intensify targeted testing of black men who have sex with men.

What is already known on this topic?

Human immunodeficiency virus (HIV) diagnoses among young black men who have sex with men (MSM) have increased recently in the United States; possible explanations include expanded HIV testing or increased HIV transmission.

What is added by this report?

Expanded HIV testing did not account for increased HIV diagnoses that occurred among young black MSM in Milwaukee County, Wisconsin, from 1999–2001 to 2006–2008; increased transmission likely occurred.

What are the implications for public health practice?

New or improved interventions to reduce HIV risk and increase HIV testing and care for those found to be infected among young black MSM are needed.

address their risk for HIV infection. As a result of this investigation, MHD has developed, funded, and is implementing a peer-focused and community-based action plan to promote prevention education, early HIV detection, and entry into care among young black MSM. If evaluation shows these interventions to be effective, other jurisdictions should consider implementing similar measures.

Acknowledgments

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Vital Signs: Prevalence, Treatment, and Control of Hypertension — United States, 1999–2002 and 2005–2008

On February 1, this report was posted as an MMWR *Early Release on the* MMWR *website (http://www.cdc.gov/mmwr).*

ABSTRACT

Background: Hypertension is a modifiable risk factor for cardiovascular disease. It affects one in three adults in the United States and contributes to one out of every seven deaths and nearly half of all cardiovascular disease–related deaths in the United States.

Methods: CDC analyzed data from the National Health and Nutrition Examination Survey (NHANES) on the prevalence, treatment, and control of hypertension among U.S. adults aged ≥18 years. Hypertension was defined as an average blood pressure ≥140/90 mmHg or the current use of blood pressure–lowering medication. Control of hypertension was reported as an average treated systolic/diastolic blood pressure <140/90 mmHg. Multivariate analysis was performed to assess changes in prevalence of hypertension, use of pharmacologic treatment, and control of blood pressure between the 1999–2002 and 2005–2008 survey cycles.

Results: During 2005–2008, approximately 68 million (31%) U.S. adults aged ≥18 years had hypertension, and this prevalence has shown no improvement in the past decade. Of these adults, 48 million (70%) were receiving pharmacologic treatment and 31 million (46%) had their condition controlled. Although 86% of adults with uncontrolled blood pressure had medical insurance, the prevalence of blood pressure control among adults with hypertension was especially low among participants who did not have a usual source of medical care (12%), received medical care less than twice in the previous year (21%), or did not have health insurance (29%). Control prevalence also was low among young adults (31%) and Mexican Americans (37%). Although the prevalence of hypertension did not change from 1999–2002 to 2005–2008, significant increases were observed in the prevalence of treatment and control.

Conclusions: Hypertension affects millions of persons in the United States, and less than half of those with hypertension have their condition controlled. Prevalence of treatment and control are even lower among persons who do not have a usual source of medical care, those who are not receiving regular medical care, and those who do not have health insurance.

Implications for Public Health Practice: To improve blood pressure control in the United States, a comprehensive approach is needed that involves policy and system changes to improve health-care access, quality of preventive care, and patient adherence to treatment. Nearly 90% of persons with uncontrolled hypertension have health insurance, indicating a need for health-care system improvements. Health-care system improvements, including use of electronic health records with registry and clinical decision support functions, could facilitate better treatment and follow-up management, and improve patient-physician interaction. Allied health professionals (e.g., nurses, dietitians, health educators and pharmacists) could help increase patient adherence to medications. Patient adoption of healthy behaviors could improve their blood pressure control. Reducing dietary intake of salt would greatly support prevention and control of hypertension; a 32% decrease in average daily consumption, from 3,400 mg to 2,300 mg, could reduce hypertension by as many as 11 million cases. Further reductions in sodium intake to 1,500 mg/day could reduce hypertension by 16.4 million cases.

Introduction

Hypertension, a major risk factor for cardiovascular disease, affects approximately one in three adults in the United States. Every year, hypertension contributes to one out of every seven deaths in the United States and to nearly half of all cardiovascular disease–related deaths, including stroke (*1*). If all hypertensive patients were treated sufficiently to reach the goal specified in current clinical guidelines, 46,000 deaths might be averted each year (*2*). In addition to the cost in lives lost, hypertension is costly to the health-care system. The American Heart Association recently estimated that direct and indirect costs of hypertension are more than $93.5 billion per year, and that

cardiovascular disease and stroke account for 17% of the total health expenditures in the United States annually (*3*).

This report uses data from the National Health and Nutrition Examination Survey (NHANES) to examine the prevalence, pharmacologic treatment, and control of hypertension among U.S. adults. The examination focuses on indicators of the use of medical care, as well as on demographic characteristics and socioeconomic factors.

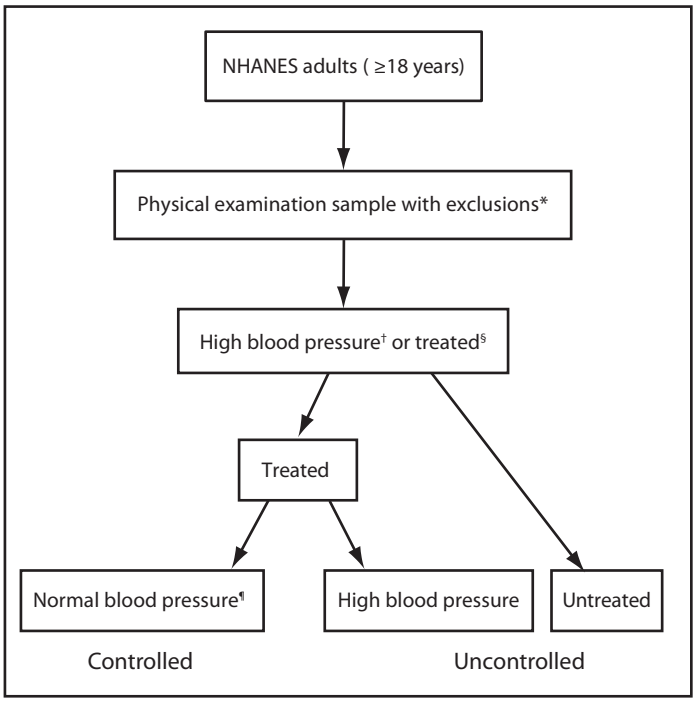
Methods

NHANES is a complex, multistage probability sample of the noninstitutionalized population of the United States. Details of the NHANES methodology can be found elsewhere (*4*). Data from NHANES from 2005–2008, the most recent nationally representative data available on hypertension, were analyzed. During this time frame, 11,154 participants aged ≥18 years were interviewed and examined. Women who were pregnant or whose pregnancy status could not be determined (505) were excluded, as were participants who did not have at least one complete blood pressure measurement or information on current medication usage (617), or were missing covariates of interest (56), yielding an analytic sample of 10,037.

To examine changes over time, 1999–2002 NHANES data also were analyzed. From the 10,393 adult participants included in those data, 830 women who were pregnant or whose pregnancy status was unknown were excluded, as were 631 participants who were missing blood pressure information and 275 participants who were missing data on the covariates of interest, yielding a sample size of 8,851. Mobile examination center response rates for NHANES ranged from 75% to 80% during the study period.

This study used the average of up to three blood pressure measurements, obtained under standard conditions during a single physical examination at the mobile examination center (*4*). Approximately 95% of participants had two or three complete blood pressure measurements. For participants with only one blood pressure measurement, that single measurement was used in place of an average. Current use of blood pressure–lowering medication was determined based on participant self-report. Hypertension was defined as an average systolic blood pressure ≥140 mmHg, an average diastolic blood pressure ≥90 mmHg, or the current use of blood pressure–lowering medication. Treatment of blood pressure was defined as the self-reported current use of blood pressure–lowering medication, and its prevalence was calculated among all those defined as having hypertension. Blood pressure control was defined as a treated blood pressure <140 mmHg systolic and <90 mmHg diastolic, and its prevalence was calculated among all those with hypertension, as defined above (Figure 1).

FIGURE 1. Study definitions for adults with hypertension whose blood pressure was treated or controlled for hypertension — National Health and Nutrition Examination Survey (NHANES), United States, 1999-2002 and 2005-2008



* Excludes pregnant women and participants with missing data needed for determining hypertension status.
† Average systolic pressure ≥140 mmHg or average diastolic pressure ≥90 mmHg.
§ Self-reported currently taking blood pressure–lowering medication.
¶ Average systolic pressure <140 mmHg and average diastolic pressure <90 mmHg.

Multivariate regression analysis was used to examine changes in prevalence of high blood pressure, blood pressure medication use, and pharmacologic control of high blood pressure from 1999–2002 to 2005–2008. All analyses were conducted using statistical software to account for sampling weights and adjust variances for the multistage, clustered sample designs. Population counts were calculated using the Current Population Surveys.*

Results

The overall U.S. prevalence of hypertension among adults aged ≥18 years in 2005–2008 was 30.9% and was highest among persons aged ≥65 years (69.7%), non-Hispanic blacks (38.6%), and those participants with Medicare coverage (68.1%) (Table). Among persons with hypertension, the prevalence of pharmacologic treatment in 2005–2008 was 69.9%. The prevalence of treatment was lowest among persons aged

* Additional information is available at http://www.cdc.gov/nchs/tutorials/nhanes/faqs.htm.

TABLE. Prevalence of hypertension among adults aged ≥18 years, and the prevalence of treatment and control among adults with hypertension — National Health and Nutrition Examination Survey, United States, 2005–2008

Characteristic	Hypertension* (n = 10,037)¶		Treatment† (n = 3,569)		Control§ (n = 3,569)	
	%**	(95% CI)	%	(95% CI)	%	(95% CI)
Total	**30.9**	**(29.4–32.4)**	**69.9**	**(67.4–72.2)**	**45.8**	**(43.7–48.0)**
Sex						
Male	30.0	(28.3–31.8)	63.8	(60.1–67.4)	43.8	(40.5–47.2)
Female	31.7	(29.9–33.5)	75.3	(73.2–77.4)	47.7	(45.8–49.6)
Age group (yrs)						
18–39	7.4	(6.2–8.7)	37.4	(30.1–45.2)	31.4	(24.6–39.1)
40–64	35.6	(33.6–37.7)	68.9	(66.1–71.6)	48.4	(45.7–51.2)
≥65	69.7	(67.0–72.4)	78.7	(76.5–80.6)	45.7	(43.0–48.4)
Race/ethnicity††						
White, non-Hispanic	32.3	(30.4–34.2)	71.2	(68.3–73.9)	47.7	(45.3–50.0)
Black, non-Hispanic	38.6	(35.6–41.6)	71.7	(67.7–75.4)	42.7	(39.7–45.8)
Mexican-American	17.3	(14.6–20.3)	56.1	(49.9–62.2)	36.9	(33.6–40.3)
Poverty-income ratio§§						
<100%	25.9	(23.2–28.9)	70.7	(64.9–75.9)	42.0	(35.0–49.4)
100–199%	35.1	(33.0–37.2)	69.9	(66.7–73.0)	42.3	(38.8–45.9)
200–499%	28.8	(26.6–31.2)	69.5	(64.8–73.8)	48.0	(43.8–52.2)
≥500%	29.2	(26.9–31.5)	70.5	(64.8–75.7)	51.8	(47.3–56.2)
Education (age ≥25 yrs)						
Less than high school	42.1	(39.0–45.3)	69.0	(65.1–72.6)	40.0	(36.1–43.9)
High school graduate	39.3	(36.4–42.2)	71.3	(68.2–74.3)	46.0	(42.9–49.1)
Some college	32.1	(30.1–34.2)	70.7	(65.8–75.2)	46.8	(42.7–50.9)
College graduate	28.5	(25.6–31.6)	71.8	(65.6–77.2)	52.9	(48.1–57.7)
Usual source of care¶¶						
Yes	33.8	(32.2–35.5)	73.4	(70.9–75.8)	48.3	(46.1–50.5)
No	14.0	(12.0–16.2)	19.8	(14.8–26.0)	12.1	(7.6–18.6)
Times received care in past year***						
0–1	17.6	(16.0–19.3)	33.8	(28.1–40.1)	21.1	(16.3–27.0)
2–3	36.8	(34.5–39.1)	78.6	(76.2–80.8)	52.1	(49.6–54.6)
≥4	43.5	(40.5–46.7)	80.2	(76.1–83.7)	52.0	(47.2–56.7)
Health insurance†††						
Medicare	68.1	(65.2–70.9)	79.3	(77.1–81.2)	47.2	(44.5–49.8)
Private	23.0	(21.2–24.9)	67.0	(63.2–70.5)	47.8	(44.6–51.1)
Public	30.9	(26.7–35.5)	71.6	(61.4–80.0)	51.5	(42.7–60.2)
Uninsured	17.2	(15.9–18.7)	43.5	(36.6–50.6)	29.0	(23.3–35.5)

Abbreviation: CI = confidence interval.

* Average blood pressure ≥140/90 mmHg or reported current use of blood pressure-lowering medication.

† An answer of "yes" to the question, "Are you currently taking medication to lower your blood pressure?" Among those with hypertension (average systolic blood pressure ≥140 mmHg, average diastolic pressure ≥90 mmHg, or current medication use).

§ Average treated blood pressure <140/90 mmHg on examination among all persons with hypertension.

¶ Unweighted sample size.

** Weighted estimates.

†† Participants of other racial/ethnic groups included in analysis.

§§ Participants missing poverty-income ratio included in analysis.

¶¶ Participants were asked "Is there a place that you usually go when you are sick or need advice about your health?" Yes responses include those who answered "yes" or "there is more than one place".

*** Participants were asked "During the last 12 months how many times have you seen a doctor or other health professional about your health at a doctor's office, a clinic, hospital emergency room, at home or some other place? Do not include times you were hospitalized overnight."

††† Public insurance includes all public non-Medicare coverage, with the exception of Indian Health Service. Uninsured includes participants with Indian Health Services or single service plan only.

18–39 years (37.4%), Mexican Americans (56.1%), those without a usual source of medical care (19.8%), those who reported receiving medical care less than twice during the previous year (33.8%), and those without health insurance (43.5%). The overall prevalence of control among participants with hypertension was 45.8% during 2005–2008. The prevalence of control was lowest among persons aged 18–39 years (31.4%), Mexican Americans (36.9%), those without a usual source of medical care (12.1%), those who received medical care less than twice in the previous year (21.1%), and those without health insurance (29.0%) (Table). However, additional analysis using the same 2005–2008 NHANES data showed that 86.1% of adults with uncontrolled hypertension had either public or private medical insurance.

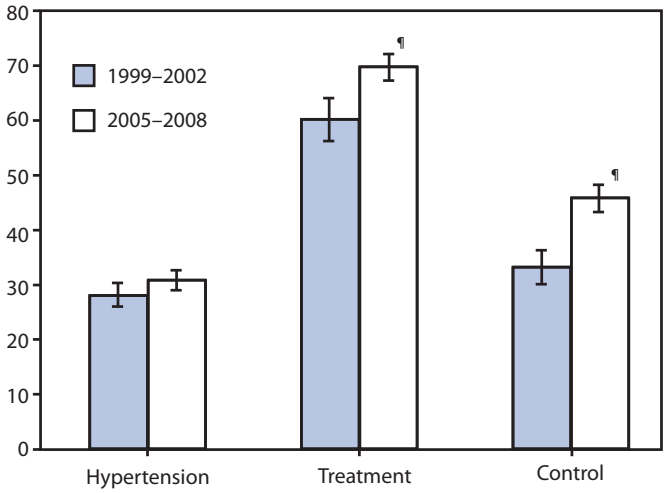
The prevalence of hypertension did not change significantly from 1999–2002 (28.1%) to 2005–2008 (30.9%) (Figure 2), after adjustment for sex, age, race/ethnicity, and poverty-income ratio (p=0.24). The prevalence of pharmacologic treatment among those with hypertension increased from 60.3% to 69.9% during this period, and the adjusted increase was significant (p<0.01). The prevalence of control also changed significantly during this time, increasing from 33.2% in 1999–2002 to 45.8% in 2005–2008 (p<0.01).

Conclusions and Comments

The results of this analysis show that the prevalence of hypertension in U.S. adults during 2005–2008 was approximately 30%; another NHANES report has shown that this prevalence has remained unchanged during the past 10 years (*5*). Significant increases in the prevalence of pharmacologic treatment and control of blood pressure among persons with hypertension have been observed in the past decade.

In spite of these gains, 30% of patients with hypertension are not being treated pharmacologically, and only 46% of persons with hypertension have their blood pressure under control. The greatest need for improvement in control is among those persons who do not have a usual source of medical care, those who reported receiving care less than twice in the previous year, and those without health insurance.

FIGURE. 2 Prevalence of hypertension,* prevalence of treatment† and control§ of blood pressure among persons with hypertension — National Health and Nutrition Examination Survey, United States 1999–2002 and 2005–2008.



* Average systolic blood pressure ≥140 mm Hg, average diastolic pressure ≥90 mmHg, or current blood pressure–lowering medication use.

† An answer of "yes" to the question, "Are you currently taking medication to lower your blood pressure?" Among those with hypertension (average systolic blood pressure ≥140 mmHg, average diastolic pressure ≥90 mmHg, or current medication use). Unadjusted prevalence.

§ Average treated blood pressure <140/90 mmHg on examination among all persons with hypertension. Unadjusted prevalence.

¶ Test for difference in prevalence statistically significant (p<0.01) after adjustment for sex, age group, race/ethnicity, and poverty-income ratio.

The findings of this study are consistent with the findings of other studies illustrating that inadequate control of hypertension often is related to gaps in availability of, access to, use of, or continuity of health care (*6,7*). The Affordable Care Act (ACA) is intended to extend insurance coverage to 94% of the non-elderly U.S. population by 2019 (*8,9*). By reducing patient out-of-pocket expenses for medical visits, ACA provisions extending insurance coverage for preventive services with no cost sharing are designed to enhance patient access to those preventive services and are anticipated to improve patient use of those services (*8,9*). Among those with uncontrolled hypertension, approximately 86% reported having some form of health insurance, indicating that for most patients, insurance is necessary but not sufficient to achieve blood pressure control. Several programmatic initiatives promoted by ACA, including patient-centered medical homes, accountable care organizations, and the federally qualified health center program (*9*), can contribute to improved health-care access and quality.

Poor adherence to medication regimens is another barrier to blood pressure control and might explain, in part, the low prevalence of blood pressure control observed even among patients with health insurance. Medication costs, complicated regimens, adverse effects, and insufficient physician-patient communication are among major factors cited as associated with decreased patient adherence to medication regimens (*10*).

The American Heart Association; the Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; and the U.S. Preventive Services Task Force also recommend the adoption of nonpharmacologic therapies associated with reductions in blood pressure. These recommendations include 1) achieving and maintaining a healthy body weight; 2) participating in regular leisure-time physical activity; 3) adoption of a healthy diet, including reduced salt intake and increased potassium intake; 4) smoking cessation; and 5) stress management.

Numerous clinical trials and longitudinal studies demonstrate that even small reductions in salt intake lower blood pressure and might prevent development of hypertension or improve blood pressure control among adults with hypertension (*11*). If average sodium intake in the United States was reduced from the current level of >3,400 mg/day to no more than 2,300 mg/day, an estimated 11 million fewer adults would be hypertensive. A reduction of 16.4 million cases of hypertension could be observed if intake were decreased to the recommended adequate intake of 1,500 mg/day (*12*). However, 90% of U.S. adults consume more salt than is recommended currently, nearly 80% of which comes from packaged, processed, and restaurant foods (*13*).

Reducing sodium intake to recommended levels will require changes in the manufacture and production of packaged, processed, and restaurant food, as well as changes by persons in their food consumption. Some manufacturers have committed to substantial sodium reduction, as has been done in other countries (*14*). On January 20, 2011, for example, Walmart announced plans to reduce sodium content of their corporate label foods by 25% by 2015 (*15*). Persons can lower their sodium intake by consuming more fresh fruits and vegetables and selecting food products and menu items labeled as "low sodium" or "no sodium added." This is particularly important for those in population groups that have a high risk for cardiovascular disease, including those with hypertension, older adults, African Americans, and those with diabetes or chronic kidney disease (*16*). Food manufacturers and restaurants have an opportunity to positively affect the health of the nation by voluntarily and gradually reducing the amount of sodium used in processed, packaged, and restaurant foods.

Lifestyle and environmental strategies to reduce blood pressure also might benefit persons who have blood pressure that is below 140/90 mmHg, but not necessarily optimal. Blood pressure reductions below the threshold for clinical hypertension (i.e., down to 115/75 mmHg) can have additional health benefits over time. For example, in a meta-analysis of 61 prospective observational studies of blood pressure and mortality, each 20 mmHg increase in usual systolic blood pressure (or, approximately equivalently, 10 mmHg increase in usual diastolic blood pressure) above 115/75 mmHg was associated with more than a twofold increase in stroke mortality, and with a twofold increase in death from coronary heart disease and other vascular causes of death at ages 40–69 years (*17*).

Progress in hypertension control cannot be achieved without improvements in health-care quality. Efforts to improve measurement of successes and shortfalls, such as the Physician Quality Reporting Initiative,[†] are designed to improve provider performance. System improvements, including adoption of electronic health records with registry and clinical decision support functions, will facilitate better patient management and the generation of patient and physician reminders to improve patient-physician interaction and patient follow-up (*18*). Other promising system improvements include nurse- or pharmacist-led care, which can improve preventive care delivery and reduce time pressures on physicians. Improved access and quality improvement efforts might need to be particularly focused on groups for whom the prevalence of control is especially low, such as young adults and Mexican Americans.

The findings in this report are subject to at least three limitations. First, the prevalence of hypertension in the U.S. population might be underestimated because older persons residing in nursing homes and other institutions, who have a higher prevalence of age-related hypertension, are not included in the NHANES. Second, although data collection is standardized, NHANES self-reported data on the use of blood pressure medications from interviews and questionnaires might be subject to misunderstanding and/or recall bias. Finally, this report focuses exclusively on pharmacologic treatment of hypertension. It does not take into account patients who might have reduced their blood pressure through lifestyle or dietary changes. Some of the participants in this study whose blood pressure levels were measured as normal might have been treated and successfully controlled with life-style modifications; thus, they would not have been classified as having hypertension.

Hypertension affects an estimated 68 million U.S. adults, yet only 70% receive treatment and fewer than half of these

Key Points

- In 2005–2008, 31% of U.S. adults had hypertension (blood pressure ≥140/90 mmHg or reported current use of blood pressure lowering medication).
- No significant decline in the national prevalence of hypertension occurred in the past decade, despite more people with hypertension being treated (70%) and controlled (46%).
- Among hypertensive persons, the groups with the lowest prevalence of blood pressure control are adults aged 18–39 years (31%), Mexican Americans (37%), those without health insurance (29%), those without a usual source of medical care (12%), and those who received medical care less than twice in the previous year (21%).
- Approximately 86% of persons with uncontrolled hypertension reported having some form of health insurance, indicating that for most patients, having insurance is not sufficient to achieve blood pressure control.
- To control hypertension in the U.S. population, a comprehensive approach is needed that involves not only improved access to health care, but also improved medical care delivery systems, patient adherence to prescribed treatment, and increased access to healthful foods and physical activity.
- Additional information is available at http://www.cdc.gov/vitalsigns.

[†] Available at https://www.cms.gov/PQRI.

conditions are controlled. Better control of blood pressure is needed, not only through improved access to and use of health care, but also through improvements in medical care delivery systems and patients' adherence to treatment, increased access to healthful foods, and physical activity. The development of targeted programs for special groups (e.g., persons who are uninsured) is warranted. Success in improving blood pressure control requires comprehensive strategies with participation from federal, state, and local governments; health-care providers; employers; nonprofit organizations; and food, restaurant, and pharmaceutical industries.

Reported by

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Vital Signs: Prevalence, Treatment, and Control of High Levels of Low-Density Lipoprotein Cholesterol — United States, 1999–2002 and 2005–2008

On February 1, this report was posted as an MMWR *Early Release on the* MMWR *website (http://www.cdc.gov/mmwr).*

ABSTRACT

Background: High levels of low-density lipoprotein cholesterol (LDL-C), a major risk factor for coronary heart disease (CHD), can be treated effectively.

Methods: CDC analyzed data from 1999–2002 and 2005–2008 to examine the prevalence, treatment, and control of high LDL-C among U.S. adults aged ≥20 years. Values were determined from blood specimens obtained from persons participating in the National Health and Nutrition Examination Survey (NHANES), a nationally representative cross-sectional, stratified, multistage probability sample survey of the U.S. civilian, noninstitutionalized population. The National Cholesterol Education Program Adult Treatment Panel-III guidelines set LDL-C goal levels of <100 mg/dL, <130 mg/dL, and <160 mg/dL for persons with high, intermediate, and low risk for developing CHD during the next 10 years, respectively. A person with high LDL-C was defined as either a person whose LDL-C levels were above the LDL-C goal levels or a person who reported currently taking cholesterol-lowering medication. Control of high LDL-C was defined as having a treated LDL-C value below the goal levels.

Results: Based on data from the 2005–2008 NHANES, an estimated 71 million (33.5%) U.S. adults aged ≥20 years had high LDL-C, but only 34 million (48.1%) were treated and 23 million (33.2%) had their LDL-C controlled. Among persons with uncontrolled LDL-C, 82.8% reported having some form of health insurance. The proportion of adults with high LDL-C who were treated increased from 28.4% to 48.1% between the 1999–2002 and 2005–2008 study periods. Among adults with high LDL-C, the prevalence of LDL-C control increased from 14.6% to 33.2% between the periods. The prevalence of LDL-C control was lowest among persons who reported receiving medical care less than twice in the previous year (11.7%), being uninsured (13.5%), being Mexican American (20.3%), or having income below the poverty level (21.9%).

Conclusions: The prevalence of control of high LDL-C in the United States, although improving, remains low, especially among low-income adults and those with limited access to health care. Strengthening the use of preventive services through improvement in health-care access and quality of care is expected to help achieve better control of high LDL-C in the United States.

Implications for Public Health Practice: To improve LDL-C control levels, a comprehensive approach that involves improved clinical care, as well as improved health-care access, sustainability, and affordability, is needed. A standardized system of patient care incorporating electronic health records, registries, and automated reminders for practitioners, focusing on achieving regular patient follow-up, has the potential to improve control of high LDL-C. Lower out-of-pocket costs and simplification of the drug regimen, as well as involvement of nurses, dietitians, health educators, pharmacists and other allied health-care professionals in direct patient care also could be used to improve patient adherence to prescribed regimens.

Introduction

Having a high level of low-density lipoprotein cholesterol (LDL-C) is a major risk factor for coronary heart disease (CHD), a major cause of death in the United States (*1*). Control of high LDL-C can reduce cardiovascular morbidity and mortality substantially (*2*), yet high LDL-C remains underdiagnosed and undertreated in the United States. Predictive modeling in one study suggested that every 10% increase in the prevalence of treatment among adults with high LDL-C could prevent approximately 8,000 deaths per year in those aged <80 years (*3*). Another study estimated that full adherence to the National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP III) primary prevention guidelines*

* Additional information is available at http://www.nhlbi.nih.gov/guidelines/cholesterol/index.htm.

among adults aged 35–85 years could prevent 20,000 myocardial infarctions and 10,000 deaths from CHD and save $2.8 billion in CHD-related health care costs per year (*4*). Previous studies demonstrated that many U.S. adults with high LDL-C are not treated adequately (*5*). To assess the current status and recent trends in the prevalence, treatment, and control of high LDL-C among U.S. adults aged ≥20 years, data from the 1999–2002 and 2005–2008 National Health and Nutrition Examination Survey (NHANES) were analyzed.

Methods

NHANES is a continuous nationally representative cross-sectional survey of the health and nutritional status of the U.S. civilian, noninstitutionalized population. The survey has a complex, multistage probability design, which is intended to represent the U.S. population.[†] NHANES data are released in 2-year cycles. All NHANES cycles include a household interview and a detailed physical examination that includes anthropometric measurements. A subsample of NHANES is selected randomly and participants are instructed to fast before the physical examination. Participants are included in the fasting subsample if they have fasted at least 8 hours before blood specimens are taken for laboratory testing. As with other subsamples in the study, the data from the fasting subsample are weighted to account for the probability of selection and nonresponse.

To estimate trends in the prevalence of high LDL-C reliably in multiple strata of the population, data were analyzed from four survey periods; data from 1999–2000 and 2001–2002 were aggregated and compared with aggregated results from 2005–2006 and 2007–2008. The overall survey response rates for adults aged ≥20 years during 1999–2002 and 2005–2008 were 78.1% and 76.4%, respectively. During 1999–2002, a total of 9,471 adults aged ≥20 years took part in the home interviews and were examined at NHANES mobile examination centers; 10,480 participated in 2005–2008. Among those participants, 4,059 (1999–2002) and 4,341 (2005–2008) provided fasting blood samples for lipid profile testing. The final analytic samples were 3,550 (1999–2002) and 3,996 (2005–2008) after further exclusions were made for pregnant women (280 and 189) and participants missing data needed for determining high LDL-C status (229 and 156).

Current guidelines by NCEP ATP III recommend LDL-C goals based on level of risk for developing coronary heart disease (CHD) in the next 10 years. The guidelines set LDL-C goal levels of <100 mg/dL, <130 mg/dL, and <160 mg/dL for high, intermediate, and low risk groups, respectively. Participants with a self-reported history of CHD, angina, myocardial infarction, stroke, and/or diabetes, or participants with a fasting blood glucose level of ≥126 mg/dL or fasting hemoglobin A1c ≥6.5 were placed in the high NCEP ATP III risk category. After participants with high risk were identified, the remaining participants were assessed according to the number of major CHD risk factors they had. These risk factors included cigarette smoking (self-reported smoking every day or some days), hypertension (an average of up to three blood pressure measurements ≥140/90 mm Hg, determined by NHANES physical examination; or self-reported current use of antihypertensive medication), high-density lipoprotein cholesterol (HDL-C) <40 mg/dL, and age (men ≥45 years and women ≥55 years). In accord with the NCEP ATP III guidelines, if a person had an HDL-C ≥60 mg/dL, one risk factor was subtracted from the person's total number of risk factors. Participants with no more than one major CHD risk factor were placed in the low NCEP ATP III risk category. For participants with two or more risk factors, a 10-year CHD risk score was calculated using the Framingham risk equation, an assessment tool used in the NCEP ATP III. Those participants with a 10-year CHD risk greater than 20% were placed in the high NCEP ATP III risk category, and those with 20% or lower risk were placed in the intermediate category. Further details on classifications of the study participants into each of the NCEP ATP III risk categories are published elsewhere (*5*).

Persons who had levels at or above the LDL-C goal for their risk group or self-reported currently taking cholesterol-lowering medication were defined as having high LDL-C. A person who reported currently taking cholesterol-lowering medication was defined to be treated for high LDL-C. A person's cholesterol level was considered to be under control if their LDL-C level was below the risk-specific goal (Figure 1). Results are described as weighted prevalence, calculated using the survey statistical weight that was designated for the subgroup with LDL-C levels measured in the morning after fasting, to account for the additional probability of selection and nonresponse, with 95% confidence limits. Population counts were calculated using the Current Population Surveys.[§]

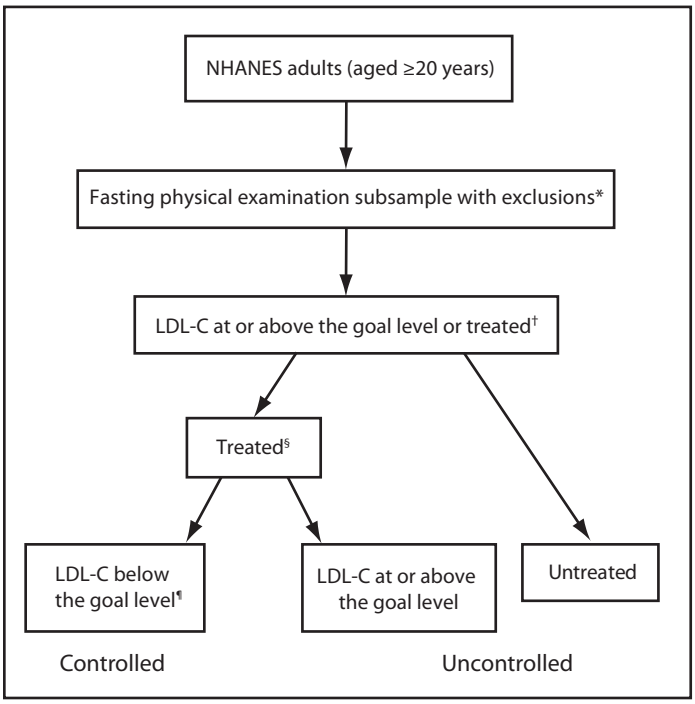
Results

Differences in prevalence, treatment, and control of high LDL-C in 2005–2008 were observed among demographic groups (Table). The prevalence of high LDL-C increased with age: 11.7%, 41.2%, and 58.2% for the age groups 20–39, 40–64, and ≥65 years, respectively. The lowest treatment prevalences occurred among persons aged 20–39 years (10.6%), those without a usual source of care (17.7%), those receiving

[†] Additional information is available at http://www.cdc.gov/nchs/nhanes.htm.

[§] Additional information is available at http://www.cdc.gov/nchs/tutorials/nhanes/faqs.htm.

FIGURE 1. Study definitions for high levels of low-density lipoprotein cholesterol (LDL-C) and treatment and control of high LDL-C — National Health and Nutrition Examination Survey (NHANES), United States, 1999–2002 and 2005–2008.



* Pregnant women and participants with missing data needed for determining high LDL-C status were excluded.
† LDL-C levels ≥100 mg/dL for high risk group, ≥130 mg/dL for intermediate risk group, or ≥160 mg/dL for low risk group; or self-reported currently taking cholesterol-lowering medication.
§ Self-reported currently taking cholesterol-lowering medication.
¶ LDL-C levels <100 mg/dL for high risk group, <130 mg/dL for intermediate risk group, or <160 mg/dL for low risk group.

medical care less than twice during the past year (17.7%), and those without health insurance (22.6%). However, in this study, 82.8% of persons with uncontrolled LDL-C reported having some form of health insurance. The highest treatment prevalences during the study period were observed among persons aged ≥65 years (64.4%), those insured under Medicare (63.4%), and those who received medical care at least four times during the previous year (61.4%). Factors associated with the highest and lowest levels of control of high LDL-C were similar to those observed for treatment.

The overall population prevalence of high LDL-C did not change significantly from 1999–2002 (34.5%) to 2005–2008 (33.5%) (Figure 2). However, treatment of high LDL-C increased significantly, from 28.4% in 1999–2002 to 48.1% in 2005–2008. In addition, the prevalence of those under control more than doubled during the study period, from 14.6% to 33.2%.

Conclusions and Comment

High LDL-C can be managed and controlled successfully with lifestyle changes, medications, or a combination of these approaches. Implementing lifestyle modifications, such as a low-fat and high-fiber diet, increased physical activity, and weight control, might decrease LDL-C levels by up to 20%–30%. Results from a meta-analysis of 14 clinical trials showed that therapy with statins, the most common type of drug prescribed to lower cholesterol, can safely reduce the 5-year incidence of major coronary events, coronary revascularization, and stroke by about 20% for each mmol/L (about 39 mg/dL) reduction in LDL-C (*6*). Although this study documented that striking improvements in the prevalence of treatment and control of high LDL-C have occurred, an estimated 71 million (33.5%) U.S. adults aged ≥20 years have high LDL-C, and only one third of conditions are controlled.

These results demonstrate that the lowest prevalence of control of high LDL-C existed among participants who did not have health insurance and those who had received medical care less than twice in the previous year. In addition, the especially low prevalence of control among Mexican Americans warrants specific attention. This study and others illustrate that gaps in cholesterol control often are related to gaps in availability of, access to, or continuity of health care (*7–9*). The Affordable Care Act (ACA) is intended to reduce some of these gaps (*10*) by increasing insurance coverage among the nonelderly population from 82.5% in the first quarter of 2010 to 94% by 2019 and by providing coverage for cholesterol screening with no cost-sharing (*11*).

Access to care alone will not solve problems with cholesterol control completely. In this study, approximately 83% of persons with uncontrolled LDL-C reported having some form of health insurance. However, even among participants with private health insurance coverage, prevalence of control of high LDL-C was <35% in this study. These results are not surprising; up to half of patients discontinue lipid-lowering medication within 1 year of treatment initiation, and adherence rates generally decrease over time (*12*). Lower out-of-pocket costs (*13*) and simplification of the drug regimen (*14*) generally are associated with better adherence.

In addition to access to care and patient adherence, quality of care must be addressed. The continued development and widespread use of electronic health records will facilitate efforts to better control cholesterol; such efforts include patient registries, panel management (an innovative approach that incorporates provider and patient reminders for proactive follow-up appointments and additional treatment), and use of these systems in real-time to direct patient care. Another promising system improvement includes team-led care, which

TABLE. Prevalence of high levels of low-density lipoprotein cholesterol (LDL-C)* and treatment† and control§ of high levels of LDL-C by selected characteristics, adults¶ aged ≥20 years — National Health and Nutrition Examination Survey, United States, 2005–2008**

Characteristic	High LDL-C (n = 3,996)		Treatment (n = 1,482)		Control (n = 1,486)	
	%††	(95% CI)	%	(95% CI)	%	(95% CI)
Total	33.5	(30.9–36.2)	48.1	(44.3–52.0)	33.2	(29.7–36.9)
Sex						
Male	36.2	(32.7–39.8)	45.6	(41.2–50.1)	31.1	(27.2–35.4)
Female	31.0	(27.8–34.4)	50.8	(44.9–56.8)	35.5	(30.1–41.3)
Age group (yrs)						
20–39	11.7	(9.6–14.4)	10.6	(6.0–17.9)	—§§§	
40–64	41.2	(37.6–45.0)	47.7	(42.2–53.2)	33.8	(28.6–39.4)
≥65	58.2	(54.7–61.6)	64.4	(61.0–67.8)	44.7	(39.5–50.1)
Race/Ethnicity						
White, non-Hispanic	34.5	(31.3–37.8)	50.3	(46.0–54.5)	35.4	(31.9–39.0)
Black, non-Hispanic	30.4	(26.5–34.6)	44.5	(37.3–51.8)	26.2	(19.8–33.7)
Mexican-American	27.7	(24.2–31.6)	34.1	(27.9–40.8)	20.3	(15.5–26.2)
Poverty status (%)§§						
<100	35.6	(30.8–40.8)	41.0	(32.7–49.9)	21.9	(17.0–27.7)
100–199	36.1	(32.6–39.9)	48.1	(41.4–54.9)	26.4	(21.8–31.6)
200–399	32.8	(29.1–36.8)	49.9	(43.8–56.0)	35.2	(29.2–41.7)
400–499	29.8	(23.9–36.5)	42.2	(29.5–56.0)	29.2	(17.6–44.3)
≥500	32.8	(28.1–37.8)	49.3	(41.1–57.5)	39.8	(31.8–48.3)
Education (aged ≥25 yrs)						
Less than high school	41.0	(36.7–45.4)	46.4	(40.7–52.3)	27.8	(22.4–34.0)
High school	42.3	(38.2–46.5)	51.5	(45.6–57.2)	35.8	(30.8–41.2)
Some college	35.7	(32.2–39.4)	47.2	(39.4–55.3)	31.8	(24.7–39.8)
College graduate	28.7	(24.0–34.0)	48.6	(39.7–57.5)	38.5	(30.2–47.4)
Usual source of care¶¶						
Yes	35.7	(33.0–38.5)	50.7	(46.8–54.6)	35.7	(31.8–39.7)
No	20.0	(15.9–24.9)	17.7	(10.9–27.4)	—§§§	
Times received health-care during last 12 months* **						
0–1	21.7	(19.0–24.7)	17.7	(13.3–23.0)	11.7	(8.0–16.7)
2–3	34.3	(29.9–39.0)	48.4	(42.6–54.2)	34.6	(29.6–40.0)
≥4	43.9	(40.7–47.1)	61.4	(56.4–66.2)	42.6	(37.1–48.3)
Insurance status†††						
Medicare	58.9	(55.2–62.6)	63.4	(59.3–67.3)	41.8	(36.7–47.2)
Private	27.8	(25.0–30.8)	45.2	(38.3–52.3)	33.5	(27.9–39.6)
Public	38.6	(30.9–46.8)	47.5	(37.4–57.8)	30.6	(21.1–42.1)
Uninsured	25.0	(21.0–29.6)	22.6	(17.4–28.8)	13.5	(8.4–21.0)

Abbreviation: CI = confidence interval.

* LDL-C levels were examined; n = unweighted sample size using National Cholesterol Education Program's Adult Treatment Panel III risk categories based on the risk for developing coronary heart disease in the next 10 years. High LDL-C was defined as ≥100 mg/dL for the high risk group, ≥130 mg/dL for the intermediate risk group, and ≥160 mg/dL for the low risk group or a person currently taking cholesterol-lowering medication. Additional information available at http://www.nhlbi.nih.gov/guidelines/cholesterol/index.htm.

† Participants were asked "Are you now following this advice to take prescribed medicine?" if they responded "yes" to the following questions: "Have you ever had your blood cholesterol checked? Have you ever been told by a doctor or other health professional that your blood cholesterol level was high? To lower your blood cholesterol have you ever been told by a doctor or other health professional to take prescribed medicine?" Treatment was examined only among those with high LDL-C.

§ Defined as having a treated LDL-C value below the goal levels (<100 mg/dL for the high risk group, <130 mg/dL for the intermediate risk group, and <160 mg/dL for the low risk group). Control was examined only among those with high LDL-C.

¶ Pregnant women were excluded from analyses.

** 2005–2008 data are from the 2005–2006 and 2007–2008 survey cycles.

†† Weighted estimates, calculated using the morning fasting sample weight.

§§ Family income relative to family size and age of the members adjusted for inflation by using the poverty thresholds developed by the U.S. Bureau of the Census.

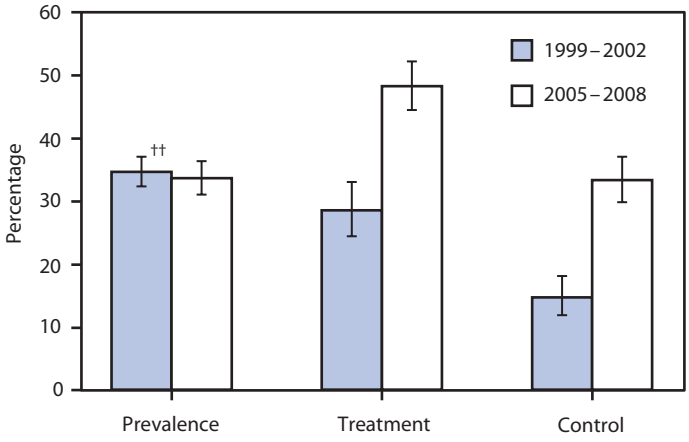
¶¶ Participants were asked "Is there a place that you usually go when you are sick or need advice about your health?" Yes responses include those who answered "yes" or "there is more than one place."

*** Participants were asked "During the last 12 months how many times have you seen a doctor or other health professional about your health at a doctor's office, a clinic, hospital emergency room, at home or some other place? Do not include times you were hospitalized overnight."

††† Medicare includes all participants who had Medicare coverage. Private does not include those participants with Medicare coverage. As a result of the survey design in the 1999–2000 and 2001–2002 survey cycles, public insurance includes participants who only reported Indian Health Service. Uninsured includes participants with single service plan only.

§§§ Estimate is not reportable because the relative standard error is >30%.

FIGURE 2. Prevalence of high levels of low-density lipoprotein cholesterol (LDL-C)* and treatment† and control§ of high levels of LDL-C in adults¶ aged ≥20 years — National Health and Nutrition Examination Survey, United States, 1999–2002 and 2005–2008**



* LDL-C levels were examined using National Cholesterol Education Program's Adult Treatment Panel III risk categories based on the risk for developing coronary heart disease in the next 10 years. High LDL-C was defined as ≥100 mg/dL for the high risk group, ≥130 mg/dL for the intermediate risk group, and ≥160 mg/dL for the low risk group or a person currently taking cholesterol-lowering medication. Additional information available at http://www.nhlbi.nih.gov/guidelines/cholesterol/index.htm.

† Participants were asked "Are you now following this advice to take prescribed medicine?" if they responded "yes" to the following questions: "Have you ever had your blood cholesterol checked? Have you ever been told by a doctor or other health professional that your blood cholesterol level was high? To lower your blood cholesterol have you ever been told by a doctor or other health professional to take prescribed medicine?" Treatment was examined only among those with high LDL-C.

§ Defined as having a treated LDL-C value below the goal levels (<100 mg/dL for the high risk group, <130 mg/dL for the intermediate risk group, and <160 mg/dL for the low risk group). Control was examined only among those with high LDL-C.

¶ Pregnant women were excluded from analyses.

** Data for 1999–2002 are from the 1999–2000 and 2001–2002 survey cycles; 2005–2008 from the 2005–2006 and 2007–2008 survey cycles.

†† Weighted estimates, calculated using the morning fasting sampling weight, and error bars representing 95% confidence intervals. Treatment and control estimates are significantly different (p<0.01).

can improve preventive and chronic care delivery (*15*). Several programmatic initiatives promoted by ACA will contribute to health-care access and quality (*15*). Those include comprehensive, family-centered, coordinated primary care (patient-centered medical homes), health care provided by types of managed-care organizations that are accountable to patients and third-party payers for the overall care of beneficiaries (accountable care organizations), and health care targeted to underserved communities and vulnerable populations (the federally qualified health center program) (*15*).

The findings in this report are subject to at least four limitations. First, the prevalence of high LDL-C levels in the U.S. population might be underestimated because older persons residing in nursing homes and other institutions, who have a higher prevalence of age-related high LDL-C, are not included in the NHANES. Second, although data collection is

Key Points

- Control of high levels of low-density lipoprotein cholesterol (LDL-C), a major risk factor for coronary heart disease that is asymptomatic, can reduce cardiovascular morbidity and mortality substantially.
- An estimated 71 million U.S. adults aged ≥20 years, or 34% of the adult population, had high LDL-C during 2005–2008 (LDL-C levels above the recommended goal levels or reported current use of cholesterol-lowering medication).
- The proportion of those treated for high LDL-C increased from 28% during 1999–2002 to 48% (34 million adults) during 2005–2008. The proportion of those who achieved control more than doubled, to 33%, or 23 million adults.
- The prevalence of LDL-C control was lowest (<15%) among adults with limited access to health care. However, about 83% of persons with uncontrolled LDL-C reported having some form of health insurance.
- Better control of high LDL-C cannot be achieved only with increased access to health care. Key elements for control also include improved clinical care and better patient adherence to treatment.
- Additional information is available at http://www.cdc.gov/vitalsigns.

standardized, the NHANES self-reported data from interviews and questionnaires might be subject to misunderstanding and/or recall bias. Third, the reported prevalence of high LDL-C treatment and control in this report might be underestimated for the following reasons. The Framingham risk score only assesses adults up to age 79 years, but the NHANES sample contained participants aged >79 years. Participants who were aged >79 years were assigned the same level of risk as those aged 70–79 years. Although family history of premature CHD is a risk factor, it could not be included in the assessment because it was not reported consistently through all study cycles. Finally, lifestyle modification factors were not examined in this report. Some of the participants in this study whose LDL-C levels were measured as normal might have been treated and successfully controlled with life-style modification measures; thus, they would not have been classified as having high LDL-C.

The prevalence of control of high LDL-C in the United States remains below 35% and is especially low (below 15%) among adults with limited access to health care. Although the development of targeted programs for low-income adults and

those with limited access to health care is warranted, better control of high LDL-C cannot be achieved only with increased access to health care. Key elements for control also include improved clinical care and better patient adherence to treatment. The development of targeted programs for special groups (e.g., persons who are uninsured or whose income is below the poverty level) is warranted. Given the multicomponent nature of high LDL-C control, implementation of comprehensive strategies by federal, state, and local governments; health-care providers; employers; nonprofit organizations; and food, restaurant, and pharmaceutical industries is needed.

Reported by

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Announcement

Congenital Heart Defect Awareness Week — February 7–14, 2011

Congenital heart defects affect nearly 1% of newborns in the United States and are a leading cause of infant mortality (*1,2*). Congenital Heart Defect Awareness Week, held February 7–14 this year, is an annual observance to promote awareness and education about these defects. A total of 31 states have birth defects surveillance programs, all of which include efforts to identify the characteristics of children with congenital heart defects, identify health disparities in their occurrence and survival rates, and help ensure that affected children receive the necessary medical care and services (*3*).

CDC's National Birth Defects Prevention Study has reported finding increased risk for congenital heart defects associated with maternal obesity (*4*), diabetes (*5*), and smoking (*6*). Health-care providers should encourage their patients who are thinking about becoming pregnant to maintain a healthy weight, control diagnosed diabetes, and quit smoking. Additional information regarding congenital heart defects is available at http://www.cdc.gov/features/heartdefects.

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Errata

Vol. 59, No. 46

In "Mortality Among Patients with Tuberculosis and Associations with HIV Status — United States, 1993–2008," the term "highly active ART (antiretroviral therapy)" used in the text on pages 1511 and 1512 and in the Figure 2 legend on page 1511, should read "**effective antiretroviral therapy,**" which is defined as combination therapy demonstrated to lower the short-term risk for death.

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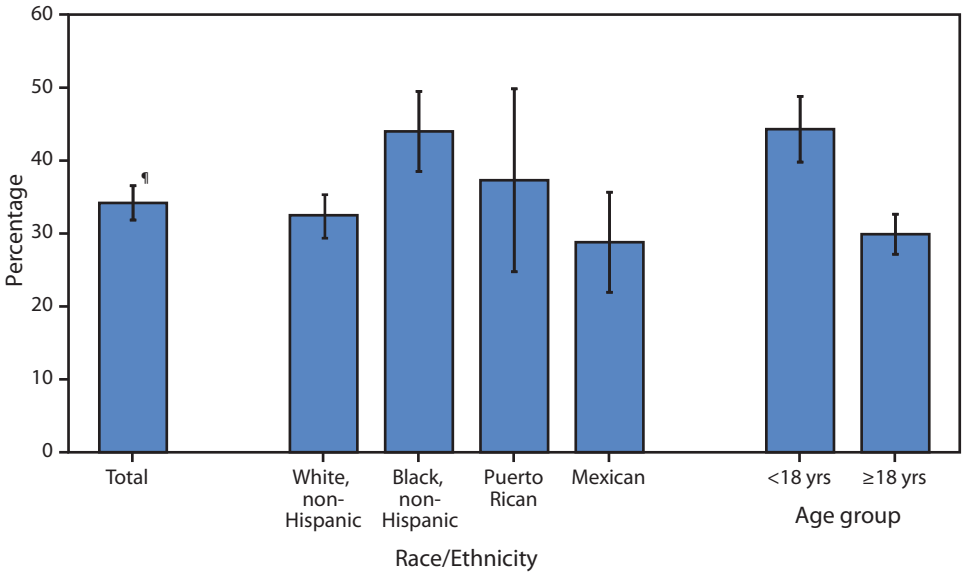
In "Health of Resettled Iraqi Refugees — San Diego County, California, October 2007–September 2009," on page 1615, in the Figure legend, the last label should read "**≤499**."

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Persons with Current Asthma* Who Reported Receiving an Asthma Management Plan† from a Health Professional, by Race/Ethnicity and Age Group — National Health Interview Survey, United States, 2008§



* Based on asking respondents whether they had ever been told by a health professional that they had asthma, and if so, whether they still had asthma. Adult respondents self reported, and a responsible adult reported for children aged <18 years.

† Based on asking respondents whether a health professional had ever given them an asthma action plan (i.e., a printed form with specific instructions on when to change the amount or type of medication taken, when to call a doctor for advice, and when to go to the emergency department). Provision of written asthma plans to patients with asthma is recommended by the *Guidelines for the Diagnosis and Management of Asthma* (available at http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm).

§ Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. Denominators for each category exclude persons for whom data were missing.

¶ 95% confidence interval.

Among persons with current asthma, 34.2% reported receiving an asthma management plan, which is below the *Healthy People 2010* target of 40%. Non-Hispanic black persons were significantly more likely to receive a plan (44.0%) than non-Hispanic white (32.5%) or Mexican (28.8%) persons with asthma. Children aged <18 years (44.3%) were more likely to have a plan than adults (29.9%).

Sources: National Health Interview Survey 2008 data. Available at http://www.cdc.gov/nchs/nhis.htm.

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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 January 29, 2011 (4th week)*

Disease	Current week	Cum 2011	5-year weekly average†	Total cases reported for previous years 2010	2009	2008	2007	2006	States reporting cases during current week (No.)
Anthrax	—	—	—	—	1	—	1	1	
Arboviral diseases§,¶:									
California serogroup virus disease	—	—	0	72	55	62	55	67	
Eastern equine encephalitis virus disease	—	—	—	10	4	4	4	8	
Powassan virus disease	—	—	—	6	6	2	7	1	
St. Louis encephalitis virus disease	—	—	0	8	12	13	9	10	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
Babesiosis	—	—	—	NN	NN	NN	NN	NN	
Botulism, total	1	2	2	108	118	145	144	165	
foodborne	—	—	0	7	10	17	32	20	
infant	—	1	1	76	83	109	85	97	
other (wound and unspecified)	1	1	0	25	25	19	27	48	CA (1)
Brucellosis	—	3	1	126	115	80	131	121	
Chancroid	—	2	1	36	28	25	23	33	
Cholera	—	3	0	12	10	5	7	9	
Cyclosporiasis§	1	3	2	171	141	139	93	137	FL (1)
Diphtheria	—	—	—	—	—	—	—	—	
Haemophilus influenzae,** invasive disease (age <5 yrs):									
serotype b	—	—	1	17	35	30	22	29	
nonserotype b	—	2	5	154	236	244	199	175	
unknown serotype	2	17	4	266	178	163	180	179	MO (1), CO (1)
Hansen disease§	—	2	2	64	103	80	101	66	
Hantavirus pulmonary syndrome§	—	—	0	17	20	18	32	40	
Hemolytic uremic syndrome, postdiarrheal§	1	5	1	225	242	330	292	288	NY (1)
Influenza-associated pediatric mortality§,††	6	15	3	61	358	90	77	43	NJ (2), GA (1), LA (1), TX (1), AZ (1)
Listeriosis	3	19	10	770	851	759	808	884	OH (1), FL (1), CA (1)
Measles§§	2	3	0	60	71	140	43	55	FL (1), CA (1)
Meningococcal disease, invasive¶¶:									
A, C, Y, and W-135	—	6	5	243	301	330	325	318	
serogroup B	2	3	3	110	174	188	167	193	NC (1), WA (1)
other serogroup	—	—	1	9	23	38	35	32	
unknown serogroup	3	27	12	418	482	616	550	651	NC (1), FL (1), CA (1)
Novel influenza A virus infections***	—	1	—	4	43,774	2	4	NN	
Plague	—	—	0	2	8	3	7	17	
Poliomyelitis, paralytic	—	—	—	—	1	—	—	—	
Polio virus Infection, nonparalytic§	—	—	—	—	—	—	—	NN	
Psittacosis§	—	—	0	4	9	8	12	21	
Q fever, total§	2	5	2	121	113	120	171	169	
acute	1	4	1	92	93	106	—	—	MI (1)
chronic	1	1	0	29	20	14	—	—	CO (1)
Rabies, human	—	—	—	1	4	2	1	3	
Rubella†††	—	—	0	6	3	16	12	11	
Rubella, congenital syndrome	—	—	0	—	2	—	—	1	
SARS-CoV§	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	8	3	163	161	157	132	125	OH (1)
Syphilis, congenital (age <1 yr)§§§	—	4	8	239	423	431	430	349	
Tetanus	—	—	0	9	18	19	28	41	
Toxic-shock syndrome (staphylococcal)§	1	4	1	76	74	71	92	101	TN (1)
Trichinellosis	—	2	0	4	13	39	5	15	
Tularemia	—	—	0	110	93	123	137	95	
Typhoid fever	4	7	7	419	397	449	434	353	PA (1), GA (1), CA (2)
Vancomycin-intermediate *Staphylococcus aureus*§	2	4	1	91	78	63	37	6	OH (2)
Vancomycin-resistant *Staphylococcus aureus*§	—	—	—	1	1	—	2	1	
Vibriosis (noncholera *Vibrio* species infections)§	2	7	2	775	789	588	549	NN	GA (1), FL (1)
Viral hemorrhagic fever¶¶¶	—	—	0	1	NN	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 January 29, 2011 (4th week)*

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

* Case counts for reporting years 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/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/ncphi/disss/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/ncphi/disss/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 3, 2010, 19 influenza-associated pediatric deaths occurred during the 2010-11 influenza season. Since August 30, 2009, a total of 282 influenza-associated pediatric deaths occurring during the 2009-10 influenza season have been reported.

§§ Of the two measles cases reported for the current week, one was indigenous and one was imported.

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

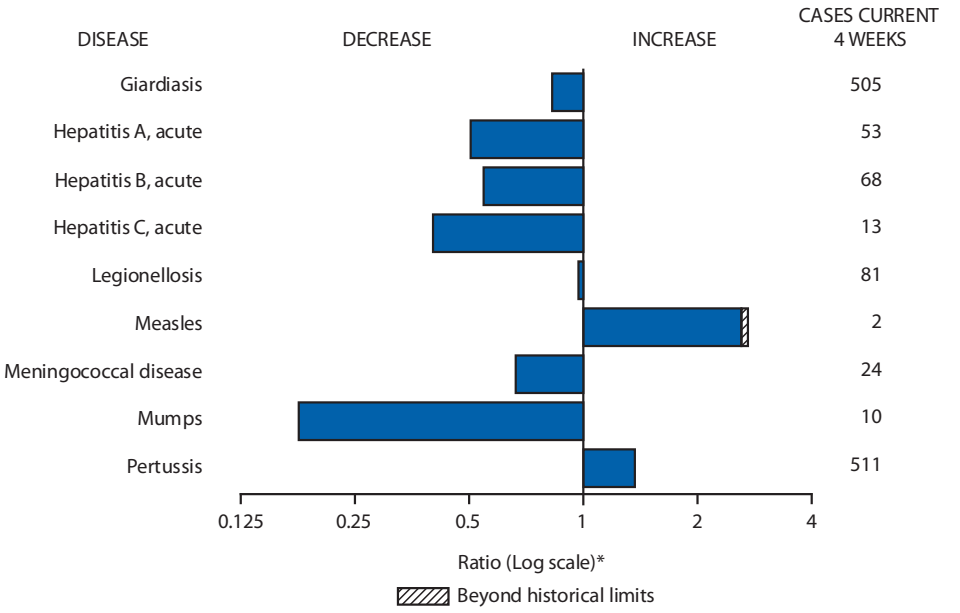
*** CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. During 2009, four cases of human infection with novel influenza A viruses, different from the 2009 pandemic influenza A (H1N1) strain, were reported to CDC. The four cases of novel influenza A virus infection reported to CDC during 2010 and the one case reported in 2011 were identified as swine influenza A (H3N2) virus and are unrelated to the 2009 pandemic influenza A (H1N1) virus. Total case counts for 2009 were 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 was one case of viral hemorrhagic fever reported during week 12 of 2010. The one case report was confirmed as lassa fever. See Table II for dengue hemorrhagic fever.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals January 29, 2011, 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 January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	*Chlamydia trachomatis* infection					Coccidioidomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	11,722	23,975	26,343	63,839	92,842	91	0	369	936	NN	46	119	351	228	436
New England	560	782	1,213	2,190	2,373	—	0	0	—	NN	1	7	19	5	100
Connecticut	—	177	402	—	284	N	0	0	N	NN	—	0	2	2	71
Maine†	—	50	100	—	199	N	0	0	N	NN	1	1	7	3	7
Massachusetts	360	402	694	1,639	1,398	N	0	0	N	NN	—	3	9	—	12
New Hampshire	72	50	113	221	169	—	0	0	—	NN	—	1	5	—	4
Rhode Island†	108	65	121	225	232	—	0	0	—	NN	—	0	2	—	1
Vermont†	20	23	51	105	91	N	0	0	N	NN	—	1	5	—	5
Mid. Atlantic	1,876	3,355	5,068	7,092	12,350	—	0	0	—	NN	5	15	38	25	42
New Jersey	609	506	680	1,770	1,914	N	0	0	N	NN	—	0	4	—	2
New York (Upstate)	700	696	1,581	2,063	1,745	N	0	0	N	NN	2	4	13	6	4
New York City	—	1,221	2,768	—	5,147	N	0	0	N	NN	—	2	6	—	3
Pennsylvania	567	946	1,137	3,259	3,544	N	0	0	N	NN	3	8	26	19	33
E.N. Central	1,002	3,531	3,999	8,739	14,687	3	0	0	3	NN	16	29	127	69	111
Illinois	45	796	1,045	1,231	3,956	N	0	0	N	NN	—	4	21	3	21
Indiana	—	414	798	703	1,000	N	0	0	N	NN	—	3	10	4	13
Michigan	656	946	1,419	3,611	3,889	—	0	0	—	NN	6	5	18	16	23
Ohio	160	980	1,109	1,972	4,092	3	0	0	3	NN	10	8	24	40	23
Wisconsin	141	427	516	1,222	1,750	N	0	0	N	NN	—	10	62	6	31
W.N. Central	204	1,377	1,556	2,745	5,704	—	0	0	—	NN	3	21	83	26	28
Iowa	18	202	237	574	885	N	0	0	N	NN	—	4	24	3	9
Kansas	—	189	235	313	765	N	0	0	N	NN	—	2	9	1	6
Minnesota	—	283	349	338	1,279	—	0	0	—	NN	—	0	16	—	—
Missouri	114	505	619	1,062	1,918	—	0	0	—	NN	1	4	30	7	6
Nebraska†	44	93	184	218	460	N	0	0	N	NN	2	3	26	12	4
North Dakota	—	28	79	—	127	N	0	0	N	NN	—	0	9	—	—
South Dakota	28	61	86	240	270	N	0	0	N	NN	—	1	6	3	3
S. Atlantic	3,264	4,770	5,642	16,637	18,479	—	0	0	—	NN	7	19	51	48	48
Delaware	65	84	220	262	331	—	0	0	—	NN	—	0	1	1	1
District of Columbia	46	94	177	265	384	—	0	0	—	NN	—	0	1	—	1
Florida	662	1,459	1,708	4,443	5,384	N	0	0	N	NN	2	7	19	26	20
Georgia	482	654	1,220	2,247	1,901	N	0	0	N	NN	4	5	31	12	16
Maryland†	—	469	804	735	1,233	—	0	0	—	NN	1	1	3	3	1
North Carolina	466	756	1,436	3,323	4,523	N	0	0	N	NN	—	0	12	—	3
South Carolina†	743	525	847	1,892	1,936	N	0	0	N	NN	—	2	8	4	2
Virginia†	706	603	882	3,087	2,514	N	0	0	N	NN	—	2	8	2	3
West Virginia	94	75	123	383	273	N	0	0	N	NN	—	0	3	—	1
E.S. Central	1,195	1,751	2,415	4,585	5,918	—	0	0	—	NN	—	4	19	7	13
Alabama†	513	533	794	1,854	1,700	N	0	0	N	NN	—	3	13	3	1
Kentucky	268	264	614	421	736	N	0	0	N	NN	—	2	6	3	5
Mississippi	414	370	780	1,229	1,432	N	0	0	N	NN	—	0	2	—	3
Tennessee†	—	572	797	1,081	2,050	N	0	0	N	NN	—	1	5	1	4
W.S. Central	764	3,003	4,310	8,159	14,412	—	0	0	—	NN	1	7	29	6	5
Arkansas†	381	273	391	1,177	1,038	N	0	0	N	NN	—	0	3	—	1
Louisiana	324	314	824	1,776	2,585	—	0	0	—	NN	—	1	6	—	—
Oklahoma	59	251	1,374	606	1,821	N	0	0	N	NN	—	1	8	—	1
Texas†	—	2,294	3,183	4,600	8,968	N	0	0	N	NN	1	4	22	6	3
Mountain	989	1,436	1,915	3,624	5,134	49	0	314	727	NN	6	10	30	21	45
Arizona	434	502	706	1,056	1,501	48	0	311	719	NN	1	1	3	3	2
Colorado	184	331	560	744	1,472	N	0	0	N	NN	4	2	6	10	12
Idaho†	—	68	200	—	208	N	0	0	N	NN	1	2	7	4	8
Montana†	43	62	82	226	205	N	0	0	N	NN	—	1	4	—	5
Nevada†	179	175	329	715	771	—	0	3	7	NN	—	0	7	—	1
New Mexico†	96	162	274	544	245	—	0	0	—	NN	—	2	12	4	9
Utah	53	118	153	339	540	—	0	0	—	NN	—	1	5	—	5
Wyoming†	—	40	90	—	192	1	0	0	1	NN	—	0	2	—	3
Pacific	1,868	3,694	4,580	10,068	13,785	39	0	82	206	NN	7	12	29	21	44
Alaska	—	111	148	316	497	N	0	0	N	NN	—	0	1	—	2
California	1,421	2,800	3,570	7,838	10,365	39	0	82	206	NN	5	6	18	11	26
Hawaii	—	111	158	—	484	N	0	0	N	NN	—	0	0	—	1
Oregon	142	213	496	700	801	N	0	0	N	NN	1	3	13	9	11
Washington	305	407	505	1,214	1,638	N	0	0	N	NN	1	1	6	1	4
Territories															
American Samoa	—	0	0	—	—	N	0	0	N	NN	N	0	0	N	NN
C.N.M.I.	—	—	—	—	—	—	—	—	—	NN	—	—	—	—	—
Guam	—	8	31	—	1	—	0	0	—	NN	—	0	0	—	—
Puerto Rico	—	95	265	392	357	N	0	0	N	NN	N	0	0	N	NN
U.S. Virgin Islands	—	12	29	—	36	—	0	0	—	NN	—	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 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Dengue Virus Infection									
	Dengue Fever†					Dengue Hemorrhagic Fever§				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max		
United States	—	6	37	—	28	—	0	2	—	—
New England	—	0	3	—	1	—	0	0	—	—
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine¶	—	0	2	—	1	—	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	12	—	12	—	0	1	—	—
New Jersey	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	0	0	—	—	—	0	0	—	—
New York City	—	1	12	—	9	—	0	1	—	—
Pennsylvania	—	0	3	—	3	—	0	0	—	—
E.N. Central	—	1	7	—	5	—	0	1	—	—
Illinois	—	0	2	—	1	—	0	0	—	—
Indiana	—	0	2	—	—	—	0	0	—	—
Michigan	—	0	2	—	—	—	0	0	—	—
Ohio	—	0	2	—	4	—	0	0	—	—
Wisconsin	—	0	2	—	—	—	0	1	—	—
W.N. Central	—	0	6	—	—	—	0	1	—	—
Iowa	—	0	1	—	—	—	0	0	—	—
Kansas	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	2	—	—	—	0	0	—	—
Missouri	—	0	0	—	—	—	0	0	—	—
Nebraska¶	—	0	6	—	—	—	0	0	—	—
North Dakota	—	0	1	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	1	—	—
S. Atlantic	—	2	17	—	6	—	0	1	—	—
Delaware	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—
Florida	—	2	14	—	5	—	0	1	—	—
Georgia	—	0	2	—	1	—	0	0	—	—
Maryland¶	—	0	0	—	—	—	0	0	—	—
North Carolina	—	0	1	—	—	—	0	0	—	—
South Carolina¶	—	0	3	—	—	—	0	0	—	—
Virginia¶	—	0	3	—	—	—	0	0	—	—
West Virginia	—	0	1	—	—	—	0	0	—	—
E.S. Central	—	0	2	—	—	—	0	0	—	—
Alabama¶	—	0	2	—	—	—	0	0	—	—
Kentucky	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	0	—	—	—	0	0	—	—
Tennessee¶	—	0	1	—	—	—	0	0	—	—
W.S. Central	—	0	1	—	—	—	0	1	—	—
Arkansas¶	—	0	0	—	—	—	0	1	—	—
Louisiana	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	1	—	—	—	0	0	—	—
Texas¶	—	0	1	—	—	—	0	0	—	—
Mountain	—	0	2	—	1	—	0	0	—	—
Arizona	—	0	1	—	—	—	0	0	—	—
Colorado	—	0	0	—	—	—	0	0	—	—
Idaho¶	—	0	1	—	—	—	0	0	—	—
Montana¶	—	0	1	—	—	—	0	0	—	—
Nevada¶	—	0	1	—	1	—	0	0	—	—
New Mexico¶	—	0	1	—	—	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—
Wyoming¶	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	6	—	3	—	0	0	—	—
Alaska	—	0	1	—	—	—	0	0	—	—
California	—	0	5	—	1	—	0	0	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—
Washington	—	0	2	—	2	—	0	0	—	—
Territories										
American Samoa	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	109	525	—	341	—	1	14	—	8
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/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.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Ehrlichiosis/Anaplasmosis†														
	Ehrlichia chaffeensis					*Anaplasma phagocytophilum*					Undetermined				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	2	8	47	4	8	1	11	56	3	7	—	1	10	1	—
New England	—	0	1	—	1	—	1	8	1	4	—	0	2	—	—
Connecticut	—	0	0	—	—	—	0	5	—	—	—	0	2	—	—
Maine§	—	0	1	—	1	—	0	2	1	2	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	1	—	—	—	0	3	—	—	—	0	1	—	—
Rhode Island§	—	0	0	—	—	—	0	5	—	2	—	0	0	—	—
Vermont§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	1	5	—	—	—	4	12	1	—	—	0	1	—	—
New Jersey	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
New York (Upstate)	—	0	5	—	—	—	4	12	1	—	—	0	1	—	—
New York City	—	0	3	—	—	—	0	1	—	—	—	0	0	—	—
Pennsylvania	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
E.N. Central	1	0	4	1	—	—	4	39	—	1	—	1	7	1	—
Illinois	—	0	2	—	—	—	0	2	—	—	—	0	2	—	—
Indiana	—	0	0	—	—	—	0	0	—	—	—	0	3	1	—
Michigan	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
Ohio	1	0	3	1	—	—	0	1	—	—	—	0	0	—	—
Wisconsin	—	0	1	—	—	—	4	39	—	1	—	0	4	—	—
W.N. Central	—	1	13	—	—	—	0	3	—	—	—	0	3	—	—
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Minnesota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Missouri	—	1	13	—	—	—	0	3	—	—	—	0	3	—	—
Nebraska§	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	1	4	19	3	7	1	1	7	1	2	—	0	2	—	—
Delaware	—	0	3	—	1	—	0	1	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Florida	—	0	2	1	1	—	0	1	—	—	—	0	0	—	—
Georgia	—	0	4	1	1	—	0	1	—	1	—	0	1	—	—
Maryland§	—	0	3	—	3	—	0	2	—	1	—	0	2	—	—
North Carolina	1	1	13	1	1	1	0	4	1	—	—	0	0	—	—
South Carolina§	—	0	2	—	—	—	0	1	—	—	—	0	0	—	—
Virginia§	—	1	8	—	—	—	0	2	—	—	—	0	1	—	—
West Virginia	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	1	10	—	—	—	0	2	—	—	—	0	1	—	—
Alabama§	—	0	3	—	—	—	0	2	—	—	—	0	0	—	—
Kentucky	—	0	2	—	—	—	0	0	—	—	—	0	0	—	—
Mississippi	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
Tennessee§	—	0	6	—	—	—	0	2	—	—	—	0	1	—	—
W.S. Central	—	0	5	—	—	—	0	2	—	—	—	0	1	—	—
Arkansas§	—	0	5	—	—	—	0	2	—	—	—	0	0	—	—
Louisiana	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	5	—	—	—	0	1	—	—	—	0	0	—	—
Texas§	—	0	1	—	—	—	0	1	—	—	—	0	1	—	—
Mountain	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Arizona	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Colorado	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Nevada§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Wyoming§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
California	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	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.
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† Cumulative total *E. ewingii* cases reported for year 2010 = 10 and 0 case reports for 2011.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive† All ages, all serotypes				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	140	337	498	657	1,191	2,775	5,602	6,413	15,822	22,807	35	57	77	199	282
New England	2	32	54	10	114	38	100	196	185	312	—	3	9	5	18
Connecticut	—	5	13	—	26	—	39	169	—	95	—	0	6	—	—
Maine§	2	4	12	5	13	—	3	11	—	26	—	0	2	3	1
Massachusetts	—	13	25	—	53	35	48	80	173	149	—	2	5	—	12
New Hampshire	—	2	8	2	10	2	3	7	7	15	—	0	2	1	4
Rhode Island§	—	1	7	—	2	1	4	15	3	23	—	0	2	—	1
Vermont§	—	3	10	3	10	—	0	17	2	4	—	0	3	1	—
Mid. Atlantic	29	61	106	139	219	389	690	1,167	1,695	2,639	6	11	22	41	61
New Jersey	—	5	18	—	34	146	109	174	533	456	—	2	5	4	5
New York (Upstate)	14	22	54	39	56	108	108	204	316	282	5	3	13	8	13
New York City	7	17	33	52	65	—	232	532	—	1,037	—	2	6	4	11
Pennsylvania	8	14	27	48	64	135	256	366	846	864	1	4	11	25	32
E.N. Central	13	54	86	95	216	275	959	1,199	2,399	4,246	2	10	20	28	48
Illinois	—	11	28	—	44	17	197	250	312	980	—	3	7	2	13
Indiana	—	5	13	1	29	—	100	222	189	323	—	2	6	1	6
Michigan	2	13	25	25	48	190	255	471	1,101	1,220	—	1	3	5	—
Ohio	11	17	29	55	60	39	311	381	539	1,340	2	2	6	17	15
Wisconsin	—	9	33	14	35	29	93	156	258	383	—	1	5	3	14
W.N. Central	18	24	101	61	92	53	287	353	613	1,116	4	3	14	8	10
Iowa	4	5	11	14	24	2	33	57	98	133	—	0	1	—	—
Kansas	6	3	10	11	22	—	40	62	60	153	—	0	2	—	2
Minnesota	—	0	75	—	—	—	37	62	42	188	—	0	9	—	—
Missouri	5	8	26	20	27	40	141	181	319	497	1	2	4	3	7
Nebraska§	3	4	9	13	13	10	22	50	68	102	3	0	3	5	1
North Dakota	—	0	5	—	—	—	1	8	—	8	—	0	2	—	—
South Dakota	—	1	7	3	6	1	7	20	26	35	—	0	0	—	—
S. Atlantic	34	74	107	153	222	836	1,346	1,797	4,587	5,720	12	14	26	56	62
Delaware	1	0	5	1	2	17	19	48	65	64	—	0	1	—	—
District of Columbia	—	1	5	—	2	11	36	66	94	152	—	0	1	—	—
Florida	21	41	75	108	122	170	388	488	1,233	1,568	6	4	9	26	12
Georgia	6	13	51	18	27	135	218	392	700	633	2	3	7	13	24
Maryland§	5	5	11	13	22	—	133	217	221	352	3	1	5	5	3
North Carolina	N	0	0	N	N	153	242	596	1,128	1,595	1	2	9	2	7
South Carolina§	—	2	9	3	9	218	152	262	566	614	—	1	5	—	12
Virginia§	1	9	19	10	35	109	148	223	498	703	—	2	5	10	4
West Virginia	—	0	6	—	3	23	12	26	82	39	—	0	3	—	—
E.S. Central	1	5	12	6	19	347	473	697	1,386	1,746	1	3	10	16	18
Alabama§	—	4	11	5	9	185	156	243	624	532	—	0	4	6	1
Kentucky	N	0	0	N	N	63	72	160	102	208	—	1	3	3	4
Mississippi	N	0	0	N	N	99	110	216	352	434	—	0	2	—	—
Tennessee§	1	0	6	1	10	—	135	195	308	572	1	2	5	7	13
W.S. Central	—	7	14	6	28	232	833	1,297	2,219	4,131	6	2	10	13	8
Arkansas§	—	2	7	1	6	109	79	133	364	306	—	0	3	—	1
Louisiana	—	3	8	5	14	107	90	272	507	864	2	0	4	6	4
Oklahoma	—	0	5	—	8	16	75	332	207	495	4	1	7	7	3
Texas§	N	0	0	N	N	—	602	959	1,141	2,466	—	0	1	—	—
Mountain	16	31	51	58	111	158	178	235	599	641	3	5	15	17	46
Arizona	1	3	8	5	15	81	57	87	187	200	1	2	7	3	18
Colorado	12	13	27	34	32	15	54	95	127	225	2	1	5	8	7
Idaho§	3	4	9	12	17	—	2	14	—	9	—	0	2	2	2
Montana§	—	2	7	1	6	1	2	6	6	6	—	0	1	—	—
Nevada§	—	2	11	4	5	25	30	94	146	150	—	0	1	1	2
New Mexico§	—	2	5	2	4	33	21	35	122	29	—	1	3	3	8
Utah	—	4	11	—	21	3	5	15	11	22	—	0	3	—	5
Wyoming§	—	0	3	—	11	—	0	4	—	—	—	0	2	—	4
Pacific	27	53	95	129	170	447	605	815	2,139	2,256	1	2	21	15	11
Alaska	—	1	6	2	6	—	23	37	50	108	—	0	2	2	3
California	21	33	57	96	121	395	501	691	1,875	1,831	—	0	18	4	—
Hawaii	—	1	4	—	4	—	14	26	—	56	—	0	2	—	3
Oregon	3	9	20	25	30	8	19	34	58	74	1	1	5	9	3
Washington	3	8	49	6	9	44	53	86	156	187	—	0	2	—	2
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	—	—	—	0	5	—	—	—	0	0	—	—
Puerto Rico	—	1	8	2	1	—	6	14	16	12	—	0	1	—	—
U.S. Virgin Islands	—	0	0	—	—	—	3	7	—	5	—	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 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/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.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Hepatitis (viral, acute), by type														
	A					B					C				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	15	30	44	65	111	34	61	91	90	192	4	13	25	27	43
New England	—	2	5	1	12	—	1	5	1	4	—	1	4	—	7
Connecticut	—	0	3	—	3	—	0	2	—	2	—	0	4	—	3
Maine†	—	0	1	—	—	—	0	2	—	—	—	0	0	—	—
Massachusetts	—	1	5	—	9	—	0	2	—	2	—	0	1	—	4
New Hampshire	—	0	1	—	—	—	0	2	1	—	N	0	0	N	N
Rhode Island†	—	0	4	—	—	U	0	0	U	U	U	0	0	U	U
Vermont†	—	0	1	1	—	—	0	1	—	—	—	0	1	—	—
Mid. Atlantic	4	4	10	11	16	2	5	10	8	14	—	2	6	2	3
New Jersey	—	0	2	—	2	—	1	5	—	1	—	0	2	—	—
New York (Upstate)	1	1	4	2	1	2	1	6	5	3	—	1	4	2	3
New York City	—	1	7	3	7	—	1	4	—	5	—	0	1	—	—
Pennsylvania	3	1	3	6	6	—	1	5	3	5	—	0	3	—	—
E.N. Central	3	4	9	8	25	17	9	17	21	42	1	2	7	7	5
Illinois	—	1	3	—	4	—	2	5	—	7	—	0	1	—	—
Indiana	—	0	2	—	—	—	1	5	1	9	—	0	2	3	1
Michigan	—	1	5	1	5	2	2	6	4	11	1	1	6	4	4
Ohio	3	1	5	6	6	15	2	6	16	8	—	0	1	—	—
Wisconsin	—	0	3	1	10	—	2	8	—	7	—	0	2	—	—
W.N. Central	—	1	13	1	6	—	2	7	5	8	—	0	8	—	—
Iowa	—	0	3	1	4	—	0	1	—	2	—	0	0	—	—
Kansas	—	0	2	—	—	—	0	2	1	—	—	0	1	—	—
Minnesota	—	0	12	—	—	—	0	4	—	—	—	0	6	—	—
Missouri	—	0	2	—	1	—	1	3	2	5	—	0	2	—	—
Nebraska†	—	0	4	—	1	—	0	2	2	1	—	0	1	—	—
North Dakota	—	0	3	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
S. Atlantic	3	6	14	14	18	6	16	32	24	63	—	2	6	3	6
Delaware	—	0	1	1	—	—	0	2	—	2	U	0	0	U	U
District of Columbia	—	0	1	—	1	—	0	1	—	—	—	0	1	—	1
Florida	1	3	7	4	4	5	5	11	17	27	—	0	0	—	—
Georgia	—	1	3	3	4	1	3	6	1	21	—	0	2	—	—
Maryland†	1	0	3	3	1	—	1	6	2	1	—	0	3	3	2
North Carolina	1	0	5	1	—	—	1	16	—	3	—	1	3	—	3
South Carolina†	—	0	3	—	6	—	1	4	1	—	—	0	1	—	—
Virginia†	—	1	6	2	2	—	1	6	3	7	—	0	2	—	—
West Virginia	—	0	5	—	—	—	0	12	—	2	—	0	5	—	—
E.S. Central	—	0	5	1	3	3	7	13	15	32	—	3	8	3	9
Alabama†	—	0	2	—	2	—	1	4	2	8	—	0	1	—	—
Kentucky	—	0	5	1	—	—	2	8	5	13	—	2	6	1	9
Mississippi	—	0	1	—	—	1	0	3	1	—	U	0	0	U	U
Tennessee†	—	0	2	—	1	2	2	8	7	11	—	1	4	2	—
W.S. Central	—	2	7	1	5	3	9	29	6	11	2	1	5	7	2
Arkansas†	—	0	1	—	—	—	0	4	—	—	—	0	0	—	—
Louisiana	—	0	2	—	1	1	1	3	3	5	—	0	2	3	—
Oklahoma	—	0	1	—	—	—	2	6	—	1	2	0	3	3	—
Texas†	—	2	7	1	4	2	5	25	3	5	—	0	3	1	2
Mountain	—	3	8	6	14	2	3	8	7	9	—	1	5	2	2
Arizona	—	1	4	2	8	—	0	2	—	2	U	0	0	U	U
Colorado	—	1	2	2	4	—	0	5	—	2	—	0	2	1	2
Idaho†	—	0	2	—	—	2	0	1	2	—	—	0	2	1	—
Montana†	—	0	1	1	1	—	0	0	—	—	—	0	1	—	—
Nevada†	—	0	2	—	—	—	1	3	5	4	—	0	1	—	—
New Mexico†	—	0	1	1	—	—	0	1	—	—	—	0	2	—	—
Utah	—	0	1	—	1	—	0	1	—	1	—	0	2	—	—
Wyoming†	—	0	3	—	—	—	0	1	—	—	—	0	0	—	—
Pacific	5	5	17	22	12	1	6	17	3	9	1	1	4	3	9
Alaska	—	0	1	—	—	—	0	1	—	1	U	0	0	U	U
California	4	4	16	20	8	1	4	16	1	5	—	0	2	—	6
Hawaii	—	0	1	—	2	—	0	1	—	1	U	0	0	U	U
Oregon	—	0	2	1	2	—	1	3	2	2	1	0	3	2	3
Washington	1	0	2	1	—	—	1	4	—	—	—	0	3	1	—
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	6	—	—	—	1	6	—	4	—	0	7	—	1
Puerto Rico	—	0	2	—	1	—	0	2	—	1	—	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.
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† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Legionellosis					Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	19	53	116	102	175	42	397	1,671	249	1,020	12	26	80	53	89
New England	—	4	15	1	9	—	126	504	6	310	—	1	5	1	6
Connecticut	—	1	6	—	2	—	47	213	—	146	—	0	1	—	—
Maine†	—	0	4	—	—	—	11	65	—	2	—	0	1	—	—
Massachusetts	—	2	10	—	4	—	41	223	—	103	—	1	4	—	6
New Hampshire	—	0	5	—	1	—	24	68	4	50	—	0	2	—	—
Rhode Island†	—	0	4	—	1	—	1	40	—	—	—	0	1	—	—
Vermont†	—	0	2	1	1	—	4	27	2	9	—	0	1	1	—
Mid. Atlantic	5	14	47	24	38	28	172	736	167	475	2	7	17	11	28
New Jersey	—	1	11	—	6	—	49	220	—	133	—	0	1	—	—
New York (Upstate)	4	5	19	9	11	11	38	200	19	35	1	1	6	2	5
New York City	—	2	17	5	7	—	2	7	—	12	—	4	14	7	15
Pennsylvania	1	6	18	10	14	17	86	386	148	295	1	1	3	2	8
E.N. Central	4	12	44	22	35	—	26	324	2	42	1	2	9	6	8
Illinois	—	2	15	—	6	—	1	17	—	2	—	0	7	—	4
Indiana	—	2	7	3	3	—	1	7	—	4	—	0	2	—	—
Michigan	—	2	20	5	8	—	1	13	—	—	—	0	4	—	2
Ohio	4	4	15	14	15	—	0	9	1	3	1	1	5	5	2
Wisconsin	—	1	11	—	3	—	21	297	1	33	—	0	1	1	—
W.N. Central	—	2	9	1	1	—	1	11	—	1	—	1	4	—	8
Iowa	—	0	2	—	—	—	0	10	—	1	—	0	2	—	2
Kansas	—	0	2	—	—	—	0	1	—	—	—	0	2	—	1
Minnesota	—	0	8	—	—	—	0	0	—	—	—	0	3	—	—
Missouri	—	0	4	1	1	—	0	1	—	—	—	0	3	—	2
Nebraska†	—	0	2	—	—	—	0	2	—	—	—	0	2	—	3
North Dakota	—	0	1	—	—	—	0	5	—	—	—	0	1	—	—
South Dakota	—	0	2	—	—	—	0	1	—	—	—	0	2	—	—
S. Atlantic	1	9	28	14	36	14	57	174	68	175	3	7	44	22	29
Delaware	—	0	3	—	3	1	10	32	17	45	—	0	1	—	—
District of Columbia	—	0	4	—	—	—	0	4	—	—	—	0	2	—	—
Florida	1	3	9	8	12	3	2	10	4	4	2	2	7	8	13
Georgia	—	1	4	—	4	—	0	2	—	1	—	0	6	2	2
Maryland†	—	2	6	3	10	6	24	105	22	80	—	1	24	6	7
North Carolina	—	0	7	1	2	3	1	9	3	4	1	0	13	1	2
South Carolina†	—	0	2	—	—	—	0	3	—	1	—	0	1	—	—
Virginia†	—	1	10	2	4	1	18	77	22	39	—	1	5	5	5
West Virginia	—	0	3	—	1	—	0	29	—	1	—	0	1	—	—
E.S. Central	1	2	10	3	11	—	0	4	—	5	—	0	3	—	2
Alabama†	—	0	2	—	—	—	0	1	—	—	—	0	1	—	1
Kentucky	—	0	4	1	3	—	0	1	—	1	—	0	1	—	1
Mississippi	1	0	3	1	2	—	0	0	—	—	—	0	2	—	—
Tennessee†	—	1	6	1	6	—	0	4	—	4	—	0	2	—	—
W.S. Central	—	3	8	4	3	—	2	9	—	1	—	1	10	—	3
Arkansas†	—	0	2	—	—	—	0	0	—	—	—	0	1	—	—
Louisiana	—	0	2	—	1	—	0	1	—	—	—	0	1	—	1
Oklahoma	—	0	3	—	—	—	0	0	—	—	—	0	1	—	—
Texas†	—	2	7	4	2	—	2	9	—	1	—	1	10	—	2
Mountain	1	3	10	3	12	—	0	3	—	2	3	1	4	6	2
Arizona	1	1	7	2	2	—	0	1	—	—	1	0	3	2	1
Colorado	—	0	2	—	5	—	0	1	—	—	2	0	3	2	—
Idaho†	—	0	1	—	—	—	0	2	—	1	—	0	1	—	—
Montana†	—	0	1	—	—	—	0	1	—	—	—	0	1	—	—
Nevada†	—	0	2	1	3	—	0	1	—	—	—	0	2	2	—
New Mexico†	—	0	2	—	1	—	0	2	—	—	—	0	1	—	—
Utah	—	0	2	—	1	—	0	1	—	1	—	0	1	—	1
Wyoming†	—	0	2	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	7	5	15	30	30	—	4	10	6	9	3	3	10	7	3
Alaska	—	0	2	—	—	—	0	1	—	1	—	0	1	—	—
California	7	4	14	29	30	—	3	9	6	5	1	2	9	4	3
Hawaii	—	0	1	—	—	N	0	0	N	N	—	0	1	—	—
Oregon	—	0	3	1	—	—	1	4	—	3	—	0	3	1	—
Washington	—	0	5	—	—	—	0	3	—	—	2	0	5	2	—
Territories															
American Samoa	—	0	0	—	—	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	N	0	0	N	N	—	0	2	—	1
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Meningococcal disease, invasive† All serogroups					Mumps					Pertussis				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	5	15	26	36	76	1	22	221	13	277	163	462	792	720	755
New England	—	0	3	1	1	—	0	4	—	7	1	9	23	3	15
Connecticut	—	0	1	1	—	—	0	2	—	2	—	1	8	—	3
Maine§	—	0	1	—	—	—	0	1	—	1	1	1	5	1	—
Massachusetts	—	0	2	—	1	—	0	2	—	4	—	5	13	—	10
New Hampshire	—	0	0	—	—	—	0	1	—	—	—	0	2	2	1
Rhode Island§	—	0	0	—	—	—	0	0	—	—	—	0	9	—	—
Vermont§	—	0	1	—	—	—	0	0	—	—	—	0	4	—	1
Mid. Atlantic	—	1	5	7	9	—	11	209	—	255	42	37	143	106	39
New Jersey	—	0	2	—	2	—	3	24	—	77	—	3	9	—	8
New York (Upstate)	—	0	2	—	2	—	2	99	—	176	13	11	81	37	5
New York City	—	0	3	5	3	—	1	201	—	2	—	0	9	—	—
Pennsylvania	—	0	2	2	2	—	0	16	—	—	29	14	69	69	26
E.N. Central	—	2	9	2	16	1	2	7	6	8	40	110	188	215	250
Illinois	—	0	3	—	3	—	0	2	1	3	—	20	51	21	36
Indiana	—	0	2	—	6	—	0	1	—	1	—	12	26	1	20
Michigan	—	0	4	—	2	—	0	2	—	2	3	28	57	49	73
Ohio	—	0	2	2	2	1	0	5	5	—	37	33	80	130	96
Wisconsin	—	0	3	—	3	—	0	2	—	2	—	9	22	14	25
W.N. Central	—	1	5	7	3	—	1	14	3	1	3	35	193	39	68
Iowa	—	0	3	1	1	—	0	7	—	1	—	12	34	2	13
Kansas	—	0	2	1	—	—	0	1	1	—	1	3	9	1	16
Minnesota	—	0	1	—	—	—	0	1	—	—	—	0	143	—	—
Missouri	—	0	4	3	2	—	0	2	1	—	2	8	44	26	29
Nebraska§	—	0	2	2	—	—	0	10	1	—	—	4	13	9	7
North Dakota	—	0	1	—	—	—	0	1	—	—	—	0	30	—	—
South Dakota	—	0	0	—	—	—	0	1	—	—	—	0	5	1	3
S. Atlantic	3	2	7	5	20	—	0	4	—	4	35	29	79	110	104
Delaware	—	0	1	—	1	—	0	0	—	—	1	0	4	3	—
District of Columbia	—	0	0	—	—	—	0	1	—	—	—	0	2	—	—
Florida	1	1	5	2	7	—	0	3	—	1	8	6	28	20	18
Georgia	—	0	2	—	2	—	0	1	—	—	1	4	18	15	13
Maryland§	—	0	1	—	—	—	0	1	—	1	1	3	8	8	14
North Carolina	2	0	2	2	3	—	0	0	—	—	20	0	32	20	41
South Carolina§	—	0	1	1	2	—	0	2	—	1	1	6	23	18	12
Virginia§	—	0	2	—	5	—	0	2	—	1	3	6	38	26	5
West Virginia	—	0	1	—	—	—	0	1	—	—	—	1	21	—	1
E.S. Central	—	1	3	1	3	—	0	2	1	—	10	16	34	40	57
Alabama§	—	0	1	1	1	—	0	2	1	—	—	4	8	5	16
Kentucky	—	0	2	—	2	—	0	1	—	—	4	5	16	23	20
Mississippi	—	0	1	—	—	—	0	0	—	—	—	1	8	—	3
Tennessee§	—	0	2	—	—	—	0	1	—	—	6	4	11	12	18
W.S. Central	—	1	9	2	7	—	2	11	1	—	6	57	113	27	87
Arkansas§	—	0	1	1	1	—	0	1	—	—	—	2	14	—	4
Louisiana	—	0	2	1	5	—	0	2	—	—	—	1	3	1	6
Oklahoma	—	0	7	—	—	—	0	0	—	—	—	0	23	—	—
Texas§	—	1	7	—	1	—	1	11	1	—	6	49	109	26	77
Mountain	—	1	6	3	4	—	0	4	1	—	16	30	102	111	89
Arizona	—	0	2	2	2	—	0	1	—	—	—	8	25	12	27
Colorado	—	0	4	—	—	—	0	1	—	—	13	6	76	72	11
Idaho§	—	0	1	1	—	—	0	1	—	—	3	2	15	10	24
Montana§	—	0	1	—	—	—	0	0	—	—	—	1	16	8	1
Nevada§	—	0	1	—	1	—	0	1	—	—	—	0	7	2	—
New Mexico§	—	0	1	—	1	—	0	2	1	—	—	2	11	—	15
Utah	—	0	1	—	—	—	0	1	—	—	—	5	13	7	11
Wyoming§	—	0	1	—	—	—	0	1	—	—	—	0	2	—	—
Pacific	2	3	9	8	13	—	0	18	1	2	10	89	241	69	46
Alaska	—	0	1	—	—	—	0	1	—	—	—	0	6	4	2
California	1	2	9	5	10	—	0	18	—	—	9	71	222	58	10
Hawaii	—	0	1	—	—	—	0	1	—	1	—	1	6	—	5
Oregon	—	1	2	2	3	—	0	1	1	1	1	6	15	7	29
Washington	1	0	4	1	—	—	0	2	—	—	—	6	76	—	—
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	1	15	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	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.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Rabies, animal					Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	32	62	143	80	132	273	865	1,739	1,276	2,611	24	89	213	127	209
New England	2	4	13	6	14	1	31	68	25	559	—	2	13	3	65
Connecticut	—	0	9	—	2	—	0	12	12	480	—	0	2	2	57
Maine§	—	1	4	1	6	1	2	7	5	4	—	0	3	—	—
Massachusetts	—	0	0	—	—	—	23	52	—	56	—	1	9	—	7
New Hampshire	1	0	5	1	2	—	3	12	5	9	—	0	2	1	1
Rhode Island§	—	0	4	—	—	—	1	17	—	8	—	0	1	—	—
Vermont§	1	1	3	4	4	—	2	5	3	2	—	0	2	—	—
Mid. Atlantic	5	19	41	19	41	19	95	218	117	284	2	9	32	18	18
New Jersey	—	0	0	—	—	—	16	57	—	58	—	1	9	—	4
New York (Upstate)	5	9	19	19	23	11	25	63	31	43	2	4	13	10	4
New York City	—	1	12	—	3	1	23	56	34	83	—	1	7	—	4
Pennsylvania	—	8	24	—	15	7	31	81	52	100	—	3	13	8	6
E.N. Central	2	2	27	4	4	16	90	244	94	248	2	12	43	4	34
Illinois	2	1	11	3	—	—	32	114	8	85	—	2	9	—	11
Indiana	—	0	0	—	—	—	13	62	3	30	—	2	10	—	2
Michigan	—	1	5	1	2	6	15	49	25	47	—	2	16	—	6
Ohio	—	0	12	—	2	10	24	47	58	60	2	2	11	4	4
Wisconsin	—	0	0	—	—	—	9	45	—	26	—	3	17	—	11
W.N. Central	1	4	14	1	9	16	46	97	69	89	—	11	39	7	15
Iowa	—	0	3	—	—	—	9	34	10	9	—	2	16	—	3
Kansas	1	1	4	1	6	3	7	18	14	17	—	1	5	1	3
Minnesota	—	0	4	—	—	—	0	32	—	—	—	0	7	—	—
Missouri	—	1	6	—	1	13	13	44	38	46	—	4	27	2	6
Nebraska§	—	1	4	—	2	—	4	13	5	10	—	1	6	4	3
North Dakota	—	0	3	—	—	—	0	13	—	2	—	0	10	—	—
South Dakota	—	0	0	—	—	—	2	17	2	5	—	0	4	—	—
S. Atlantic	18	20	104	43	46	106	261	614	452	733	8	14	30	42	25
Delaware	—	0	0	—	—	1	3	11	7	6	—	0	2	—	—
District of Columbia	—	0	0	—	—	—	1	6	—	4	—	0	1	—	1
Florida	1	0	96	2	—	56	108	226	222	314	6	5	23	22	7
Georgia	—	0	0	—	—	14	43	133	71	134	—	2	15	5	2
Maryland§	2	6	14	3	18	7	17	55	36	47	—	2	9	6	8
North Carolina	—	0	0	—	—	9	31	240	27	136	1	1	10	2	1
South Carolina§	—	0	0	—	—	18	25	99	44	44	—	0	2	—	1
Virginia§	15	11	25	38	22	1	20	57	45	43	1	2	9	7	5
West Virginia	—	1	7	—	6	—	2	13	—	5	—	0	3	—	—
E.S. Central	3	3	7	4	5	13	55	177	108	130	3	5	22	10	5
Alabama§	2	1	4	3	—	7	18	52	37	43	—	1	4	1	4
Kentucky	1	0	4	1	—	—	11	32	15	25	—	1	6	1	—
Mississippi	—	0	1	—	—	—	18	67	21	19	—	0	12	—	1
Tennessee§	—	1	4	—	5	6	17	53	35	43	3	2	7	8	—
W.S. Central	—	0	30	—	—	16	122	267	74	121	1	6	18	4	9
Arkansas§	—	0	7	—	—	—	12	43	9	10	—	1	5	1	2
Louisiana	—	0	0	—	—	3	20	49	14	43	—	0	2	—	2
Oklahoma	—	0	30	—	—	5	12	39	14	11	1	0	8	2	1
Texas§	—	0	0	—	—	8	77	190	37	57	—	4	15	1	4
Mountain	—	1	7	1	3	14	48	108	102	188	—	11	34	7	22
Arizona	—	0	0	—	—	1	16	42	21	71	—	1	13	2	4
Colorado	—	0	0	—	—	7	11	24	40	39	—	3	21	1	7
Idaho§	—	0	2	—	—	4	3	9	14	15	—	2	7	3	4
Montana§	—	0	3	1	—	—	1	5	1	16	—	1	5	1	1
Nevada§	—	0	2	—	—	2	5	22	13	10	—	0	5	—	1
New Mexico§	—	0	2	—	—	—	6	19	6	15	—	1	6	—	3
Utah	—	0	2	—	—	—	5	17	7	16	—	1	7	—	2
Wyoming§	—	0	4	—	3	—	1	8	—	6	—	0	3	—	—
Pacific	1	2	12	2	10	72	116	252	235	259	8	12	39	32	16
Alaska	—	0	2	—	4	—	1	5	3	6	—	0	1	—	1
California	—	1	12	—	5	65	79	217	204	201	6	6	23	26	10
Hawaii	—	0	0	—	—	—	6	14	—	21	—	0	4	—	3
Oregon	1	0	2	2	1	1	8	48	22	29	—	2	14	4	2
Washington	—	0	0	—	—	6	14	57	6	2	2	3	17	2	—
Territories															
American Samoa	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	—	—	0	0	—	—
Puerto Rico	1	1	3	2	3	2	10	21	4	32	—	0	0	—	—
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 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
† Includes E. coli O157:H7; Shiga toxin-positive, serogroup non-O157; and Shiga toxin-positive, not serogrouped.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Shigellosis					Spotted Fever Rickettsiosis (including RMSF)†									
						Confirmed					Probable				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	114	275	452	471	939	1	2	11	7	5	4	24	91	15	21
New England	—	4	17	3	83	—	0	0	—	—	—	0	1	—	—
Connecticut	—	0	1	1	63	—	0	0	—	—	—	0	0	—	—
Maine§	—	0	1	1	1	—	0	0	—	—	—	0	1	—	—
Massachusetts	—	3	16	—	16	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	2	—	2	—	0	0	—	—	—	0	1	—	—
Rhode Island§	—	0	2	—	1	—	0	0	—	—	—	0	0	—	—
Vermont§	—	0	1	1	—	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	7	30	68	34	158	—	0	1	—	—	—	1	4	1	—
New Jersey	—	5	16	3	20	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	5	3	15	10	9	—	0	1	—	—	—	0	3	—	—
New York City	1	5	14	12	26	—	0	1	—	—	—	0	4	1	—
Pennsylvania	1	11	55	9	103	—	0	1	—	—	—	0	3	—	—
E.N. Central	4	25	238	29	111	—	0	1	—	—	—	1	10	1	1
Illinois	—	8	228	—	47	—	0	1	—	—	—	0	5	—	—
Indiana§	—	1	4	—	2	—	0	1	—	—	—	0	5	—	1
Michigan	1	5	10	8	9	—	0	0	—	—	—	0	1	—	—
Ohio	3	5	18	21	32	—	0	0	—	—	—	0	2	1	—
Wisconsin	—	4	21	—	21	—	0	0	—	—	—	0	1	—	—
W.N. Central	7	32	81	44	233	—	0	4	—	—	—	4	21	—	—
Iowa	—	1	4	2	7	—	0	0	—	—	—	0	1	—	—
Kansas§	2	5	13	10	12	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	3	—	—	—	0	0	—	—	—	0	0	—	—
Missouri	5	22	66	30	213	—	0	4	—	—	—	4	20	—	—
Nebraska§	—	1	10	1	1	—	0	1	—	—	—	0	1	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	2	1	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	63	51	134	179	132	1	1	9	3	4	4	7	60	4	19
Delaware§	—	0	4	—	12	—	0	1	—	—	—	0	3	—	—
District of Columbia	—	0	4	—	2	—	0	1	—	—	—	0	0	—	—
Florida§	42	24	53	135	37	—	0	1	1	—	1	0	2	1	—
Georgia	13	14	39	29	54	—	0	6	—	4	—	0	0	—	—
Maryland§	2	2	8	5	8	—	0	1	1	—	—	0	5	—	1
North Carolina	5	3	36	7	10	1	0	3	1	—	3	2	48	3	17
South Carolina§	1	1	5	1	6	—	0	1	—	—	—	0	3	—	1
Virginia§	—	3	8	2	3	—	0	2	—	—	—	2	12	—	—
West Virginia	—	0	66	—	—	—	0	0	—	—	—	0	0	—	—
E.S. Central	3	14	40	26	33	—	0	3	—	—	—	5	29	2	—
Alabama§	2	4	14	14	8	—	0	1	—	—	—	1	8	1	—
Kentucky	1	3	28	2	13	—	0	2	—	—	—	0	0	—	—
Mississippi	—	1	4	1	2	—	0	0	—	—	—	0	3	—	—
Tennessee§	—	5	14	9	10	—	0	2	—	—	—	4	20	1	—
W.S. Central	15	52	113	60	65	—	0	3	—	—	—	1	18	—	—
Arkansas§	—	1	6	1	5	—	0	2	—	—	—	0	17	—	—
Louisiana	—	5	13	5	5	—	0	0	—	—	—	0	1	—	—
Oklahoma	1	5	13	4	7	—	0	3	—	—	—	0	6	—	—
Texas§	14	43	92	50	48	—	0	1	—	—	—	0	3	—	—
Mountain	5	15	32	38	59	—	0	5	4	—	—	0	3	7	1
Arizona	2	8	18	16	36	—	0	5	4	—	—	0	3	7	—
Colorado§	3	2	8	13	10	—	0	1	—	—	—	0	1	—	—
Idaho§	—	0	3	2	1	—	0	0	—	—	—	0	1	—	—
Montana§	—	0	1	1	1	—	0	1	—	—	—	0	1	—	—
Nevada§	—	0	6	1	2	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	3	10	5	7	—	0	0	—	—	—	0	0	—	1
Utah	—	1	4	—	2	—	0	0	—	—	—	0	1	—	—
Wyoming§	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Pacific	10	22	67	58	65	—	0	2	—	1	—	0	0	—	—
Alaska	—	0	1	—	—	N	0	0	N	N	N	0	0	N	N
California	10	17	54	56	58	—	0	2	—	1	—	0	0	—	—
Hawaii	—	1	4	—	3	N	0	0	N	N	N	0	0	N	N
Oregon	—	1	4	2	3	—	0	1	—	—	—	0	0	—	—
Washington	—	1	17	—	1	—	0	0	—	—	—	0	0	—	—
Territories															
American Samoa	—	1	1	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	1	—	—	N	0	0	N	N	N	0	0	N	N
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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† 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.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	*Streptococcus pneumoniae*,† invasive disease										Syphilis, primary and secondary				
	All ages					Age <5									
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	208	272	576	1,197	1,330	17	39	84	84	186	51	245	322	380	891
New England	2	9	99	12	44	—	1	14	—	7	2	9	20	15	24
Connecticut	—	0	91	—	—	—	0	12	—	—	—	1	8	—	1
Maine§	—	2	7	8	9	—	0	1	—	2	—	0	3	—	1
Massachusetts	—	1	5	—	8	—	1	4	—	3	1	5	15	9	18
New Hampshire	—	0	7	—	17	—	0	1	—	2	1	0	2	2	1
Rhode Island§	—	0	36	—	—	—	0	3	—	—	—	1	4	4	3
Vermont§	2	1	6	4	10	—	0	1	—	—	—	0	2	—	—
Mid. Atlantic	14	29	56	145	105	2	7	19	7	30	11	32	45	41	130
New Jersey	—	1	8	2	13	—	1	5	2	8	3	4	12	11	14
New York (Upstate)	1	3	11	6	15	1	2	9	3	8	5	2	11	10	2
New York City	1	13	32	74	31	—	2	14	—	4	—	18	31	—	81
Pennsylvania	12	10	22	63	46	1	1	5	2	10	3	7	16	20	33
E.N. Central	26	59	99	219	299	2	6	18	14	36	1	27	48	13	138
Illinois	—	2	7	—	7	—	2	5	—	7	—	7	26	—	69
Indiana	—	10	24	13	57	—	1	6	—	8	—	3	14	2	—
Michigan	2	12	27	42	63	—	1	6	4	9	—	4	12	4	32
Ohio	22	25	45	132	136	2	2	6	7	5	1	9	19	6	33
Wisconsin	2	7	22	32	36	—	0	4	3	7	—	1	3	1	4
W.N. Central	12	10	61	36	34	3	1	12	7	7	—	6	18	8	16
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	3	—	1
Kansas	1	2	7	8	3	—	0	2	—	—	—	0	3	—	—
Minnesota	—	0	46	—	—	—	0	8	—	—	—	2	9	5	2
Missouri	8	2	10	16	15	3	1	4	6	4	—	3	9	3	13
Nebraska§	3	2	9	12	13	—	0	2	1	2	—	0	2	—	—
North Dakota	—	0	11	—	—	—	0	1	—	—	—	0	0	—	—
South Dakota	—	0	3	—	3	—	0	2	—	1	—	0	1	—	—
S. Atlantic	78	62	144	392	379	6	9	27	31	46	17	55	103	123	163
Delaware	—	1	4	8	2	—	0	1	—	—	—	0	4	2	—
District of Columbia	—	0	3	1	4	—	0	2	—	2	2	2	20	9	10
Florida	44	26	89	214	153	3	3	18	13	11	1	22	44	44	67
Georgia	10	10	26	47	68	2	2	9	8	14	4	9	27	12	7
Maryland§	6	9	31	65	65	—	1	6	4	3	—	6	15	11	7
North Carolina	—	0	0	—	—	—	0	0	—	—	1	5	22	17	40
South Carolina§	18	7	24	53	73	1	1	4	2	9	5	3	10	13	13
Virginia§	—	1	4	4	7	—	1	4	4	6	4	5	22	15	18
West Virginia	—	1	9	—	7	—	0	4	—	1	—	0	2	—	1
E.S. Central	24	23	48	100	135	1	2	7	9	13	7	17	39	23	48
Alabama§	—	0	0	—	—	—	0	0	—	—	—	5	11	7	18
Kentucky	5	3	16	23	8	1	0	3	4	2	6	2	12	10	7
Mississippi	—	1	8	1	9	—	0	2	—	2	1	4	16	2	2
Tennessee§	19	19	43	76	118	—	2	6	5	9	—	5	17	4	21
W.S. Central	26	35	223	113	99	3	5	21	7	17	1	38	65	69	144
Arkansas§	1	3	19	13	8	—	0	3	1	3	1	3	10	9	24
Louisiana	—	2	7	14	16	—	0	3	—	5	—	7	30	1	32
Oklahoma	—	1	5	3	3	—	1	5	3	3	—	2	7	1	4
Texas§	25	27	202	83	72	3	3	17	3	6	—	24	33	58	84
Mountain	23	34	72	158	212	—	4	12	8	24	5	10	26	14	37
Arizona	17	12	38	80	116	—	1	7	2	14	—	3	8	2	12
Colorado	5	12	22	43	54	—	1	4	1	5	1	2	8	3	14
Idaho§	—	0	2	2	—	—	0	2	1	—	—	0	2	—	1
Montana§	—	0	2	1	1	—	0	1	—	—	—	0	2	—	—
Nevada§	1	2	4	6	10	—	0	1	1	2	3	2	9	7	5
New Mexico§	—	3	11	17	11	—	0	4	1	—	1	1	4	2	3
Utah	—	3	9	6	19	—	0	3	2	3	—	1	5	—	2
Wyoming§	—	0	15	3	1	—	0	1	—	—	—	0	0	—	—
Pacific	3	5	18	22	23	—	0	7	1	6	7	45	63	74	191
Alaska	—	2	9	6	14	—	0	5	—	4	—	0	1	—	—
California	3	3	17	16	9	—	0	5	1	2	6	39	52	65	162
Hawaii	—	0	3	—	—	—	0	0	—	—	—	0	5	—	2
Oregon	—	0	0	—	—	—	0	0	—	—	—	1	7	1	5
Washington	—	0	0	—	—	—	0	0	—	—	1	4	11	8	22
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	4	15	7	16
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).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending January 29, 2011, and January 30, 2010 (4th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010	Current week	Previous 52 weeks		Cum 2011	Cum 2010
		Med	Max				Med	Max				Med	Max		
United States	133	281	563	672	1,098	—	0	71	—	1	—	1	53	—	—
New England	4	19	43	34	84	—	0	3	—	—	—	0	2	—	—
Connecticut	—	6	20	—	16	—	0	2	—	—	—	0	2	—	—
Maine¶	—	4	15	15	28	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	4	12	—	19	—	0	2	—	—	—	0	1	—	—
New Hampshire	—	2	8	—	12	—	0	1	—	—	—	0	0	—	—
Rhode Island¶	—	0	3	1	1	—	0	0	—	—	—	0	0	—	—
Vermont¶	4	0	10	18	8	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	11	31	62	50	139	—	0	19	—	—	—	0	13	—	—
New Jersey	—	8	30	3	47	—	0	3	—	—	—	0	6	—	—
New York (Upstate)	N	0	0	N	N	—	0	9	—	—	—	0	7	—	—
New York City	—	0	1	—	—	—	0	7	—	—	—	0	4	—	—
Pennsylvania	11	21	41	47	92	—	0	3	—	—	—	0	3	—	—
E.N. Central	38	97	176	265	425	—	0	15	—	—	—	0	8	—	—
Illinois	5	20	45	41	103	—	0	10	—	—	—	0	5	—	—
Indiana¶	5	5	35	16	45	—	0	2	—	—	—	0	2	—	—
Michigan	10	30	62	81	142	—	0	6	—	—	—	0	1	—	—
Ohio	18	27	58	127	114	—	0	1	—	—	—	0	1	—	—
Wisconsin	—	7	22	—	21	—	0	0	—	—	—	0	1	—	—
W.N. Central	2	15	32	23	58	—	0	7	—	—	—	0	11	—	—
Iowa	N	0	0	N	N	—	0	1	—	—	—	0	2	—	—
Kansas¶	2	4	22	12	30	—	0	1	—	—	—	0	3	—	—
Minnesota	—	0	0	—	—	—	0	1	—	—	—	0	3	—	—
Missouri	—	8	23	10	26	—	0	1	—	—	—	0	0	—	—
Nebraska¶	N	0	0	N	N	—	0	3	—	—	—	0	7	—	—
North Dakota	—	0	10	—	1	—	0	2	—	—	—	0	2	—	—
South Dakota	—	1	7	1	1	—	0	2	—	—	—	0	3	—	—
S. Atlantic	21	35	100	76	127	—	0	4	—	—	—	0	4	—	—
Delaware¶	—	0	3	—	—	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	4	1	—	—	0	1	—	—	—	0	1	—	—
Florida¶	19	16	57	61	62	—	0	3	—	—	—	0	1	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	3	—	—
Maryland¶	N	0	0	N	N	—	0	3	—	—	—	0	2	—	—
North Carolina	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
South Carolina¶	—	0	35	—	2	—	0	1	—	—	—	0	0	—	—
Virginia¶	2	10	29	14	25	—	0	1	—	—	—	0	1	—	—
West Virginia	—	7	26	—	38	—	0	0	—	—	—	0	0	—	—
E.S. Central	1	5	22	16	19	—	0	1	—	1	—	0	3	—	—
Alabama¶	1	5	22	16	19	—	0	1	—	—	—	0	1	—	—
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Mississippi	—	0	2	—	—	—	0	1	—	1	—	0	2	—	—
Tennessee¶	N	0	0	N	N	—	0	1	—	—	—	0	2	—	—
W.S. Central	34	43	177	95	117	—	0	15	—	—	—	0	3	—	—
Arkansas¶	—	2	32	—	10	—	0	3	—	—	—	0	1	—	—
Louisiana	1	2	4	3	8	—	0	3	—	—	—	0	1	—	—
Oklahoma	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Texas¶	33	39	171	92	99	—	0	15	—	—	—	0	2	—	—
Mountain	22	20	43	107	125	—	0	18	—	—	—	0	15	—	—
Arizona	—	0	0	—	—	—	0	13	—	—	—	0	9	—	—
Colorado¶	21	8	31	61	49	—	0	5	—	—	—	0	11	—	—
Idaho¶	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
Montana¶	1	3	28	42	26	—	0	0	—	—	—	0	0	—	—
Nevada¶	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
New Mexico¶	—	1	8	4	10	—	0	5	—	—	—	0	2	—	—
Utah	—	4	17	—	40	—	0	1	—	—	—	0	1	—	—
Wyoming¶	—	0	3	—	—	—	0	1	—	—	—	0	1	—	—
Pacific	—	1	7	6	4	—	0	7	—	—	—	0	6	—	—
Alaska	—	1	5	6	3	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	7	—	—	—	0	6	—	—
Hawaii	—	0	7	—	1	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
Washington	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
Territories															
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	—	1	—	0	0	—	—	—	0	0	—	—
Puerto Rico	3	9	30	15	17	—	0	0	—	—	—	0	0	—	—
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 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/ncphi/disss/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.

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

TABLE III. Deaths in 122 U.S. cities,* week ending January 29, 2011 (4th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	542	397	109	17	6	13	56
Boston, MA	143	100	34	5	2	2	12
Bridgeport, CT	31	23	5	2	—	1	5
Cambridge, MA	14	11	2	1	—	—	1
Fall River, MA	26	19	5	—	1	1	8
Hartford, CT	54	42	10	—	1	1	8
Lowell, MA	18	10	4	2	—	2	2
Lynn, MA	6	4	2	—	—	—	—
New Bedford, MA	32	26	6	—	—	—	1
New Haven, CT	U	U	U	U	U	U	U
Providence, RI	79	59	15	3	—	2	9
Somerville, MA	3	3	—	—	—	—	—
Springfield, MA	47	35	9	2	—	1	4
Waterbury, CT	24	20	4	—	—	—	2
Worcester, MA	65	45	13	2	2	3	4
Mid. Atlantic	1,661	1,157	365	86	26	27	116
Albany, NY	48	32	14	2	—	—	6
Allentown, PA	27	21	6	—	—	—	3
Buffalo, NY	84	51	23	5	4	1	11
Camden, NJ	31	17	7	4	2	1	1
Elizabeth, NJ	11	7	3	—	—	1	—
Erie, PA	55	43	9	3	—	—	5
Jersey City, NJ	20	11	8	1	—	—	1
New York City, NY	805	591	171	34	8	1	48
Newark, NJ	9	5	3	1	—	—	2
Paterson, NJ	23	13	7	1	1	1	1
Philadelphia, PA	202	108	48	16	11	19	6
Pittsburgh, PA§	39	29	7	1	—	2	3
Reading, PA	43	31	8	4	—	—	5
Rochester, NY	88	63	18	6	—	1	9
Schenectady, NY	19	13	5	1	—	—	3
Scranton, PA	41	32	9	—	—	—	3
Syracuse, NY	62	50	9	3	—	—	4
Trenton, NJ	24	13	9	2	—	—	2
Utica, NY	7	5	1	1	—	—	—
Yonkers, NY	23	22	—	1	—	—	3
E.N. Central	2,116	1,465	484	111	34	22	172
Akron, OH	55	40	10	2	1	2	8
Canton, OH	46	36	10	—	—	—	6
Chicago, IL	243	159	66	12	6	—	18
Cincinnati, OH	120	73	28	9	4	6	18
Cleveland, OH	274	205	51	13	3	2	13
Columbus, OH	251	175	61	11	2	2	29
Dayton, OH	163	117	34	9	2	1	18
Detroit, MI	U	U	U	U	U	U	U
Evansville, IN	44	32	9	2	1	—	—
Fort Wayne, IN	100	59	28	10	1	2	8
Gary, IN	13	3	5	4	1	—	—
Grand Rapids, MI	55	40	13	2	—	—	4
Indianapolis, IN	259	167	71	15	2	4	10
Lansing, MI	48	33	13	1	1	—	2
Milwaukee, WI	69	45	19	4	—	1	8
Peoria, IL	55	35	9	8	2	1	6
Rockford, IL	69	52	11	3	2	1	7
South Bend, IN	65	49	10	3	3	—	4
Toledo, OH	115	87	22	3	3	—	6
Youngstown, OH	72	58	14	—	—	—	7
W.N. Central	743	497	184	38	9	15	62
Des Moines, IA	120	98	17	4	1	—	7
Duluth, MN	33	26	4	2	1	—	4
Kansas City, KS	36	19	14	1	—	2	3
Kansas City, MO	136	88	37	8	2	1	10
Lincoln, NE	60	47	9	4	—	—	3
Minneapolis, MN	75	35	29	3	—	8	4
Omaha, NE	113	73	28	7	3	2	17
St. Louis, MO	7	3	2	1	—	1	1
St. Paul, MN	65	42	19	4	—	—	6
Wichita, KS	98	66	25	4	2	1	7
S. Atlantic	1,292	814	348	79	28	23	112
Atlanta, GA	190	114	51	15	7	3	13
Baltimore, MD	156	77	56	17	5	1	14
Charlotte, NC	143	95	36	9	—	3	19
Jacksonville, FL	159	106	40	11	2	—	18
Miami, FL	111	77	20	5	5	4	11
Norfolk, VA	50	28	15	2	2	3	1
Richmond, VA	51	31	16	2	—	2	4
Savannah, GA	68	41	23	2	2	—	7
St. Petersburg, FL	55	40	9	4	—	2	6
Tampa, FL	200	137	50	10	1	2	8
Washington, D.C.	99	60	30	2	4	3	10
Wilmington, DE	10	8	2	—	—	—	1
E.S. Central	1,091	714	283	57	18	18	93
Birmingham, AL	318	204	78	18	10	7	32
Chattanooga, TN	118	81	29	5	3	—	5
Knoxville, TN	113	71	30	12	—	—	4
Lexington, KY	66	49	13	3	—	1	7
Memphis, TN	211	133	62	7	3	6	19
Mobile, AL	42	33	6	2	—	1	3
Montgomery, AL	53	41	12	—	—	—	7
Nashville, TN	170	102	53	10	2	3	16
W.S. Central	1,301	851	318	90	26	16	89
Austin, TX	108	74	28	4	1	1	6
Baton Rouge, LA	86	51	15	15	5	—	—
Corpus Christi, TX	55	39	12	1	3	—	7
Dallas, TX	219	129	60	23	3	4	10
El Paso, TX	91	55	26	5	3	2	8
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	96	58	27	4	4	3	5
Little Rock, AR	107	65	30	8	—	4	—
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	277	193	66	11	5	2	26
Shreveport, LA	71	52	13	6	—	—	8
Tulsa, OK	191	135	41	13	2	—	19
Mountain	1,015	707	226	56	16	9	82
Albuquerque, NM	141	97	31	8	4	1	15
Boise, ID	52	38	11	1	—	2	3
Colorado Springs, CO	69	49	13	6	—	1	1
Denver, CO	85	56	21	7	—	1	9
Las Vegas, NV	294	202	73	12	3	3	19
Ogden, UT	40	29	7	2	2	—	4
Phoenix, AZ	U	U	U	U	U	U	U
Pueblo, CO	38	28	8	1	1	—	4
Salt Lake City, UT	116	81	19	11	5	—	9
Tucson, AZ	180	127	43	8	1	1	18
Pacific	1,866	1,277	439	90	32	28	201
Berkeley, CA	15	14	1	—	—	—	1
Fresno, CA	152	105	33	9	1	4	15
Glendale, CA	44	33	8	2	1	—	13
Honolulu, HI	76	58	11	6	1	—	11
Long Beach, CA	76	48	23	3	1	1	10
Los Angeles, CA	275	191	60	13	8	3	36
Pasadena, CA	39	29	7	3	—	—	3
Portland, OR	198	126	55	12	2	3	11
Sacramento, CA	219	149	54	8	4	4	26
San Diego, CA	40	25	9	2	1	3	14
San Francisco, CA	128	87	31	6	3	1	17
San Jose, CA	224	147	58	9	5	5	25
Santa Cruz, CA	26	19	7	—	—	—	1
Seattle, WA	150	97	42	7	1	3	7
Spokane, WA	71	59	10	1	1	—	8
Tacoma, WA	133	90	30	9	3	1	3
Total¶	**11,627**	**7,879**	**2,756**	**624**	**195**	**171**	**983**

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 Adult Immunization Schedule — United States, 2011

Each year, the Advisory Committee on Immunization Practices (ACIP) reviews the recommended adult immunization schedule to ensure that the schedule reflects current recommendations for the licensed vaccines. In October 2010, ACIP approved the adult immunization schedule for 2011, which includes several changes. The notation for influenza vaccination in the figure and footnotes was changed to reflect the expanded recommendation for annual influenza vaccination for all persons aged 6 months and older, which was approved by ACIP in February 2010. In October 2010, ACIP issued a permissive recommendation for use of tetanus, diphtheria, and acellular pertussis (Tdap) vaccine in adults aged 65 years and older, approved the recommendation that Tdap vaccine be administered regardless of how much time has elapsed since the most recent tetanus and diphtheria toxoids (Td)–containing vaccine, and approved a recommendation for a 2-dose series of meningococcal vaccine in adults with certain high-risk medical conditions. The vaccines listed in the figures have been reordered to keep all universally recommended vaccines together (e.g., influenza, Td/Tdap, varicella, human papillomavirus [HPV], and zoster vaccines). Clarifications were made to the footnotes for measles, mumps, and rubella (MMR) vaccination; HPV vaccine; revaccination with pneumococcal polysaccharide vaccine (PPSV), and *Haemophilus influenza* type b (Hib) vaccine. Finally, a statement has been added to the box at the bottom of the footnotes to clarify that a vaccine series does not need to be restarted, regardless of the time that has elapsed between doses.

Additional information is available as follows: schedule (in English and Spanish) at http://www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm; information about adult vaccination at http://www.cdc.gov/vaccines/default.htm; ACIP statements for specific vaccines at http://www.cdc.gov/vaccines/pubs/acip-list.htm; and reporting adverse events at http://www.vaers.hhs.gov or by telephone, 800-822-7967.

The recommended adult immunization schedule has been approved by the Advisory Committee on Immunization Practices, the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, and the American College of Physicians.

Suggested citation: Centers for Disease Control and Prevention. Recommended adult immunization schedule—United States, 2011. MMWR 2011;60(4).

Changes for 2011

Footnotes (Figures 1 and 2)

- The influenza vaccination footnote (#1) is revised and shortened to reflect a recommendation for vaccination of all persons aged 6 months and older, including all adults. The high-dose influenza vaccine (Fluzone), licensed in 2010 for adults aged 65 years and older, is mentioned as an option for this age group.
- The Td/Tdap vaccination footnote (#2) has language added to indicate that persons aged 65 years and older who have close contact with an infant aged less than 12 months should get vaccinated with Tdap; the additional language notes that all persons aged 65 years and older may get vaccinated with Tdap. Also added is the recommendation to administer Tdap regardless of interval since the most recent Td-containing vaccine.
- The HPV vaccination footnote (#4) has language added to the introductory sentences to indicate that either quadrivalent vaccine or bivalent vaccine is recommended for females.
- The MMR vaccination footnote (#6) has been revised mainly by consolidating common language that previously had been part of each of the three vaccine component sections into one introductory statement.
- The revaccination with PPSV footnote (#8) clarifies that one-time revaccination after 5 years only applies to persons with indicated chronic conditions who are aged 19 through 64 years.
- The meningococcal vaccination footnote (#9) has language added to indicate that a 2-dose series of meningococcal conjugate vaccine is recommended for adults with anatomic or functional asplenia, or persistent complement component deficiencies, as well adults with human immunodeficiency (HIV) virus infection who are vaccinated. Language has been added that a single dose of meningococcal vaccine is still recommended for those with other indications. Also, language has been added to clarify that quadrivalent meningococcal conjugate vaccine (MCV4) is a quadrivalent vaccine.
- The language for the selected conditions for the Hib footnote (#12) has been shortened to clarify which persons at high risk may receive 1 dose of Hib vaccine.

FIGURE 1. Recommended adult immunization schedule, by vaccine and age group — United States, 2011

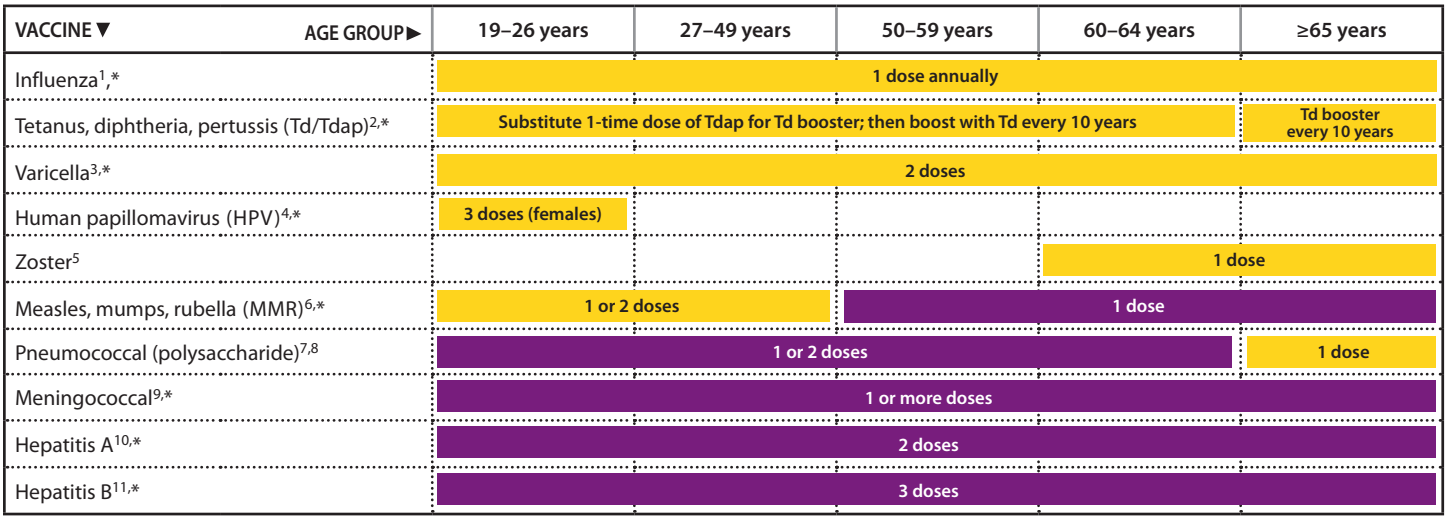
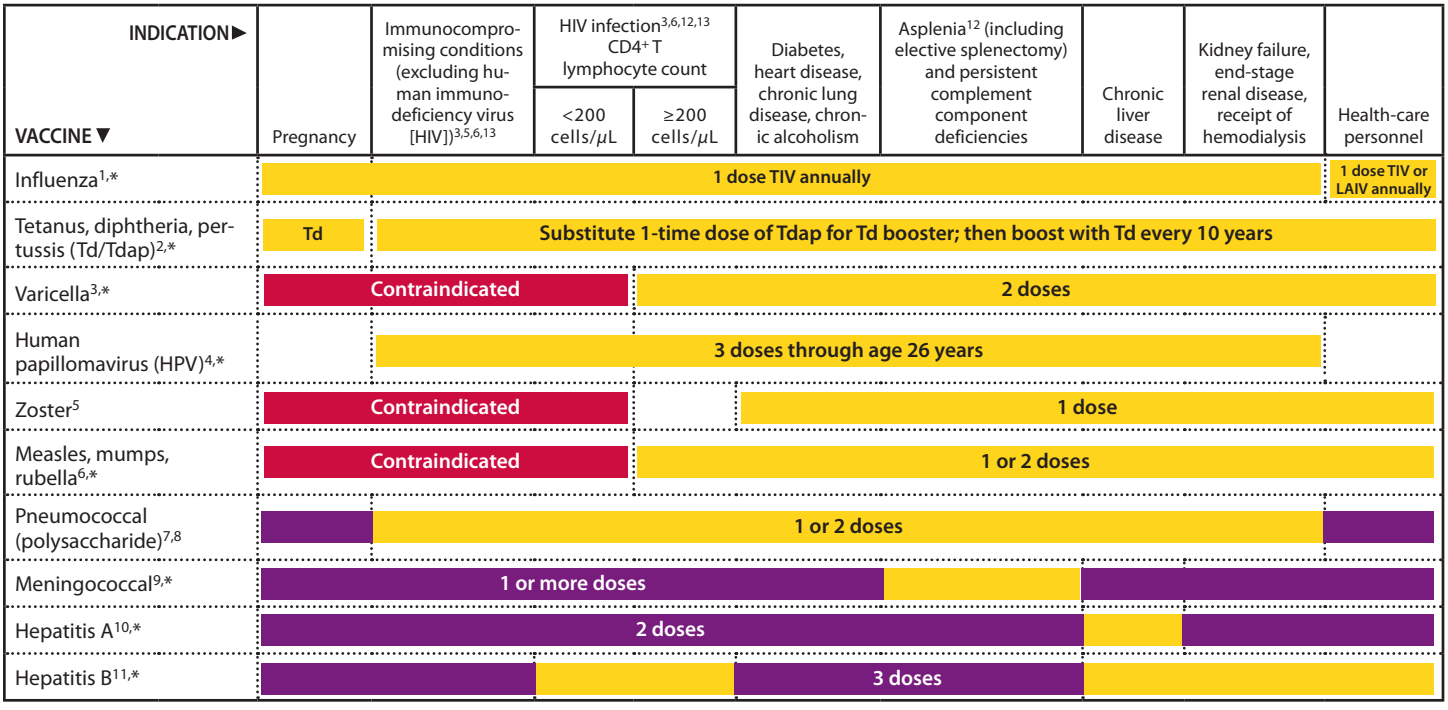


FIGURE 2. Vaccines that might be indicated for adults, based on medical and other indications — United States, 2011



NOTE: The above recommendations must be read along with the footnotes on pages 3–4 of this schedule.

1. **Influenza vaccination**

Annual vaccination against influenza is recommended for all persons aged 6 months and older, including all adults. Healthy, nonpregnant adults aged less than 50 years without high-risk medical conditions can receive either intranasally administered live, attenuated influenza vaccine (FluMist), or inactivated vaccine. Other persons should receive the inactivated vaccine. Adults aged 65 years and older can receive the standard influenza vaccine or the high-dose (Fluzone) influenza vaccine. Additional information about influenza vaccination is available at http://www.cdc.gov/vaccines/vpd-vac/flu/default.htm.

2. **Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination**

Administer a one-time dose of Tdap to adults aged less than 65 years who have not received Tdap previously or for whom vaccine status is unknown to replace one of the 10-year Td boosters, and as soon as feasible to all 1) postpartum women, 2) close contacts of infants younger than age 12 months (e.g., grandparents and child-care providers), and 3) health-care personnel with direct patient contact. Adults aged 65 years and older who have not previously received Tdap and who have close contact with an infant aged less than 12 months also should be vaccinated. Other adults aged 65 years and older may receive Tdap. Tdap can be administered regardless of interval since the most recent tetanus or diphtheria-containing vaccine.

Adults with uncertain or incomplete history of completing a 3-dose primary vaccination series with Td-containing vaccines should begin or complete a primary vaccination series. For unvaccinated adults, administer the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second. If incompletely vaccinated (i.e., less than 3 doses), administer remaining doses. Substitute a one-time dose of Tdap for one of the doses of Td, either in the primary series or for the routine booster, whichever comes first.

If a woman is pregnant and received the most recent Td vaccination 10 or more years previously, administer Td during the second or third trimester. If the woman received the most recent Td vaccination less than 10 years previously, administer Tdap during the immediate postpartum period. At the clinician's discretion, Td may be deferred during pregnancy and Tdap substituted in the immediate postpartum period, or Tdap may be administered instead of Td to a pregnant woman after an informed discussion with the woman.

The ACIP statement for recommendations for administering Td as prophylaxis in wound management is available at http://www.cdc.gov/vaccines/pubs/acip-list.htm.

3. **Varicella vaccination**

All adults without evidence of immunity to varicella should receive 2 doses of single-antigen varicella vaccine if not previously vaccinated or a second dose if they have received only 1 dose, unless they have a medical contraindication. Special consideration should be given to those who 1) have close contact with persons at high risk for severe disease (e.g., health-care personnel and family contacts of persons with immunocompromising conditions) or 2) are at high risk for exposure or transmission (e.g., teachers; child-care employees; residents and staff members of institutional settings, including correctional institutions; college students; military personnel; adolescents and adults living in households with children; nonpregnant women of childbearing age; and international travelers).

Evidence of immunity to varicella in adults includes any of the following: 1) documentation of 2 doses of varicella vaccine at least 4 weeks apart; 2) U.S.-born before 1980 (although for health-care personnel and pregnant women, birth before 1980 should not be considered evidence of immunity); 3) history of varicella based on diagnosis or verification of varicella by a health-care provider (for a patient reporting a history of or having an atypical case, a mild case, or both, health-care providers should seek either an epidemiologic link with a typical varicella case or to a laboratory-confirmed case or evidence of laboratory confirmation, if it was performed at the time of acute disease); 4) history of herpes zoster based on diagnosis or verification of herpes zoster by a health-care provider; or 5) laboratory evidence of immunity or laboratory confirmation of disease.

Pregnant women should be assessed for evidence of varicella immunity. Women who do not have evidence of immunity should receive the first dose of varicella vaccine upon completion or termination of pregnancy and before discharge from the health-care facility. The second dose should be administered 4–8 weeks after the first dose.

4. **Human papillomavirus (HPV) vaccination**

HPV vaccination with either quadrivalent (HPV4) vaccine or bivalent vaccine (HPV2) is recommended for females at age 11 or 12 years and catch-up vaccination for females aged 13 through 26 years.

Ideally, vaccine should be administered before potential exposure to HPV through sexual activity; however, females who are sexually active should still be vaccinated consistent with age-based recommendations. Sexually active females who have not been infected with any of the four HPV vaccine types (types 6, 11, 16, and 18, all of which HPV4 prevents) or any of the two HPV vaccine types (types 16 and 18, both of which HPV2 prevents) receive the full benefit of the vaccination. Vaccination is less beneficial for females who have already been infected with one or more of the HPV vaccine types. HPV4 or HPV2 can be administered to persons with a history of genital warts, abnormal Papanicolaou test, or positive HPV DNA test, because these conditions are not evidence of previous infection with all vaccine HPV types.

HPV4 may be administered to males aged 9 through 26 years to reduce their likelihood of genital warts. HPV4 would be most effective when administered before exposure to HPV through sexual contact.

A complete series for either HPV4 or HPV2 consists of 3 doses. The second dose should be administered 1–2 months after the first dose; the third dose should be administered 6 months after the first dose.

Although HPV vaccination is not specifically recommended for persons with the medical indications described in Figure 2, "Vaccines that might be indicated for adults based on medical and other indications," it may be administered to these persons because the HPV vaccine is not a live-virus vaccine. However, the immune response and vaccine efficacy might be less for persons with the medical indications described in Figure 2 than in persons who do not have the medical indications described or who are immunocompetent.

5. **Herpes zoster vaccination**

A single dose of zoster vaccine is recommended for adults aged 60 years and older regardless of whether they report a previous episode of herpes zoster. Persons with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication.

6. **Measles, mumps, rubella (MMR) vaccination**

Adults born before 1957 generally are considered immune to measles and mumps. All adults born in 1957 or later should have documentation of 1 or more doses of MMR vaccine unless they have a medical contraindication to the vaccine, laboratory evidence of immunity to each of the three diseases, or documentation of provider-diagnosed measles or mumps disease. For rubella, documentation of provider-diagnosed disease is not considered acceptable evidence of immunity.

Measles component: A second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who 1) have been recently exposed to measles or are in an outbreak setting; 2) are students in postsecondary educational institutions; 3) work in a health-care facility; or 4) plan to travel internationally. Persons who received inactivated (killed) measles vaccine or measles vaccine of unknown type during 1963–1967 should be revaccinated with 2 doses of MMR vaccine.

Mumps component: A second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who 1) live in a community experiencing a mumps outbreak and are in an affected age group; 2) are students in postsecondary educational institutions; 3) work in a health-care facility; or 4) plan to travel internationally. Persons vaccinated before 1979 with either killed mumps vaccine or mumps vaccine of unknown type who are at high risk for mumps infection (e.g. persons who are working in a health-care facility) should be revaccinated with 2 doses of MMR vaccine.

Rubella component: For women of childbearing age, regardless of birth year, rubella immunity should be determined. If there is no evidence of immunity, women who are not pregnant should be vaccinated. Pregnant women who do not have evidence of immunity should receive MMR vaccine upon completion or termination of pregnancy and before discharge from the health-care facility.

Health-care personnel born before 1957: For unvaccinated health-care personnel born before 1957 who lack laboratory evidence of measles, mumps, and/or rubella immunity or laboratory confirmation of disease, health-care facilities should 1) consider routinely vaccinating personnel with 2 doses of MMR vaccine at the appropriate interval (for measles and mumps) and 1 dose of MMR vaccine (for rubella), and 2) recommend 2 doses of MMR vaccine at the appropriate interval during an outbreak of measles or mumps, and 1 dose during an outbreak of rubella. Complete information about evidence of immunity is available at http://www.cdc.gov/vaccines/recs/provisional/default.htm.

7. **Pneumococcal polysaccharide (PPSV) vaccination**

Vaccinate all persons with the following indications:

Medical: Chronic lung disease (including asthma); chronic cardiovascular diseases; diabetes mellitus; chronic liver diseases; cirrhosis; chronic alcoholism; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy [if elective splenectomy is planned, vaccinate at least 2 weeks before surgery]); immunocompromising conditions (including chronic renal failure or nephrotic syndrome); and cochlear implants and cerebrospinal fluid leaks. Vaccinate as close to HIV diagnosis as possible.

Other: Residents of nursing homes or long-term care facilities and persons who smoke cigarettes. Routine use of PPSV is not recommended for American Indians/Alaska Natives or persons aged less than 65 years unless they have underlying medical conditions that are PPSV indications. However, public health authorities may consider recommending PPSV for American Indians/Alaska Natives and persons aged 50 through 64 years who are living in areas where the risk for invasive pneumococcal disease is increased.

8. **Revaccination with PPSV**

One-time revaccination after 5 years is recommended for persons aged 19 through 64 years with chronic renal failure or nephrotic syndrome; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy); and for persons with immunocompromising conditions. For persons aged 65 years and older, one-time revaccination is recommended if they were vaccinated 5 or more years previously and were aged less than 65 years at the time of primary vaccination.

9. **Meningococcal vaccination**

Meningococcal vaccine should be administered to persons with the following indications:

Medical: A 2-dose series of meningococcal conjugate vaccine is recommended for adults with anatomic or functional asplenia, or persistent complement component deficiencies. Adults with HIV infection who are vaccinated should also receive a routine 2-dose series. The 2 doses should be administered at 0 and 2 months.

Other: A single dose of meningococcal vaccine is recommended for unvaccinated first-year college students living in dormitories; microbiologists routinely exposed to isolates of *Neisseria meningitidis*; military recruits; and persons who travel to or live in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the "meningitis belt" of sub-Saharan Africa during the dry season [December through June]), particularly if their contact with local populations will be prolonged. Vaccination is required by the government of Saudi Arabia for all travelers to Mecca during the annual Hajj.

Meningococcal conjugate vaccine, quadrivalent (MCV4) is preferred for adults with any of the preceding indications who are aged 55 years and younger; meningococcal polysaccharide vaccine (MPSV4) is preferred for adults aged 56 years and older. Revaccination with MCV4 every 5 years is recommended for adults previously vaccinated with MCV4 or MPSV4 who remain at increased risk for infection (e.g., adults with anatomic or functional asplenia, or persistent complement component deficiencies).

10. Hepatitis A vaccination

Vaccinate persons with any of the following indications and any person seeking protection from hepatitis A virus (HAV) infection:

Behavioral: Men who have sex with men and persons who use injection drugs.

Occupational: Persons working with HAV-infected primates or with HAV in a research laboratory setting.

Medical: Persons with chronic liver disease and persons who receive clotting factor concentrates.

Other: Persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A (a list of countries is available at http://wwwn.cdc.gov/travel/contentdiseases.aspx).

Unvaccinated persons who anticipate close personal contact (e.g., household or regular babysitting) with an international adoptee during the first 60 days after arrival in the United States from a country with high or intermediate endemicity should be vaccinated. The first dose of the 2-dose hepatitis A vaccine series should be administered as soon as adoption is planned, ideally 2 or more weeks before the arrival of the adoptee.

Single-antigen vaccine formulations should be administered in a 2-dose schedule at either 0 and 6–12 months (Havrix), or 0 and 6–18 months (Vaqta). If the combined hepatitis A and hepatitis B vaccine (Twinrix) is used, administer 3 doses at 0, 1, and 6 months; alternatively, a 4-dose schedule may be used, administered on days 0, 7, and 21–30, followed by a booster dose at month 12.

11. Hepatitis B vaccination

Vaccinate persons with any of the following indications and any person seeking protection from hepatitis B virus (HBV) infection:

Behavioral: Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than one sex partner during the previous 6 months); persons seeking evaluation or treatment for a sexually transmitted disease (STD); current or recent injection-drug users; and men who have sex with men.

Occupational: Health-care personnel and public-safety workers who are exposed to blood or other potentially infectious body fluids.

Medical: Persons with end-stage renal disease, including patients receiving hemodialysis; persons with HIV infection; and persons with chronic liver disease.

Other: Household contacts and sex partners of persons with chronic HBV infection; clients and staff members of institutions for persons with developmental disabilities; and international travelers to countries with high or intermediate prevalence of chronic HBV infection (a list of countries is available at http://wwwn.cdc.gov/travel/contentdiseases.aspx).

Hepatitis B vaccination is recommended for all adults in the following settings: STD treatment facilities; HIV testing and treatment facilities; facilities providing drug-abuse treatment and prevention services; health-care settings targeting services to injection-drug users or men who have sex with men; correctional facilities; end-stage renal disease programs and facilities for chronic hemodialysis patients; and institutions and nonresidential day-care facilities for persons with developmental disabilities.

Administer missing doses to complete a 3-dose series of hepatitis B vaccine to those persons not vaccinated or not completely vaccinated. The second dose should be administered 1 month after the first dose; the third dose should be given at least 2 months after the second dose (and at least 4 months after the first dose). If the combined hepatitis A and hepatitis B vaccine (Twinrix) is used, administer 3 doses at 0, 1, and 6 months; alternatively, a 4-dose Twinrix schedule, administered on days 0, 7, and 21 to 30, followed by a booster dose at month 12 may be used.

Adult patients receiving hemodialysis or with other immunocompromising conditions should receive 1 dose of 40 μg/mL (Recombivax HB) administered on a 3-dose schedule or 2 doses of 20 μg/mL (Engerix-B) administered simultaneously on a 4-dose schedule at 0, 1, 2, and 6 months.

12. Selected conditions for which *Haemophilus influenzae* type b (Hib) vaccine may be used

1 dose of Hib vaccine should be considered for persons who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy, if they have not previously received Hib vaccine.

13. Immunocompromising conditions

Inactivated vaccines generally are acceptable (e.g., pneumococcal, meningococcal, influenza [inactivated influenza vaccine]) and live vaccines generally are avoided in persons with immune deficiencies or immunocompromising conditions. Information on specific conditions is available at http://www.cdc.gov/vaccines/pubs/acip-list.htm.

These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly indicated for adults ages 19 years and older, as of January 1, 2011. For all vaccines being recommended on the adult immunization schedule: a vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Licensed combination vaccines may be used whenever any components of the combination are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are issued during the year, consult the manufacturers' package inserts and the complete statements from the Advisory Committee on Immunization Practices (http:// www.cdc.gov/vaccines/pubs/acip-list.htm).

Report all clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available at http://www.vaers.hhs.gov or by telephone, 800-822-7967.

Information on how to file a Vaccine Injury Compensation Program claim is available at http://www.hrsa.gov/vaccinecompensation or by telephone, 800-338-2382. Information about filing a claim for vaccine injury is available through the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, extent of available data, and contraindications for vaccination also is available at http://www.cdc.gov/vaccines or from the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 24 hours a day, 7 days a week.

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