MMWR™
Morbidity and Mortality Weekly Report
www.cdc.gov/mmwr

Weekly November 27, 2009 / Vol. 58 / No. 46

World AIDS Day — December 1, 2009

Since 1998, World AIDS Day has drawn attention to the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) pandemic. The global theme for this year's observance on December 1 is Universal Access and Human Rights.

Various biologic, cultural, and political factors combine to make women especially vulnerable to HIV. In 2008, an estimated 16.5 million women worldwide were living with HIV infection, and women and girls accounted for nearly 60% of new infections (*1*). Additional programs are needed to reduce the risk for infection in women, including programs that reduce economic dependence and gender-based violence and increase legal protections and educational opportunities for women and girls (*1*).

Worldwide, progress continues in providing access to treatment. At the end of 2008, approximately 4 million persons in low- and middle-income countries were receiving antiretroviral therapy, an increase of 36% from the previous year (*2*).

In the United States, in 2006, an estimated 1.1 million persons were living with HIV infection (*3*), and 56,300 persons were newly infected (*4*). HIV infection in the United States disproportionately affects blacks, Hispanics, and men who have sex with men (*3,4*).

References

1. Joint United Nations Programme on HIV/AIDS and World Health Organization. AIDS epidemic update 2009. Available at http://www.unaids.org/en/KnowledgeCentre/HIVData/EpiUpdate/EpiUpdArchive/2009/default.asp. Accessed November 24, 2009.
2. World Health Organization. Towards universal access: scaling up priority HIV/AIDS interventions in the health sector: progress report 2009. Geneva, Switzerland: World Health Organization; 2009. Available at http://www.who.int/hiv/pub/tuapr_2009_en.pdf.
3. CDC. HIV prevalence estimates—United States, 2006. MMWR 2008;57:1073–6.
4. Hall HI, Song R, Rhodes P, et al; HIV Incidence Surveillance Group. Estimation of HIV incidence in the United States. JAMA 2008;300:520–9.

HIV Infection Among Injection-Drug Users — 34 States, 2004–2007

Injection-drug users (IDUs) acquire human immunodeficiency virus (HIV) infection by sharing drug equipment with HIV-infected persons and by engaging in risky sexual behavior. In 2007, injection-drug use was the third most frequently reported risk factor for HIV infection in the United States, after male-to-male sexual contact and high-risk heterosexual contact (*1*). To characterize HIV-infected IDUs aged ≥13 years in the United States, CDC analyzed data from the national notifiable disease reporting system for 2004–2007 from the 34 states that had conducted confidential, name-based HIV surveillance since at least 2003. The results of that analysis indicated that, during 2004–2007, 62.2% of IDUs with a new diagnosis of HIV infection were males, 57.5% were blacks or African Americans, and 74.8% lived in urban areas at the time of their HIV diagnosis. In addition, during 2004–2006, approximately 40% of HIV-infected IDUs received late HIV diagnoses (i.e., diagnosis of acquired immunodeficiency syndrome [AIDS] <12 months after the date of HIV diagnosis). To reduce the prevalence of HIV infection and late HIV diagnosis among IDUs, HIV prevention programs serving IDUs should have comprehensive approaches that incorporate access to HIV testing as part of community-based outreach, drug abuse treatment, and syringe exchange programs.

HIV infection and AIDS are notifiable diseases in all 50 states, the District of Columbia, and five U.S. territories. Although all states have had AIDS reporting since the early

INSIDE

The *MMWR* series of publications is published by Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30333.

Suggested Citation: Centers for Disease Control and Prevention. [Article title]. MMWR 2009;58:[inclusive page numbers].

1980s, HIV surveillance with uniform reporting was not implemented in all states until 2008.* CDC regards data from states with confidential, name-based, HIV surveillance systems as sufficient to monitor trends and estimate risk behaviors for HIV infection after 4 continuous years of reporting (*1*). The HIV and AIDS diagnosis data for IDUs in this report were obtained from case report forms from the 34 states† with such reporting since December 2003.

The data in this report represent IDUs who received a new diagnosis of HIV infection, regardless of when that infection was acquired. Data were adjusted for reporting delays (i.e., the time between diagnosis and report); IDU risk factor information was imputed for persons without sufficient information (*1*). IDUs who also were categorized as men who have sex with men (MSM) were excluded from the analysis. The number and percentage of IDUs who received HIV diagnoses were estimated by sex, age, race/ethnicity, and area of residence at time of HIV diagnosis. Area of residence was categorized as urban (≥500,000 population), suburban (50,000–499,999), or rural (nonmetropolitan area).

Because no standard national population estimates exist for IDUs, calculation of new HIV diagnosis rates used 2007 general population estimates from the U.S. Census.§ In addition, to identify characteristics associated with late diagnosis of HIV infection, stratified multivariate analyses using log-binomial models were conducted to estimate prevalence ratios by sex and age group in the three racial/ethnic populations with the most HIV-infected IDUs (whites, blacks or African Americans, and Hispanics or Latinos). An HIV diagnosis was considered late if diagnosis of AIDS was received <12 months after the date of HIV diagnosis.

During 2004–2007, a total of 152,917 persons received a diagnosis of HIV infection in the 34 states, including 19,687 (12.9%) IDUs. The majority of HIV-infected IDUs (62.2%) were males (Table 1). By age group, the highest percentage of HIV diagnoses among IDUs (33.2%) was observed among persons aged 35–44 years. By race/ethnicity,¶ blacks or African Americans accounted for 11,321 (57.5%) of HIV-infected IDUs, whites for 4,216 (21.4%), Hispanics or Latinos

* Case definitions and additional information regarding HIV reporting available at http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/technicalnotes.htm.

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

§ Available at http://www.census.gov/popest/archives/2000s/vintage_2007.

¶ For this report, persons identified as white, black or African American, Asian, Native Hawaiian or other Pacific Islander, American Indian or Alaska Native, or of other or unknown race are non-Hispanic. Persons identified as Hispanic or Latino might be of any race.

TABLE 1. Estimated number,* percentage, and average annual rate† of new diagnoses of human immunodeficiency virus (HIV) infection,§ among injection-drug users (IDUs),¶ by selected characteristics — 34 states, 2004–2007**

Characteristic	No.	(%)††	Rate
Sex			
Male	12,253	(62.2)	3.9
Female	7,434	(37.8)	2.2
Age group (yrs)			
13–24	1,453	(7.4)	1.1
25–34	3,758	(19.1)	3.5
35–44	6,538	(33.2)	5.7
45–54	5,621	(28.6)	5.0
55–64	1,831	(9.3)	2.2
≥65	486	(2.5)	0.5
Race/Ethnicity			
American Indian/Alaska Native	117	(0.6)	2.1
Asian	79	0.4)	0.4
Black/African American	11,321	(57.5)	11.0
Hispanic/Latino	3,764	(19.1)	4.9
Native Hawaiian/Other Pacific Islander	10	(0.1)	2.4
White	4,216	(21.4)	0.9
Multiple	180	(0.9)	—
Area of residence§§			
Urban	14,726	(74.8)	3.7
Suburban	2,683	(13.6)	2.1
Rural	2,125	(10.8)	1.7
Unknown	153	(0.8)	—
Total	**19,687**	**(100)**	**3.0**

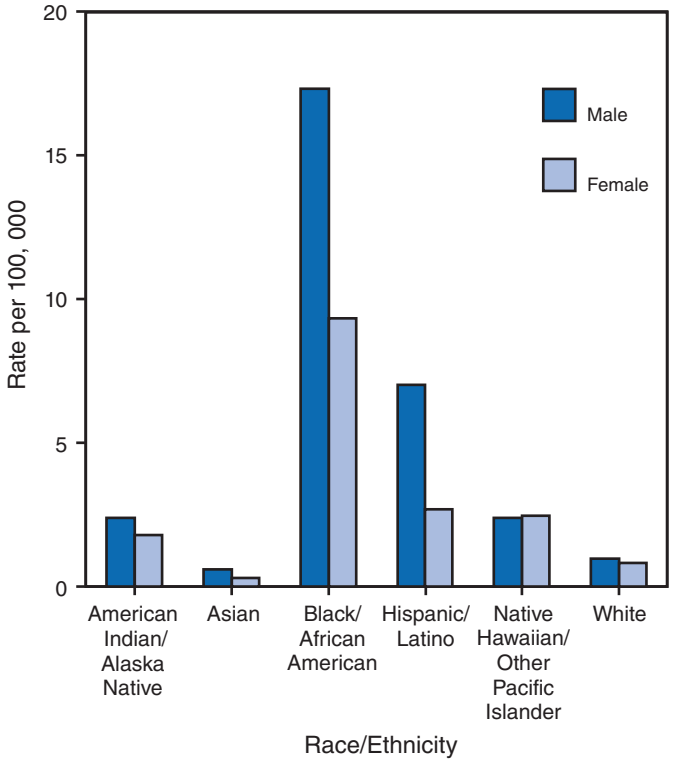
* N = 19,687. Includes persons who received a diagnosis of HIV infection with or without acquired immunodeficiency syndrome. Data as of June 2008, adjusted for reporting delays and missing IDU risk factor information.
† Per 100,000 general population with each characteristic.
§ Case definitions and additional information regarding HIV reporting available at http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/technicalnotes.htm.
¶ Excludes persons categorized as IDUs/men who have sex with men.
** Data were reported by 34 states with confidential, name-based reporting since at least December 2003: Alabama, Alaska, Arizona, Arkansas, Colorado, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.
†† Percentages might not add to 100% because of rounding.
§§ Urban: ≥500,000 population. Suburban: 50,000–499,999. Rural: nonmetropolitan area.

for 3,764 (19.1%), American Indians or Alaska Natives for 117 (0.6%), Asians for 79 (0.4%), and Native Hawaiians or Other Pacific Islanders for 10 (0.1%). The average annual rate of new HIV infection diagnosis per 100,000 general population during 2004–2007 was 11.0 for black or African American IDUs, 4.9 per 100,000 for Hispanics or Latinos, and 0.9 per 100,000 for whites (Table 1).

By area of residence, 14,726 (74.8%) IDUs with a new HIV diagnosis lived in urban areas (Table 1). By race/ethnicity and sex, male blacks or African Americans (17.3) had the highest average annual rate of new HIV diagnosis per 100,000 general population during 2004–2007, followed by female black or African Americans (9.3), male Hispanics or Latinos (7.0), and female Hispanics or Latinos (2.7) (Figure).

During 2004–2006, approximately 40% of the estimated 14,715 IDUs with HIV received late diagnoses. In each of the three racial/ethnic populations analyzed (whites, blacks or African Americans, and Hispanics or Latinos), higher percentages of males received a late diagnosis than females (Table 2). Compared with persons aged 13–24 years, higher percentages of persons in older age groups received a late diagnosis of HIV infection (Table 2).

FIGURE. Estimated average annual rate* of new diagnoses of human immunodeficiency virus (HIV) infection† among injection-drug users (IDUs),§ by race/ethnicity and sex — 34 states,¶ 2004–2007**



* Per 100,000 general population.
† Case definitions and additional information regarding HIV reporting available at http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/technicalnotes.htm.
§ Excludes persons categorized as IDUs/men who have sex with men.
¶ Data were reported by 34 states with confidential, name-based reporting since at least December 2003: Alabama, Alaska, Arizona, Arkansas, Colorado, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.
** Includes persons (N = 19,507) who received a diagnosis of HIV infection with or without acquired immunodeficiency syndrome. Data as of June 2008, adjusted for reporting delays and missing IDU risk factor information.

TABLE 2. Estimated number* and percentage of late diagnoses† of human immunodeficiency virus (HIV) infection§ among white, black/African American and Hispanic/Latino injection-drug users,¶ by sex and age group — 34 states, 2004–2006**

Sex/Age group	White				Black/African American				Hispanic/Latino			
	No. IDUs with late HIV diagnosis	(% IDUs with late HIV diagnosis††)	APR§§	(95% CI¶¶)	No. IDUs with late HIV diagnosis	(% IDUs with late HIV diagnosis)	APR	(95% CI)	No. IDUs with late HIV diagnosis	(% IDUs with late HIV diagnosis)	APR	(95% CI)
Sex												
Female	459	(31.7)	Referent	—	1,248	(37.9)	Referent	—	290	(38.6)	Referent	—
Male	731	(43.2)	1.2	(1.1–1.3)	2,208	(42.4)	1.1	(1.0–1.1)	931	(45.8)	1.1	(1.0–1.3)
Age group (yrs)												
13–24	31	(12.5)	Referent	—	123	(19.9)	Referent	—	57	(27.8)	Referent	—
25–34	171	(26.1)	2.0	(1.4–2.9)	458	(33.0)	1.7	(1.4–2.0)	267	(39.3)	1.4	(1.1–1.8)
35–44	454	(39.0)	3.0	(2.1–4.2)	1,133	(41.0)	2.0	(1.7–2.4)	433	(44.4)	1.6	(1.2–2.0)
45–54	386	(47.6)	3.6	(2.5–5.0)	1,182	(45.0)	2.2	(1.9–2.6)	313	(49.0)	1.7	(1.4–2.2)
55–64	119	(56.8)	4.2	(2.9–6.0)	431	(48.6)	2.4	(2.0–2.9)	107	(50.3)	1.8	(1.4–2.3)
≥65	29	(55.1)	4.1	(2.7–6.2)	128	(60.3)	3.0	(2.5–3.6)	44	(61.9)	2.2	(1.6–2.9)
Total	**1,190**	**(37.9)**	**—**	**—**	**3,456**	**(40.7)**	**—**	**—**	**1,221**	**(43.9)**	**—**	**—**

* N = 5,867. Includes persons who received a diagnosis of HIV infection with or without acquired immunodeficiency syndrome. Data as of June 2008, adjusted for reporting delays and missing IDU risk factor information.
† An HIV diagnosis was considered late if diagnosis of acquired immunodeficiency syndrome was received <12 months after the date of HIV diagnosis.
§ Case definitions and additional information regarding HIV reporting available at http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/technicalnotes.htm.
¶ Excludes persons categorized as IDUs/men who have sex with men.
** Data were reported by 34 states with confidential, name-based reporting: Alabama, Alaska, Arizona, Arkansas, Colorado, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.
†† Calculated by dividing the number of IDUs with late HIV diagnoses by the total number of IDUs with new HIV diagnoses for each sex/age group.
§§ Adjusted prevalence ratio (i.e., adjusted for sex or age group).
¶¶ Confidence interval.

Reported by: *A Grigoryan, MD, RL Shouse, MD, T Durant, PhD, TD Mastro, MD, L Espinoza, DDS, M Chen, MS, T Kajese, MSPH, X Wei, MS, HI Hall, PhD, Div of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC.*

Editorial Note: Since the peak of the HIV epidemic among IDUs in the late 1980s, HIV incidence among IDUs has decreased by nearly 80% (*2*). Despite that overall decline, IDUs continue to represent a substantial proportion of persons with new HIV diagnoses. Recent evidence suggests many IDUs continue to engage in high-risk behaviors such as sharing syringes and having unprotected sex (32% and 63% during the past 12 months, respectively [*3*]). The higher number of HIV infections among blacks or African Americans is consistent with reports that blacks or African Americans are more likely to inject drugs than whites and have higher rates of HIV infection overall (*1,4*). HIV prevention programs should be enhanced to target IDUs, especially black or African American IDUs, and to always include HIV testing as a component of the prevention program.

Although a recent analysis indicated that overall testing during the preceding 12 months among IDUs was high (72%) (*3*), the results in this report indicated that, during 2004–2006, approximately 40% of IDUs received late HIV diagnoses. In another previous analysis, the percentage of late HIV diagnoses among IDUs was found to be significantly higher than among persons in the other major risk behavior categories: MSM (35%), MSM/IDUs (37%) and persons who engage in high-risk heterosexual contact (37%) (CDC, unpublished data, 2009). In addition, IDUs tend to receive HIV diagnoses at older ages than persons who are not IDUs (*1*), suggesting that IDUs might continue high-risk behaviors at older ages (*5*) or might be more likely to receive late testing and diagnosis.

In this report, as in previous analyses, late diagnosis of HIV infection was interpreted as a diagnosis that occurred <12 months before a diagnosis of AIDS. An alternative interpretation of that sequence is that some persons have HIV infection that progresses more rapidly to AIDS (*6*). In addition, more rapid progression to AIDS has been observed among IDUs than among MSM (*7*). However, other models of rapid HIV progression suggest that the proportion of persons who progress to AIDS <12 months after diagnosis of HIV infection is only 45 in 10,000 patients and thus would have minimal impact on the findings in this analysis (*8*).

Persons who receive an HIV diagnosis late in the course of their infection receive HIV treatment late and also represent missed opportunities for counseling, education, and substance abuse treatment. To identify all HIV infections as early as possible, including those in IDUs, CDC recommends routine HIV screening in all health-care settings for persons

What is already known on this topic?

In 2007, injection-drug use was the third most frequently reported risk factor among persons with diagnosed human immunodeficiency virus (HIV) infection in the United States after male-to-male sexual contact and high-risk heterosexual contact.

What is added by this report?

During 2004–2007, 62% of injection-drug users (IDUs) with diagnosed HIV infection were males, 58% were blacks or African Americans, and 75% lived in urban areas at the time of their HIV diagnosis; during 2004–2006, approximately 40% of IDUs with diagnosed HIV infection were deemed to be diagnosed with HIV late in the course of their infection.

What are the implications for public health practice?

HIV prevention programs should be enhanced to target IDUs, especially black or African American IDUs, to address both risk from injecting and from risky sexual behavior, to seek new opportunities for testing IDUs (e.g., in correctional facilities or mental health clinics), and to include HIV testing consistently as a component of the prevention program.

aged 13–64 years and pregnant women and retesting at least annually for all persons at high risk for HIV (*9*).

The findings in this report are subject to at least four limitations. First, this report only includes data from 34 states with confidential, name-based HIV reporting since 2003. Although HIV is now a reportable condition in all 50 states, name-based HIV reporting was not implemented in all 50 states until 2008. The 34 states with data analyzed in this report are estimated to represent 66% of all AIDS cases in the United States (*1*). Certain areas with historically high AIDS morbidity that have not conducted confidential, name-based HIV surveillance since 2003 (e.g., California, Illinois, and the District of Columbia) were not included, thus the results might not be nationally representative. Second, diagnoses of HIV infection might not always represent new infections. CDC has established a new system for measuring incident HIV infection at the population level, providing a tool to assess HIV infection among IDUs apart from HIV diagnoses alone (*2*). However, diagnosis data continue to be an important indicator for monitoring HIV disparities and potentially adverse outcomes (e.g., late diagnosis). Third, misclassification of the HIV diagnosis date might have occurred in certain cases. For example, some persons might have had positive results from anonymous, unreported HIV tests before they had a confidential HIV test that was reported to a health department, making the time from initial HIV diagnosis to AIDS diagnosis appear shorter than was actually the case. Finally, this analysis did not consider the frequency of HIV testing or screening among IDUs. Variations in screening rates might lead to higher or lower rates of HIV diagnosis.

The overall declines in new HIV infections among IDUs since the 1980s likely are related to decreases in injection-drug use or the sharing of injection equipment and changes in social networks of IDUs (e.g., associating with persons who do not have HIV infection or who are less likely to share injecting equipment) (*9*). However, many IDUs with newly diagnosed infection have suboptimal access to and utilization of highly active antiretroviral therapy (HAART), and initiate HAART at more advanced stages of infection (*10*). Programs to prevent HIV among IDUs should address both risk from injecting and risk from unsafe sexual behavior. HIV testing should be a key component of any comprehensive strategy, and new opportunities to test IDUs (e.g., in correctional facilities or mental health clinics) should be considered. In addition, newer testing technologies such as rapid HIV testing might enable programs to reach IDUs who would otherwise not be tested.

References

1. CDC. HIV/AIDS surveillance report, 2007. Vol. 19. Atlanta, GA: US Department of Health and Human Services, CDC; 2009. Available at http://www.cdc.gov/hiv/topics/surveillance/resources/reports. Accessed November 24, 2009.
2. Hall HI, Song R, Rhodes P, et al; HIV Incidence Surveillance Group. Estimation of HIV incidence in the United States. JAMA 2008;300:520–9.
3. CDC. HIV-associated behaviors among injecting-drug users—23 cities, United States, May 2005–February 2006. MMWR 2009;58:329–32.
4. Santibanez SS, Garfein RS, Swartzendruber A, Purcell DW, Paxton LA, Greenberg AE. Update and overview of practical epidemiologic aspects of HIV/AIDS among injection drug users in the United States. J Urban Health 2006;83:86–100.
5. Kwiatkowski CF, Booth RE. HIV risk behaviors among older American drug users. J Acquir Immune Defic Syndr 2003;33:S131–7.
6. CDC. Investigation of a new diagnosis of multidrug-resistant, dual-tropic HIV-1 infection —New York City, 2005. MMWR 2006;55:793–6.
7. El-Sadr W, Paik M, Gorman J, Stein Z. Increased morbidity and more rapid progression in HIV-infected injection drug users. Proceedings of the International Conference on AIDS. June 6–11, 1993; Berlin, Germany.
8. Gange S, Munoz A. Variations in the natural history of HIV seroconverters in US military cohorts. Proceedings of the 12th Conference on Retroviruses and Opportunistic Infections. February 22–25, 2005; Boston, MA.
9. CDC. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. MMWR 2006;55(No. RR-14).
10. Celentano DD, Galai N, Sethi AK, et al. Time to initiating highly active antiretroviral therapy among HIV-infected injection drug users. AIDS 2001;15:1707–15.

Acute HIV Infection — New York City, 2008

Acute human immunodeficiency virus (HIV) infection (AHI) is a highly infectious phase of disease that lasts approximately 2 months and is characterized by nonspecific clinical symptoms (*1*). AHI contributes disproportionately to HIV transmission because it is associated with a high level of viremia, despite negative or indeterminate antibody (Ab) tests (*2*). Diagnosis of AHI with individual or pooled nucleic acid amplification tests (p-NAAT) can enable infected persons to adopt behaviors that reduce HIV transmission, facilitate partner referral for counseling and testing, and identify social networks of persons with elevated rates of HIV transmission (*3*). The national HIV surveillance case definition does not distinguish AHI from other stages of HIV infection (*4*), and the frequency of AHI among reported HIV cases is unknown. In 2008, to increase detection of AHI and demonstrate the feasibility of AHI surveillance, the New York City Department of Health and Mental Hygiene (NYC DOHMH) initiated p-NAAT screening at four sexually transmitted disease (STD) clinics and enhanced citywide HIV surveillance (using a standard case definition) to differentiate AHI among newly reported cases. Seventy cases of AHI (representing 1.9% of all 3,635 HIV diagnoses reported in New York City) were identified: 53 cases from enhanced surveillance and 17 cases from p-NAAT screening (representing 9% of 198 HIV diagnoses at the four clinics). Men who have sex with men (MSM) constituted 81% of AHI cases. Screening STD clinic patients, especially MSM, with p-NAAT can identify additional cases of HIV infection. Surveillance for AHI is feasible and can identify circumstances in which HIV prevention efforts should be intensified.

Screening for AHI in Four STD Clinics

NYC DOHMH operates nine STD clinics in the five boroughs of New York City.* All clinics offer rapid HIV-Ab screening on blood specimens. In May 2008, NYC DOHMH began phasing in routine p-NAAT screening for AHI at four New York City STD clinics, beginning at Jamaica in Queens, then Chelsea in Manhattan and Fort Greene in Brooklyn in June, and finally Morrisania in the Bronx in November. Clinics were selected because of their HIV testing volume (39,000 [65%] of all HIV tests performed at New York City STD clinics in 2007) and availability of space to process the additional laboratory specimens. Testing was conducted by a commercial vendor.† Specimens from all patients whose rapid HIV-Ab test was negative were tested by polymerase chain reaction in pools of 512 specimens. If the pool was negative for HIV RNA, all component specimens were classified as "presence of HIV not detected." If the pool was positive, component specimens were tested to identify which specimen(s) contained HIV RNA.

From May 5 to December 31, 2008, the four STD clinics performed 21,425 rapid HIV-Ab tests, of which 184 (0.9%) were HIV-Ab positive. HIV RNA was detected by p-NAAT in 17 (0.08%) of the 21,241 Ab-negative specimens. These 17 AHI cases represented 9% of 198 HIV diagnoses§ at the four clinics during the screening period: 11 (11%) of 103 at Chelsea, one of five at Morrisania, two (5%) of 40 at Jamaica, and three (6%) of 50 at Fort Greene.

STD clinic staff members received positive p-NAAT results indicative of AHI approximately 3 weeks¶ after patients had received negative rapid HIV-Ab test results. Public health advisors (PHAs) telephoned patients and asked them to return as soon as possible for follow-up testing and a more extensive interview regarding risk behaviors and symptoms. Sixteen of the 17 patients returned, most within 2 weeks of notification (range: 0–22 days). The patient who did not return was contacted and interviewed but had moved to another jurisdiction and received follow-up there.

Median age of patients with AHI was 28 years (range: 19–42 years) (Table). All 16 male patients were MSM; three reported having sex with men and women. The female patient reported commercial sex work and injection-drug use. Seroconversion was confirmed by Western blot in all 16 patients who returned. Nine patients were documented in the New York City STD registry, seven as having had previous and two as having concurrent syphilis infection. Eleven patients recalled one or more symptoms during the 4 weeks preceding receipt of their AHI diagnosis: fever (seven), malaise (six), night sweats (six), sore throat (five), joint pain (four), swollen glands (four), and headache (four). Patients reported an average of four sex partners (range: 0–16; two sex partners also were needle-sharing partners) during the 3 months before diagnosis. Of the 44 partners reported, sufficient information was provided to notify 36 (82%) of their HIV exposure, and among those, 16 (44%) reported that they were HIV-infected and were documented in the New York City HIV Surveillance Registry. Of the 20 who did not know their HIV status, 16 agreed to HIV testing, performed on the same day as notification. One partner was

* Bronx, Brooklyn, Manhattan, Queens, and Staten Island.

† Additional information regarding the procedure used is available at http://www.ngi.com/services/screening.asp. Protocols and validation data for use of this polymerase chain reaction technique for patient diagnosis were submitted and approved by the New York State Clinical Laboratory Evaluation Program.

§ Three patients tested twice with Ab-positive results each time.

¶ Results for negative pools are returned to NYC DOHMH in 10–12 business days. Results from deconstruction and individual testing of a positive pool take an additional 3–5 days. Thus, a positive result of p-NAAT would take 15–20 days from specimen collection until patient notification. Conversely, the results of conventional confirmatory testing after a reactive rapid test are returned to NYC DOHMH within 7–10 business days, and the patients who are rapid-test positive are instructed to return in 10 days to receive the results of confirmatory testing.

TABLE. Demographic characteristics and human immunodeficiency virus (HIV) transmission risks of acute HIV infection cases* — New York City, 2008†

Characteristic	Total		Source of acute HIV diagnosis: p-NAAT§ in sexually transmitted disease clinics¶		Source of acute HIV diagnosis: Provider clinical or laboratory diagnosis citywide	
	No.	(%)	No.	(%)	No.	(%)
Total	**70**	**(100)**	**17**	**(100)**	**53**	**(100)**
Sex						
Male	**66**	**(94.3)**	16	(94.1)	50	(94.3)
Female	**4**	**(5.7)**	1	(5.9)	3	(5.7)
Race/Ethnicity						
Black, non-Hispanic	**23**	**(32.9)**	8	(47.1)	15	(28.3)
White, non-Hispanic	**18**	**(25.7)**	3	(17.6)	15	(28.3)
Hispanic	**25**	**(35.7)**	6	(35.3)	19	(35.8)
Asian/Pacific Islander	**3**	**(4.3)**	0	(0.0)	3	(5.7)
Multiracial	**1**	**(1.4)**	0	(0.0)	1	(1.9)
Age group (yrs) at diagnosis						
0–12	**0**	**(0.0)**	0	(0.0)	0	(0.0)
13–19	**6**	**(8.6)**	1	(5.9)	5	(9.4)
20–29	**27**	**(38.6)**	9	(52.9)	18	(34.0)
30–39	**21**	**(30.0)**	5	(29.4)	16	(30.2)
40–49	**9**	**(12.9)**	2	(11.8)	7	(13.2)
50–59	**6**	**(8.6)**	0	(0.0)	6	(11.3)
≥60	**1**	**(1.4)**	0	(0.0)	1	(1.9)
Transmission risk						
MSM** only	**54**	**(77.1)**	15	(88.2)	39	(73.6)
IDU†† only	**2**	**(2.9)**	1	(5.9)	1	(1.9)
MSM and IDU	**3**	**(4.3)**	1	(5.9)	2	(3.8)
Heterosexual§§	**4**	**(5.7)**	0	(0.0)	4	(7.5)
Unknown/Under investigation	**7**	**(10.0)**	0	(0.0)	7	(13.2)
Area of residence						
Bronx	**7**	**(10.0)**	2	(11.8)	5	(9.4)
Brooklyn	**19**	**(27.1)**	6	(35.3)	13	(24.5)
Manhattan	**26**	**(37.1)**	5	(29.4)	21	(39.6)
Queens	**11**	**(15.7)**	3	(17.6)	8	(15.1)
Staten Island	**0**	**(0.0)**	0	(0.0)	0	(0.0)
Unknown or other¶¶	**7**	**(10.0)**	1	(5.9)	6	(11.3)

* HIV infections meeting New York City Department of Health and Mental Hygiene case definition of acute HIV infection, available at http://www.nyc.gov/html/doh/downloads/pdf/ah/definition-acute-hiv-infection.pdf.
† Among cases included in the New York City HIV Surveillance Registry as of March 15, 2009.
§ Pooled nucleic acid amplification test. Protocol and additional information available at http://www.ngi.com/services/screening.asp.
¶ Included four clinics: Jamaica in Queens, Chelsea in Manhattan, Fort Greene in Brooklyn, and Morrisania in the Bronx.
** Men who have sex with men.
†† Injection-drug user.
§§ Includes persons who had heterosexual sex with an HIV-infected person, an injection-drug user, or a person who has received blood products. For females only, also includes sex with a male and at least one of the following: history of prostitution, multiple male sex partners, sexually transmitted disease, crack/cocaine use, sex with a bisexual male, probable heterosexual transmission as noted in medical chart, or negative history of injection drug use.
¶¶ Includes one homeless patient.

HIV-Ab positive. The Ab-negative patients, who also were p-NAAT negative, were encouraged to retest in 3 months.

Citywide Enhanced Surveillance

NYC DOHMH conducts surveillance to identify new cases of HIV infection from provider reports and electronically reportable laboratory results (positive Western blot and all CD4 and HIV viral load results).** In follow-up, PHAs obtain demographic and risk information through chart review at the provider facility and match data to criteria in the national HIV surveillance case definition (*4*). In January 2008, NYC DOHMH enhanced routine HIV surveillance with a working case definition for AHI (Box) to determine whether AHI was present at initial diagnosis. PHAs also documented evidence for AHI, including testing history or provider diagnosis.

Enhanced surveillance identified 53 AHI cases among the 3,482 new HIV diagnoses investigated by PHAs. Forty (75%) met the AHI case definition on the basis of laboratory criteria.

** Since 2005, CD4 results (even if in the normal range) and HIV viral loads (even if undetectable) have been reportable in New York state.

BOX. New York City Department of Health and Mental Hygiene case definition for surveillance of acute human immunodeficiency virus (HIV) infection

Not previously reported as an HIV case to the New York City HIV Surveillance Registry
AND one of the following (A, B, or C):

A) A negative Western blot (WB), indeterminate WB, or negative screening test for HIV antibody (e.g., enzyme immunoassay or rapid test) AND an HIV viral load of >5,000 copies/mL measured from a specimen drawn within 1 month of the specimen that provided the negative WB, indeterminate WB, or negative screening test for HIV.

B) Serial (all within 1 month) HIV antibody tests consistent with a recent HIV infection (e.g., an indeterminate WB followed by a positive WB, a negative WB followed by a positive WB, or a negative screening test, such as enzyme immunoassay, for HIV antibody, followed by a positive WB).

C) Physician-documented diagnosis of "acute HIV" or "primary HIV."

Median age was 32 years (range: 15–62 years) among 50 men and three women (Table). Among the 50 men, 41 (82%) reported having sex with men. Among the 53 AHI cases, 23 (43%) were diagnosed at hospitals, 17 (32%) at private physician offices, 12 (23%) at community clinics, and one (2%) at a college clinic; each of 35 health-care providers diagnosed 1–10 cases.

Summary of Case Characteristics

Of the 3,635 new HIV diagnoses in 2008 reported to NYC DOHMH by March 15, 2009, AHI was present in 70 (1.9%), including the 17 diagnosed by p-NAAT, at the time of their HIV diagnosis. Sixty-six (94%) patients with AHI were male, and 57 (81%) were MSM. By comparison, 2,726 (75%) of all new HIV diagnoses reported in NYC in 2008 were in males, including 1,580 (43%) in MSM.

Reported by: *CW Shepard, MD, K Gallagher, MPH, SD Bodach, MPH, A Kowalski, MPH, AS Terzian, PhD, E Begier, MD, I Weisfuse, MD, New York City Dept of Health and Mental Hygiene. S Blank, MD, Div of Sexually Transmitted Diseases Prevention; BM Branson, MD, Div of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC.*

Editorial Note: The findings in this report confirm that p-NAAT can increase AHI diagnoses among high-risk STD clinic patients (*3,5,6*), and indicate that AHI diagnoses can be made apart from p-NAAT screening programs. The 70 AHI cases identified by NYC DOHMH represent a fraction of the 4,762 (72 per 100,000 population) new infections previously estimated to occur annually in New York City (*7*), highlighting the need to improve awareness and detection of AHI. Notably, 81% of AHI cases identified in New York City were among MSM, reflecting the high HIV incidence in MSM (*7*) and demonstrating the risk for missed diagnoses when HIV-Ab testing alone is used in a high-risk, high-incidence population (*5*). Without p-NAAT screening, 9% of the HIV infections documented by the four STD clinics during the screening period would have been missed. However, because HIV RNA is not detectable for approximately 10 days after infection (*8*), even NAAT will not identify all infected persons. CDC recommends that persons with very recent high-risk exposures be encouraged to retest after 4–6 weeks, even if p-NAAT is negative.

Based on the results, NYC DOHMH has expanded p-NAAT screening to all nine New York City STD clinics and improved ascertainment of AHI in routine surveillance. As of June 26, 2009, reportable laboratory results that might indicate recent viral acquisition are flagged systematically as potential AHI cases before investigation. Because AHI is associated with high levels of HIV RNA (*9*), an HIV RNA measurement >100,000 copies/mL for a person not previously reported to the health department will prompt PHAs to query the ordering provider about possible AHI. The health department also plans to include AHI data in routine surveillance reports it distributes and has sent letters asking that providers consider AHI in patients who have a negative HIV-Ab test and a high HIV viral load and document AHI diagnoses in patient charts.

The findings in this report are subject to at least three limitations. First, STD clinics were not selected for p-NAAT screening based on demographic or behavioral characteristics of their patients. Targeted screening, particularly for MSM, can improve the yield of p-NAAT screening (*6*). The majority of AHI cases were found at the Chelsea STD clinic, which served approximately one third of patients identified as MSM at New York City STD clinics in 2007. Thus, the yield of the New York City p-NAAT screening program might be lower in clinics serving fewer MSM. Second, the findings are subject to testing bias. The New York City STD clinics used a rapid HIV-Ab test that is less sensitive during the first 3 weeks after acquisition of HIV than conventional Ab tests (*5*). Use of a test with a longer Ab-negative window increases the apparent yield of p-NAAT screening, because more specimens are negative for HIV antibodies and subsequently tested by p-NAAT. Finally, cases of AHI might have been misclassified

What is already known on this topic?

Acute human immunodeficiency virus (HIV) infection (AHI) is a short, highly infectious phase of disease that can be detected by screening antibody-negative specimens with pooled nucleic acid amplification tests (p-NAAT). However, because most HIV screening is conducted only with antibody tests, only a small proportion of HIV infections are diagnosed during the acute phase.

What is added by this report?

In 2008, p-NAAT screening at four sexually transmitted disease (STD) clinics in New York City detected 17 cases of AHI: 16 were among men who have sex with men (MSM), and nine were in patients who had a history of previous or concurrent syphilis. Citywide surveillance identified 53 cases of AHI, of which 77% were in MSM. AHI represented 9% of all HIV diagnoses at the four STD clinics, but only 1.9% of the 3,635 HIV diagnoses reported in New York City during 2008 and 1.5% of the 4,762 new HIV infections estimated to have occurred.

What are the implications for public health practice?

Screening for AHI, particularly among MSM, can pinpoint circumstances in which new HIV infections are occurring and identify highly infectious persons who, with their partners, require concentrated efforts to prevent further transmission. Intensive risk reduction interventions should focus on MSM, especially those with syphilis.

or not detected. The AHI case definition allowed for provider diagnosis only, which might have resulted in misclassification among the 13 (25%) cases that met the case definition on this criterion alone. Reportable laboratory events in the case definition might not have been reported in full or accurately to NYC DOHMH. The laboratory criteria in the case definition also included nonreportable laboratory events, such as enzyme immunoassay (EIA) and negative Western blot results, that might not have been available or ascertained during chart review. Lack of documentation of a recent negative test might have resulted in undercounting of AHI.

In the United States, NAAT is the only option available for detecting AHI before seroconversion. Ab-negative specimens are pooled to reduce costs, but p-NAAT testing increases the expense of HIV screening and the turnaround time for test results. Alternatives to detect AHI soon might be available. Combination assays that use an EIA technique for p24 antigen and HIV Ab can detect HIV infection within 3–5 days of first detection by NAAT (*10*). Such tests can make routine screening for AHI more feasible and potentially less expensive by detecting almost all acute HIV infections with a single screening test. Confirmatory testing with both an Ab test and RNA test after a reactive combination test result could then distinguish AHI or longstanding HIV infection. These combination tests have been available in Europe and elsewhere since 2002, and several manufacturers have indicated their intention to seek Food and Drug Administration approval for use in the United States (CDC, personal communication, 2009). Wider use of p-NAAT and combination assays could increase AHI identification. CDC is considering a national AHI case definition for use in national HIV surveillance to identify areas or populations in which HIV infection is spreading, and for assessing new methods for AHI screening.

Acknowledgments

This report is based, in part, on contributions from NYC DOHMH staff members involved in AHI screening, surveillance, and response.

References

1. Daar ES, Pilcher CD, Hect FM. Clinical presentation and diagnosis of primary HIV-1 infection. Curr Opin HIV AIDS 2008;3:10–15.
2. Hollingsworth TD, Anderson RM, Fraser C. HIV-1 transmission, by stage of infection. J Infect Dis 2008;198:687–93.
3. Pilcher CD, Fiscus SA, Nguyen TQ, et al. Detection of acute infections during HIV testing in North Carolina. N Engl J Med 2005;352:1873–83.
4. CDC. Revised surveillance case definitions for HIV infection among adults, adolescents, and children aged <18 months and for HIV infection and AIDS among children aged 18 months to <13 years—United States, 2008. MMWR 2008;57(No. RR-10).
5. Stekler JD, Swenson PD, Coombs RW, et al. HIV testing in a high-incidence population: is antibody testing alone good enough? Clin Infect Dis 2009;49:444–53.
6. Miller WC, Leone PA, McCoy S, Nguyen TQ, William DE, Pilcher CD. Targeted testing for acute HIV infection in North Carolina. AIDS 2009;23:835–43.
7. New York City Department of Health and Mental Hygiene. HIV epidemiology and field services semiannual report covering January 1, 2007–December 31, 2007. New York, NY: New York City Department of Health and Mental Hygiene; 2008. Available at http://home2.nyc.gov/html/doh/downloads/pdf/dires/dires-2008-report-semi2.pdf. Accessed November 19, 2009.
8. Tomaras GD, Yates NL, Liu P, et al. Initial B-cell responses to transmitted human immunodeficiency virus type 1: virion-binding immunoglobulin M (IgM) and IgG antibodies followed by plasma anti-gp41 antibodies with ineffective control of initial viremia. J Virol 2008;82:12449–63.
9. Pilcher CD, Joaki G, Hoffman IF, et al. Amplified transmission of HIV-1: comparison of HIV-1 concentrations in semen and blood during acute and chronic infection. AIDS 2007;21:1723–30.
10. Ly TD, Ebel A, Faucher V, Fihman V, Laperche S. Could the new HIV combined p24 antigen and antibody assays replace p24 antigen specific assays? J Virol Methods 2007;143:86–94.

Pseudo-Outbreak of Antimony Toxicity in Firefighters — Florida, 2009

Antimony oxides, in combination with halogens, have been used as flame retardants in textiles since the 1960s. Uniforms made from fabric containing antimony are common among the estimated 1.1 million firefighters in the United States. In October 2008, CDC received a report from the fire chief of a fire department in Florida (fire department A) regarding an outbreak of antimony toxicity among 30 firefighters who had elevated antimony levels detected in hair samples. This report summarizes the ensuing health hazard evaluation conducted by CDC to determine the source of antimony exposure. In February 2009, CDC administered questionnaires to and collected urine samples from two groups of firefighters: 20 firefighters from fire department A who did not wear pants made from antimony-containing fabric, and 42 firefighters from fire department B (also located in Florida) who did. All 20 firefighters from fire department A and 41 (98%) from fire department B had urine antimony concentrations below or within the laboratory reference range (*1*). CDC concluded that wearing pants made from antimony-containing fabric was not associated with elevated levels of urinary antimony. Only validated methods (e.g., urine testing) should be used for the determination of antimony toxicity. Accurate and timely risk communication during suspected workplace exposures should underscore the importance of using validated tests, thereby refuting an unproven hypothesis, allaying unsubstantiated concerns, and enhancing public trust.

Firefighters' station uniforms typically are worn throughout a firefighter's shift, which can range from 8 to 48 hours. When responding to a fire, firefighters don turnout gear (i.e., outer protective clothing) over their station uniforms. Station uniforms are made from antimony-containing fabric, or from pure cotton, wool, and other flame-resistant materials. The pants evaluated during this evaluation, made by one manufacturer, consisted of a cotton and antimony trioxide and chloride flame-retardant fiber blend.

Fire department A had used antimony-containing pants for station uniforms since March 1997. In August 2008, unexplained neurologic symptoms of 1 year's duration (including generalized weakness, numbness, and hoarseness) in one long-tenured firefighter prompted him to undergo hair testing for heavy metals by a local physician. This test revealed an elevated antimony level according to the commercial laboratory's reference range. Subsequently, the local firefighters union encouraged all 199 fire department A firefighters to undergo testing for heavy metals. During September–November, a total of 29 of these firefighters independently underwent hair testing for heavy metals conducted by the same local physician at a private laboratory. The hair samples from these 29 firefighters were reported to have elevated antimony levels at an average of 10 times the commercial laboratory's reference range.

The local union suspected that the source of antimony exposure was the uniform pants. On October 6, fire department A suspended its requirement to wear the antimony-containing pants and advised that firefighters wear 100% cotton pants instead. From September 17 to November 11, a total of 44 firefighters from fire department A filed workers' compensation claims related to antimony exposure. Twenty-seven (61%) firefighters reported symptoms they attributed to antimony exposure, including fatigue, headache, muscle cramps, and joint pain. During November 2008–January 2009, print and television media and firefighter websites reported this apparent outbreak of antimony toxicity, causing national concern over the safety of the uniform pants.

In November 2008, CDC launched a health hazard evaluation by requesting and reviewing the workers' compensation claims related to antimony exposure. The half-life of antimony in urine is approximately 95 hours (*2*); therefore, to detect potential absorption occurring with use of antimony-containing pants, CDC investigators determined that a comparison group still using the pants was needed. Many fire departments had discontinued use of the pants because of negative media coverage. However, fire department B, also in Florida, had not reported any symptoms, continued to use the antimony-containing pants, and agreed to participate in the evaluation in January 2009.

During February 2–6, CDC conducted a site visit to measure urine antimony concentrations among firefighters, compare antimony concentrations between firefighters wearing and not wearing antimony-containing pants, and describe occupational factors potentially associated with elevated antimony concentrations. A convenience sample of 112 on-duty and off-duty fire department A firefighters was invited to participate.* Twenty-four (21%) participated (four civilian employees and 20 firefighters, including two who had filed workers' compensation claims). All 42 on-duty and off-duty firefighters from fire department B participated.

After obtaining informed consent, CDC administered surveys to all participants, which included questions concerning demographics, work history, and possible sources of exposure to antimony, such as live fire responses and at-risk secondary occupations. Spot urine samples were collected from all participants. Concentrations of antimony were measured at

* Convenience sample included 42 on-duty firefighters, 50 additional firefighters who had filed workers' compensation claims up until the site visit date, and 20 chief officers and fire inspectors.

CDC by inductively coupled dynamic reaction cell plasma mass spectrometry, in accordance with published protocols (*3*) and were adjusted for urine creatinine. The logarithmic urine antimony concentrations were distributed normally among participants, and this warranted a comparison of the means of the log transformed values for urine antimony concentrations between groups using the Student's t-test.

Fire department A participants generally were older and worked longer as firefighters (Table). The proportion of fire department A (38%) and B (31%) participants that had responded to a live fire, in which they might have been exposed to antimony-containing ash, was similar. Fire department A participants had not worn pants containing antimony during the preceding 4 months, whereas fire department B participants had worn the pants for a mean of 92 hours (the equivalent of nearly four 24-hour shifts) during the preceding 2 weeks. None of the participants reported other activities that might have exposed them to antimony, such as metal smelting or battery manufacturing (*2*).

All fire department A participants (100%) and all but one fire department B participant (98%) had urine antimony concentrations below or within the laboratory reference range of 0.120–0.364 μg/g creatinine for the general population (*1*). The median urine antimony concentration for fire department A participants was 0.059 μg/g creatinine (range: 0.027–0.285 μg/g creatinine) and for fire department B participants was 0.048 μg/g creatinine (range: 0.017–0.366 μg/g creatinine). The means of the log transformed urine antimony concentrations of both fire departments were not significantly different (p = 0.31). One fire department B firefighter had a urine antimony concentration of 0.366 μg/g creatinine, a clinically unimportant difference from the upper limit of the laboratory reference range.

TABLE. Characteristics of firefighters participating in an evaluation of a pseudo-outbreak of antimony toxicity — Florida, 2009

Characteristic	Fire department A (n = 24)*		Fire department B (n = 42)†	
Mean age (yrs)	49		39	
Mean no. of yrs spent as a firefighter	26		13	
Mean no. of yrs spent at fire department A or B	23		11	
	No.	(%)	No.	(%)
Male	23	(96)	39	(93)
Participated in a live fire response in preceding 2 wks	9	(38)	13	(31)

* Fire department A participants had not worn pants made from antimony-containing fabric during the preceding 4 months.
† All fire department B participants had worn pants made from antimony-containing fabric (mean duration: 92 hours) during the preceding 2 weeks.

What is already known on this topic?

Although antimony oxides have been used as flame retardants in textiles since the 1960s, no previous studies have been published about the health effects after dermal exposure in humans.

What is added by this report?

Results of the health hazard evaluation described in this report indicate that wearing pants made from antimony-containing fabric was not associated with elevated concentrations of urinary antimony among 65 persons tested.

What are the implications for public health practice?

Clinicians should use only a validated method, such as urine testing (not hair testing), to determine antimony toxicity, and officials responding to suspected workplace exposures should use accurate and timely risk communication to refute an unproven hypothesis, thereby allaying unsubstantiated concerns and enhancing the public trust.

CDC investigators concluded that wearing pants made from antimony-containing fabric was not associated with elevated levels of urinary antimony. By October 2009, a total of 77 fire department A firefighters filed workers' compensation claims concerning antimony exposure. Many claims were withdrawn after CDC's final report† was released; the remainder were dismissed by the city. As of October 2009, fire department A has not reinstated the requirement for antimony-containing uniforms; however, other fire departments nationwide continue to use them.

Reported by: *M Kawamoto, MD, S Durgam, MS, J Eisenberg, MD, Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health; K Caldwell, PhD, Div of Laboratory Sciences, National Center for Environmental Health; M de Perio, MD, EIS Officer, CDC.*

Editorial Note: The U.S population is exposed to low levels of antimony, a silver-white metal, every day through food, drinking water, and air (*4*). No studies have been published about the health effects after dermal exposure to or dermal absorption of antimony in humans (*4*). The findings in this report indicate no clinically important elevated antimony concentrations, as evidenced by urine testing, occurred in any firefighters, whether or not they wore antimony-containing pants.

This investigation highlights the importance of using validated methods for toxicity determination. Urine testing is the most reliable validated test for measuring antimony concentrations (*5*). The decision to perform laboratory testing for heavy metals should be based on whether symptoms are consistent with toxicity from these metals and whether a likelihood of exposure exists. Hair testing is not reliable

† Available at http://www.cdc.gov/niosh/hhe.

or valid for measuring heavy metals in the body (except for methylmercury) and does not predict toxicity (*6*). Standards on methods of hair collection, storage, and analysis are lacking. No regulation or certification of laboratories conducting hair analysis exists. Different laboratories have reported different results for hair samples collected from the same person and use different reference ranges (*7*). Hair analysis cannot distinguish between internal (substances inside one's body) and external (substances that might stick to hair, such as ash or hair-care products) exposure. These limitations render hair analysis results uninterpretable. The American Medical Association (*8*) and Agency for Toxic Substances and Disease Registry (*9*) do not recommend using hair testing in diagnosing or guiding treatment for heavy metal toxicity.

Symptoms of chronic antimony toxicity from inhalation or ingestion include headache, dizziness, and pulmonary and gastrointestinal symptoms.[§] The neurologic symptoms reported by the index firefighter were not consistent with antimony toxicity. The fatigue, headache, muscle cramps, and joint pain reported by fire department A firefighters in the workers' compensation claims were nonspecific and likely had unrelated etiologies.

Subjective nonspecific symptoms can trigger concerns about workplace or environmental exposures. Hypotheses for potential exposure sources can be based on inaccurate information. Health-care providers occasionally use invalid medical tests, which can lead to unnecessary, inappropriate treatments and delay appropriate medical care. Hair analysis is one test inappropriately used to propose an environmental and occupational cause for reported symptoms. Other such tests encountered during CDC health hazard evaluations include post-chelation urine testing for metal toxicity, use of peripheral neurofilaments for neurotoxic exposure, measurement of caffeine clearance for hepatotoxic exposure, and use of mold immunoassays for symptoms attributed to mold exposure.

This investigation highlights the public health importance of timely dissemination of accurate information. Before the site visit, investigators distributed information about antimony and the shortcomings of hair analysis. Shortly after the site visit, they posted questions and answers about the evaluation on a CDC website[¶] and on national firefighters unions' websites. Effective risk communication, which underscores the proper use of validated tests, can refute an unproven hypothesis, allay unsubstantiated concerns, and enhance public trust (*10*).

[§] Additional information available at http://origin.cdc.gov/niosh/docs/81-123/pdfs/0036.pdf.

[¶] Available at http://www.cdc.gov/niosh/fire/spotlight.html.

Acknowledgments

The findings in this report are based, in part, on contributions by B Bernard, E Page, T Hales, S Evans, J Clark, and C Toennis, National Institute for Occupational Safety and Health, CDC.

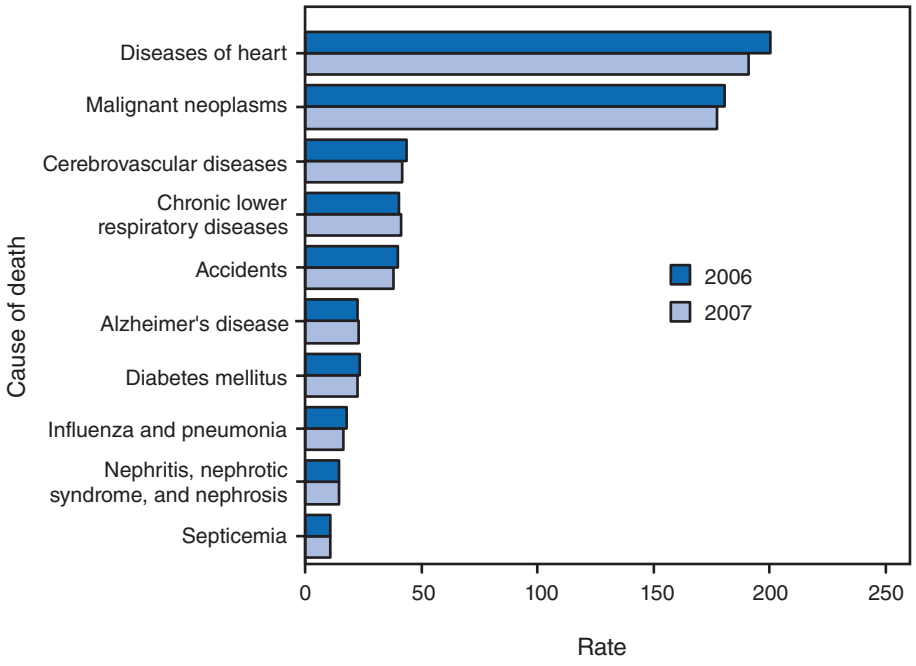
References

1. CDC. Third national report on human exposure to environmental chemicals. Atlanta, GA: US Department of Health and Human Services, CDC; 2005:15–7. Available at http://www.cdc.gov/exposurereport/pdf/thirdreport.pdf. Accessed November 17, 2009.
2. Kentner M, Leinemann M, Schaller KH, Weltle D, Lehnert G. External and internal antimony exposure in starter battery production. Int Arch Occup Environ Health 1995;67:119–23.
3. Caldwell K, Hartel J, Jarrett J, Jones RL. Inductively coupled plasma mass spectrometry to measure multiple toxic elements in urine in NHANES 1999–2000. Atomic Spectroscopy 2005;26:1–7.
4. Agency for Toxic Substances and Disease Registry. Toxicological profile for antimony and compounds. Atlanta, GA: US Department of Health and Human Services, Public Health Service; 1992. Available at http://www.atsdr.cdc.gov/toxprofiles/tp23.html. Accessed November 17, 2009.
5. Goldfrank L, Flomenbaum N, Lewin N, et al. Goldfrank's toxicologic emergencies. 8th ed. New York, NY: McGraw-Hill Professional; 2006:1244–50.
6. Harkins DK, Susten AS. Hair analysis: exploring the state of the science. Environ Health Perspect 2003;111:576–8.
7. Seidel S, Kreutzer R, Smith D, McNeel S, Gilliss D. Assessment of commercial laboratories performing hair mineral analysis. JAMA 2001;285:67–72.
8. American Medical Association. Hair analysis: a potential for abuse. Policy no. H-175.995. Chicago, IL: American Medical Association; 1994. Available at http://www.ama-assn.org/ad-com/polfind/Hlth-Ethics.pdf. Accessed November 17, 2009.
9. Agency for Toxic Substances and Disease Registry. Summary report: hair analysis panel discussion: exploring the state of the science. Atlanta, GA: US Department of Health and Human Services, Agency for Toxic Substances and Disease Registry; 2001. Available at http://www.atsdr.cdc.gov/hac/hair_analysis/index.html. Accessed November 17, 2009.
10. Covello V, Sandman PM. Risk communication: evolution and revolution. In: Wolbarst A, ed. Solutions to an environment in peril. Baltimore, MD: John Hopkins University Press; 2001:164–78.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Age-Adjusted Death Rates* for the 10 Leading Causes of Death — National Vital Statistics System, United States, 2006 and 2007†



* Rate per 100,000 U.S. standard population.
† Data for 2006 are final. Data for 2007 are preliminary. Rank based on 2007 preliminary data.

The 10 leading causes of death were the same in 2006 and 2007. The rankings also remained the same, with one exception. In 2007, Alzheimer's disease was the sixth leading cause of death, and diabetes the seventh; the ranks were reversed in 2006. Age-adjusted death rates for six of the 10 leading causes of death declined from 2006 to 2007 (from a decline of 1.8% for malignant neoplasms to a decline of 8.4% for influenza and pneumonia). Only the rate for chronic lower respiratory diseases increased (up by 1.7%). No changes were observed in the rates for Alzheimer's disease; nephritis, nephrotic syndrome, and nephrosis; and septicemia.

SOURCE: Xu JQ, Kochanek KD, Tejada-Vera B. Deaths: preliminary data for 2007. Natl Vital Stat Rep 2009;58(01). Hyattsville, MD: US Department of Health and Human Services, CDC; 2009. Available at http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_01.pdf.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending November 21, 2009 (46th week)*

Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years 2008	2007	2006	2005	2004	States reporting cases during current week (No.)
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	12	1	17	32	20	19	16	
infant	1	46	2	109	85	97	85	87	WA (1)
other (wound and unspecified)	1	20	1	19	27	48	31	30	WA (1)
Brucellosis	—	87	2	80	131	121	120	114	
Chancroid	1	22	1	25	23	33	17	30	FL (1)
Cholera	—	8	0	5	7	9	8	6	
Cyclosporiasis§	1	116	1	139	93	137	543	160	FL (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	38	0	62	55	67	80	112	
eastern equine	—	4	0	4	4	8	21	6	
Powassan	—	1	0	2	7	1	1	1	
St. Louis	—	10	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
Ehrlichia chaffeensis	6	720	10	1,137	828	578	506	338	MD (3), NC (3)
Ehrlichia ewingii	—	6	—	9	—	—	—	—	
Anaplasma phagocytophilum	5	594	14	1,026	834	646	786	537	NY (2), MN (2), MD (1)
undetermined	—	104	2	180	337	231	112	59	
Haemophilus influenzae,††									
invasive disease (age <5 yrs):									
serotype b	—	24	0	30	22	29	9	19	
nonserotype b	1	159	3	244	199	175	135	135	OK (1)
unknown serotype	1	200	3	163	180	179	217	177	TN (1)
Hansen disease§	—	53	2	80	101	66	87	105	
Hantavirus pulmonary syndrome§	—	10	0	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	3	177	4	330	292	288	221	200	CT (1), MN (1), MD (1)
Hepatitis C viral, acute	4	1,725	15	878	845	766	652	720	OH (1), FL (3)
HIV infection, pediatric (age <13 years)§§	—	—	3	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	35	301	0	90	77	43	45	—	NH (1), MA (1), RI (2), PA (2), MN (1), MO (1), NC (2), FL (3), TN (1), TX (2), CO (1), NM (8), WA (1), CA (1), IL (3), IN (1), KY (1), NY (1), SC (2)
Listeriosis	5	657	15	759	808	884	896	753	RI (1), NY (2), KY (1), TX (1)
Measles***	—	60	0	140	43	55	66	37	
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	2	227	4	330	325	318	297	—	OH (1), FL (1)
serogroup B	1	118	3	188	167	193	156	—	NE (1)
other serogroup	—	22	1	38	35	32	27	—	
unknown serogroup	7	399	10	616	550	651	765	—	NY (2), PA (1), OH (1), MO (2), OR (1)
Mumps	58	543	17	454	800	6,584	314	258	NY (24), NYC (34)
Novel influenza A virus infections	—	§§§	0	2	4	N	N	N	
Plague	—	7	0	3	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	8	0	8	12	21	16	12	
Q fever total§,¶¶¶:	—	74	2	124	171	169	136	70	
acute	—	63	1	110	—	—	—	—	
chronic	—	11	0	14	—	—	—	—	
Rabies, human	—	2	0	2	1	3	2	7	
Rubella****	—	4	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV§,††††	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	117	1	157	132	125	129	132	NY (1)
Syphilis, congenital (age <1 yr)	—	215	7	434	430	349	329	353	
Tetanus	—	9	0	19	28	41	27	34	
Toxic-shock syndrome (staphylococcal)§	1	75	1	71	92	101	90	95	PA (1)
Trichinellosis	—	12	0	39	5	15	16	5	
Tularemia	—	74	2	123	137	95	154	134	
Typhoid fever	1	297	4	449	434	353	324	322	WA (1)
Vancomycin-intermediate *Staphylococcus aureus*§	—	64	0	63	37	6	2	—	
Vancomycin-resistant *Staphylococcus aureus*§	—	—	—	—	2	1	3	1	
Vibriosis (noncholera *Vibrio* species infections)§	—	540	5	492	549	N	N	N	
Yellow fever	—	—	—	—	—	—	—	—	

See Table I 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 November 21, 2009 (46th week)*

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

* Incidence data for reporting year 2009 is provisional, whereas data for 2004 through 2008 are finalized.

† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. The total sum of incident cases is then divided by 25 weeks. Additional information is available at http://www.cdc.gov/epo/dphsi/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 domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.

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

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

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

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

¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since April 26, 2009, a total of 198 influenza-associated pediatric deaths associated with 2009 pandemic influenza A (H1N1) virus infection have been reported. Since August 30, 2009, a total of 172 influenza-associated pediatric deaths occurring during the 2009–10 influenza season have been reported. A total of 128 influenza-associated pediatric death occurring during the 2008-09 influenza season have been reported.

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

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

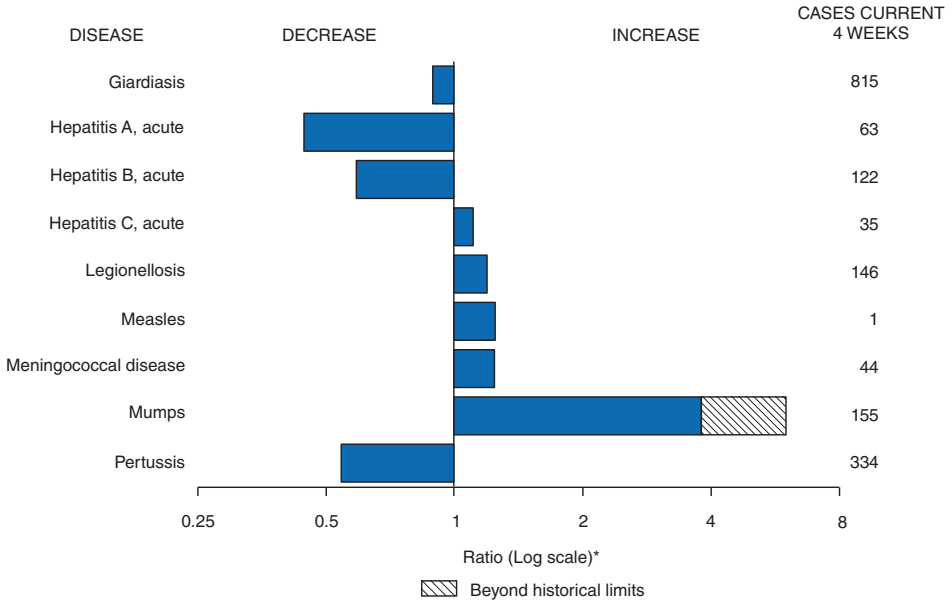
§§§ CDC discontinued reporting of individual confirmed and probable cases of novel influenza A (H1N1) viruses infections on July 24, 2009. CDC will report the total number of novel influenza A (H1N1) hospitalizations and deaths weekly on the CDC H1N1 influenza website (http://www.cdc.gov/h1n1flu).

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

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

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

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals November 21, 2009, with historical data



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

Notifiable Disease Data Team and 122 Cities Mortality Data Team

Patsy A. Hall

Deborah A. Adams
Willie J. Anderson
Jose Aponte
Lenee Blanton
Rosaline Dhara
Michael S. Wodajo
Pearl C. Sharp

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	Chlamydia†					Coccidiodomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 week		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	8,184	22,352	26,093	991,721	1,053,541	44	230	471	10,324	5,793	40	122	369	6,040	8,047
New England	821	756	1,655	35,426	33,080	—	0	1	1	1	1	6	43	381	372
Connecticut	250	224	1,306	10,318	10,045	N	0	0	N	N	—	0	36	36	41
Maine§	—	47	76	2,115	2,282	N	0	0	N	N	—	0	4	41	43
Massachusetts	480	350	944	17,259	15,291	N	0	0	N	N	—	2	15	150	164
New Hampshire	—	35	61	1,372	1,847	—	0	1	1	1	—	1	5	64	56
Rhode Island§	58	69	244	3,301	2,585	—	0	0	—	—	—	0	8	20	10
Vermont§	33	23	63	1,061	1,030	N	0	0	N	N	1	1	9	70	58
Mid. Atlantic	2,456	3,011	6,734	138,588	130,728	—	0	0	—	—	1	13	35	699	676
New Jersey	—	425	838	19,568	19,780	N	0	0	N	N	—	0	4	26	38
New York (Upstate)	699	589	4,563	28,299	24,360	N	0	0	N	N	—	3	12	197	240
New York City	1,274	1,146	1,982	53,139	49,760	N	0	0	N	N	—	1	8	66	102
Pennsylvania	483	825	1,001	37,582	36,828	N	0	0	N	N	1	8	19	410	296
E.N. Central	644	3,371	4,272	148,476	170,901	—	1	4	32	38	8	27	54	1,317	2,006
Illinois	—	1,046	1,425	43,968	52,420	N	0	0	N	N	—	2	8	123	199
Indiana	—	413	695	19,102	19,170	N	0	0	N	N	—	4	17	182	174
Michigan	588	869	1,332	40,345	39,730	—	0	3	18	29	1	5	11	240	242
Ohio	56	776	1,177	30,004	40,813	—	0	2	14	9	7	7	16	349	648
Wisconsin	—	332	494	15,057	18,768	N	0	0	N	N	—	8	24	423	743
W.N. Central	200	1,357	1,697	58,560	59,631	—	0	1	9	3	5	17	62	948	922
Iowa	146	178	256	8,470	8,133	N	0	0	N	N	1	3	13	184	272
Kansas	13	171	561	8,487	8,096	N	0	0	N	N	—	1	6	61	81
Minnesota	—	261	338	11,122	12,739	—	0	0	—	—	2	5	34	323	209
Missouri	—	509	638	22,302	21,784	—	0	1	9	3	2	3	12	168	168
Nebraska§	41	103	219	4,648	4,722	N	0	0	N	N	—	2	9	106	107
North Dakota	—	31	77	1,386	1,589	N	0	0	N	N	—	0	10	11	6
South Dakota	—	56	80	2,145	2,568	N	0	0	N	N	—	1	10	95	79
S. Atlantic	1,915	3,856	5,448	174,004	215,975	—	0	1	5	4	13	20	45	961	931
Delaware	94	87	180	4,203	3,275	—	0	1	1	1	—	0	2	8	11
District of Columbia	137	126	226	5,916	6,114	—	0	0	—	—	—	0	1	2	15
Florida	592	1,425	1,672	64,696	62,805	N	0	0	N	N	9	8	24	415	415
Georgia	1	726	1,909	27,416	36,843	N	0	0	N	N	2	5	23	308	233
Maryland§	441	422	772	18,628	20,912	—	0	1	4	3	—	1	5	37	44
North Carolina	—	0	1,193	—	31,990	N	0	0	N	N	—	0	9	58	64
South Carolina§	—	536	1,421	21,839	23,697	N	0	0	N	N	1	1	7	50	49
Virginia§	650	602	926	28,100	27,456	N	0	0	N	N	1	1	7	68	76
West Virginia	—	70	135	3,206	2,883	N	0	0	N	N	—	0	2	15	24
E.S. Central	706	1,755	2,208	80,181	75,983	—	0	0	—	—	1	3	10	197	160
Alabama§	51	459	627	20,800	22,054	N	0	0	N	N	—	1	5	53	68
Kentucky	—	245	642	11,857	10,731	N	0	0	N	N	—	1	4	60	32
Mississippi	—	457	840	20,537	18,426	N	0	0	N	N	—	0	3	12	17
Tennessee§	655	573	809	26,987	24,772	N	0	0	N	N	1	1	5	72	43
W.S. Central	400	2,994	5,820	137,706	132,898	—	0	1	1	3	6	9	271	454	2,052
Arkansas§	1	270	417	12,144	12,560	N	0	0	N	N	—	1	5	48	85
Louisiana	52	525	1,130	23,525	19,741	—	0	1	1	3	—	0	6	29	59
Oklahoma	345	174	2,728	12,104	11,687	N	0	0	N	N	—	2	11	116	123
Texas§	2	2,021	2,521	89,933	88,910	N	0	0	N	N	6	6	258	261	1,785
Mountain	484	1,405	2,145	61,611	66,390	44	158	368	8,218	3,826	2	9	26	470	548
Arizona	211	455	736	18,844	21,929	42	156	364	8,127	3,737	1	1	3	34	85
Colorado	—	329	727	14,305	15,961	N	0	0	N	N	—	2	10	130	108
Idaho§	7	67	245	3,152	3,442	N	0	0	N	N	1	1	7	82	62
Montana§	—	56	87	2,607	2,689	N	0	0	N	N	—	1	4	50	42
Nevada§	173	169	477	8,632	8,526	2	1	4	51	46	—	0	2	3	16
New Mexico§	84	182	540	8,083	7,214	—	0	2	9	31	—	2	8	120	168
Utah	9	100	176	4,262	5,243	—	1	2	30	10	—	0	3	31	44
Wyoming§	—	34	97	1,726	1,386	—	0	1	1	2	—	0	2	20	23
Pacific	558	3,490	4,682	157,169	167,955	—	41	172	2,058	1,918	3	13	25	613	380
Alaska	—	93	199	3,370	4,152	N	0	0	N	N	—	0	1	6	3
California	—	2,701	3,592	122,041	130,263	—	41	172	2,058	1,918	—	7	20	366	229
Hawaii	—	120	147	4,981	5,239	N	0	0	N	N	—	0	1	1	2
Oregon§	270	198	416	8,706	9,261	N	0	0	N	N	1	3	8	160	60
Washington	288	395	571	18,071	19,040	N	0	0	N	N	2	1	8	80	86
American Samoa	—	0	0	—	73	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	1	—	123	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	134	331	6,385	6,341	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	8	17	369	567	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Chlamydia refers to genital infections caused by *Chlamydia trachomatis*.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	142	318	498	15,471	16,489	2,025	5,395	6,918	237,252	295,612	19	60	124	2,528	2,398
New England	9	28	65	1,424	1,499	106	94	301	4,455	4,645	1	3	16	167	150
Connecticut	—	5	15	247	306	53	46	275	2,137	2,281	—	0	12	49	38
Maine§	2	3	13	187	161	—	2	9	119	84	—	0	2	17	17
Massachusetts	—	11	36	580	618	45	38	112	1,764	1,871	—	2	5	78	70
New Hampshire	—	3	11	157	145	—	2	6	94	94	—	0	2	11	9
Rhode Island§	2	1	6	58	81	3	6	19	296	286	1	0	7	8	8
Vermont§	5	3	14	195	188	5	1	4	45	29	—	0	1	4	8
Mid. Atlantic	21	62	104	2,831	3,069	467	590	1,138	28,100	29,033	6	11	25	525	451
New Jersey	—	6	17	215	459	—	94	122	4,078	4,669	—	2	7	104	80
New York (Upstate)	17	24	81	1,185	1,081	122	109	664	5,283	5,402	4	3	20	136	133
New York City	—	15	25	697	760	240	213	380	10,005	9,225	—	2	11	86	76
Pennsylvania	4	15	34	734	769	105	189	253	8,734	9,737	2	4	10	199	162
E.N. Central	22	44	70	2,070	2,473	314	1,090	1,436	46,697	60,905	2	12	28	517	392
Illinois	—	9	18	395	645	—	344	521	14,096	18,239	—	3	9	127	128
Indiana	N	0	11	N	N	—	141	223	6,116	7,691	—	1	22	62	65
Michigan	1	12	23	566	556	288	279	498	13,143	14,883	2	0	3	22	22
Ohio	21	15	28	732	800	26	251	431	9,555	14,599	—	2	6	87	119
Wisconsin	—	9	19	377	472	—	85	142	3,787	5,493	—	3	20	219	58
W.N. Central	4	24	141	1,400	1,795	69	276	373	12,486	14,944	3	3	15	144	179
Iowa	2	6	15	271	295	19	33	53	1,418	1,441	—	0	0	—	2
Kansas	—	2	11	96	149	38	44	83	2,087	1,999	—	0	2	13	19
Minnesota	—	0	104	343	590	—	41	64	1,823	2,715	—	0	10	50	54
Missouri	1	8	30	446	429	—	126	173	5,601	7,106	3	1	4	52	66
Nebraska§	1	3	9	157	186	12	24	55	1,212	1,260	—	0	4	23	27
North Dakota	—	0	16	22	17	—	2	14	87	114	—	0	4	6	11
South Dakota	—	1	5	65	129	—	6	20	258	309	—	0	0	—	—
S. Atlantic	64	70	109	3,295	2,655	649	1,148	1,956	50,441	75,517	5	14	31	624	608
Delaware	—	0	3	23	40	16	18	37	860	918	—	0	1	3	7
District of Columbia	—	0	5	22	60	41	50	88	2,334	2,309	—	0	1	2	8
Florida	48	38	59	1,739	1,138	195	411	486	18,625	20,737	4	4	10	203	159
Georgia	—	11	67	750	621	1	241	876	9,311	13,816	—	3	9	137	124
Maryland§	7	5	11	244	251	120	114	197	5,095	5,645	1	1	6	81	85
North Carolina	N	0	0	N	N	—	0	470	—	13,769	—	0	17	62	66
South Carolina§	3	2	8	95	116	—	162	412	6,921	8,561	—	1	5	59	54
Virginia§	6	8	31	375	362	276	147	308	6,863	9,096	—	1	6	50	82
West Virginia	—	1	5	47	67	—	10	20	432	666	—	0	3	27	23
E.S. Central	2	7	22	347	455	145	510	687	23,019	27,212	1	3	9	136	123
Alabama§	—	3	11	157	260	18	138	178	6,010	8,700	—	1	4	33	21
Kentucky	N	0	0	N	N	—	72	156	3,424	4,084	—	0	5	19	6
Mississippi	N	0	0	N	N	—	143	252	6,393	6,554	—	0	1	4	13
Tennessee§	2	4	18	190	195	127	157	230	7,192	7,874	1	2	6	80	83
W.S. Central	5	8	22	382	402	112	892	1,556	40,333	45,327	1	2	22	101	104
Arkansas§	4	2	9	138	128	—	82	134	3,737	4,121	—	0	3	16	13
Louisiana	—	2	8	96	134	10	168	418	7,647	8,412	—	0	1	12	10
Oklahoma	1	3	18	148	140	100	63	612	4,073	4,254	1	1	20	69	71
Texas§	N	0	0	N	N	2	559	696	24,876	28,540	—	0	1	4	10
Mountain	6	28	59	1,394	1,461	80	170	234	7,116	10,350	—	5	11	206	260
Arizona	2	4	7	179	123	31	51	88	2,238	3,039	—	1	7	69	94
Colorado	—	8	26	438	513	—	47	106	1,978	3,331	—	1	6	62	50
Idaho§	2	3	10	184	179	—	2	13	85	153	—	0	1	4	12
Montana§	—	2	11	119	81	—	1	5	69	111	—	0	1	1	4
Nevada§	1	1	10	67	109	30	28	93	1,502	1,954	—	0	2	15	16
New Mexico§	—	2	8	101	99	19	23	52	1,003	1,211	—	0	3	23	43
Utah	1	6	12	251	316	—	4	11	176	436	—	1	2	29	37
Wyoming§	—	1	4	55	41	—	1	5	65	115	—	0	1	3	4
Pacific	9	50	130	2,328	2,680	83	541	764	24,605	27,679	—	2	8	108	131
Alaska	—	2	7	100	95	—	15	24	578	481	—	0	3	17	19
California	—	33	55	1,503	1,760	—	447	657	20,688	22,760	—	0	4	25	42
Hawaii	—	0	2	15	40	—	11	24	536	552	—	0	3	24	17
Oregon§	3	7	18	360	414	44	20	42	885	1,071	—	1	3	39	51
Washington	6	7	74	350	371	39	40	71	1,918	2,815	—	0	2	3	2
American Samoa	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	73	—	0	0	—	—
Puerto Rico	—	2	10	101	202	—	4	24	206	254	—	0	1	3	1
U.S. Virgin Islands	—	0	0	—	—	—	2	7	93	110	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† 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 November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	Hepatitis (viral, acute), by type† A: Current week	A: Previous 52 weeks Med	A: Previous 52 weeks Max	A: Cum 2009	A: Cum 2008	B: Current week	B: Previous 52 weeks Med	B: Previous 52 weeks Max	B: Cum 2009	B: Cum 2008	Legionellosis: Current week	Legionellosis: Previous 52 weeks Med	Legionellosis: Previous 52 weeks Max	Legionellosis: Cum 2009	Legionellosis: Cum 2008
United States	13	36	89	1,639	2,307	23	63	197	2,699	3,349	39	55	153	2,770	2,770
New England	—	2	5	83	122	—	1	4	36	71	5	3	16	152	185
Connecticut	—	0	2	18	26	—	0	3	12	25	2	1	5	50	37
Maine§	—	0	2	1	16	—	0	2	13	10	—	0	3	8	10
Massachusetts	—	1	4	47	55	—	0	1	8	21	—	1	9	59	77
New Hampshire	—	0	1	7	11	—	0	1	3	8	—	0	2	9	25
Rhode Island§	—	0	1	8	12	—	0	0	—	4	3	0	12	19	31
Vermont§	—	0	1	2	2	—	0	0	—	3	—	0	1	7	5
Mid. Atlantic	—	5	11	222	288	3	5	17	264	398	8	15	68	1,013	932
New Jersey	—	1	5	48	69	—	1	6	63	111	—	2	13	143	132
New York (Upstate)	—	1	3	44	58	—	1	11	47	57	4	5	29	320	310
New York City	—	2	5	70	100	—	1	4	56	92	—	3	20	200	123
Pennsylvania	—	1	6	60	61	3	2	7	98	138	4	6	25	350	367
E.N. Central	1	4	18	224	310	3	7	21	331	462	7	9	34	520	609
Illinois	—	1	12	95	101	—	1	6	69	169	—	1	10	78	109
Indiana	—	0	4	15	19	—	1	18	52	40	—	1	4	33	52
Michigan	1	1	4	64	114	2	2	8	107	129	1	2	11	133	164
Ohio	—	0	3	35	45	1	1	13	77	108	6	4	17	266	247
Wisconsin	—	0	4	15	31	—	0	4	26	16	—	0	2	10	37
W.N. Central	1	2	16	110	234	1	3	16	150	76	—	2	7	90	132
Iowa	—	0	3	32	106	—	0	3	28	20	—	0	2	19	20
Kansas	—	0	1	7	15	—	0	2	5	7	—	0	1	3	2
Minnesota	1	0	12	19	36	1	0	11	25	10	—	0	4	12	21
Missouri	—	0	3	29	32	—	1	5	71	30	—	1	5	43	66
Nebraska§	—	0	3	20	41	—	0	2	19	8	—	0	2	11	20
North Dakota	—	0	2	—	—	—	0	1	—	1	—	0	3	1	—
South Dakota	—	0	1	3	4	—	0	1	2	—	—	0	1	1	3
S. Atlantic	7	7	14	370	358	5	17	32	796	827	12	10	20	478	437
Delaware	—	0	1	3	7	U	0	1	U	U	—	0	5	18	11
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	9	15
Florida	—	4	9	163	132	5	6	11	261	286	9	3	10	171	127
Georgia	2	1	3	51	52	—	3	9	129	160	1	1	5	48	38
Maryland§	2	0	4	38	41	—	1	5	64	76	2	2	12	122	122
North Carolina	—	0	3	25	59	—	2	19	148	71	—	0	6	39	33
South Carolina§	—	1	4	49	17	—	1	4	49	59	—	0	1	10	11
Virginia§	3	1	3	36	45	—	2	10	84	100	—	1	5	53	52
West Virginia	—	0	2	5	5	—	0	19	61	75	—	0	2	8	28
E.S. Central	—	1	4	38	77	4	7	11	286	350	—	2	12	121	107
Alabama§	—	0	2	10	12	—	2	7	74	95	—	0	2	15	16
Kentucky	—	0	1	8	30	4	2	7	79	80	—	1	3	46	52
Mississippi	—	0	2	11	5	—	1	2	30	43	—	0	2	4	1
Tennessee§	—	0	2	9	30	—	2	6	103	132	—	1	9	56	38
W.S. Central	3	3	43	157	218	5	10	99	432	642	5	2	21	99	87
Arkansas§	—	0	1	8	8	—	1	5	46	58	—	0	1	7	13
Louisiana	—	0	1	3	11	—	0	4	33	82	—	0	2	4	9
Oklahoma	—	0	6	3	7	1	2	17	90	100	—	0	2	6	10
Texas§	3	3	37	143	192	4	6	76	263	402	5	1	19	82	55
Mountain	1	3	8	142	198	1	2	6	108	186	2	2	7	119	86
Arizona	—	2	6	66	100	—	1	3	39	72	2	1	4	47	20
Colorado	—	1	5	46	36	—	0	2	20	32	—	0	2	18	13
Idaho§	—	0	1	3	17	—	0	2	11	8	—	0	2	5	3
Montana§	—	0	1	6	1	—	0	0	—	2	—	0	2	6	4
Nevada§	1	0	1	7	11	1	0	3	24	42	—	0	1	9	11
New Mexico§	—	0	1	6	17	—	0	2	5	11	—	0	2	8	10
Utah	—	0	2	6	13	—	0	1	5	13	—	0	4	22	25
Wyoming§	—	0	1	2	3	—	0	2	4	6	—	0	2	4	—
Pacific	—	6	17	293	502	1	6	36	296	337	—	4	12	178	195
Alaska	—	0	1	3	5	—	0	1	3	10	—	0	1	1	2
California	—	5	16	233	409	—	4	28	211	239	—	3	12	140	153
Hawaii	—	0	1	5	17	—	0	1	5	7	—	0	1	1	8
Oregon§	—	0	2	15	25	1	1	4	39	39	—	0	2	13	16
Washington	—	0	4	37	46	—	1	8	38	42	—	0	4	23	16
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	18	23	—	0	5	20	46	—	0	1	1	—
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. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† Data for acute hepatitis C, viral are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	191	435	1,865	26,648	30,466	7	22	44	1,016	1,092	10	16	48	766	1,033
New England	29	57	419	5,107	10,994	—	1	5	39	52	—	0	4	27	32
Connecticut	—	0	41	—	3,727	—	0	4	5	10	—	0	1	3	1
Maine§	28	9	76	833	804	—	0	1	2	1	—	0	1	4	6
Massachusetts	—	21	282	2,789	4,440	—	0	3	22	31	—	0	3	12	20
New Hampshire	—	10	84	930	1,529	—	0	1	3	4	—	0	1	3	4
Rhode Island§	—	1	78	204	122	—	0	1	5	2	—	0	1	4	1
Vermont§	1	4	38	351	372	—	0	1	2	4	—	0	1	1	—
Mid. Atlantic	127	251	1,401	15,516	12,101	2	5	13	256	295	3	2	6	85	115
New Jersey	—	37	373	3,961	3,314	—	0	1	1	63	—	0	2	8	15
New York (Upstate)	46	73	1,368	3,821	4,430	1	1	10	44	28	2	0	2	21	29
New York City	—	2	23	194	755	—	3	11	163	166	—	0	2	15	24
Pennsylvania	81	63	630	7,540	3,602	1	1	4	48	38	1	1	4	41	47
E.N. Central	—	15	208	2,062	2,247	2	3	10	134	142	2	2	9	127	185
Illinois	—	0	11	116	107	—	1	4	52	73	—	1	6	30	72
Indiana	—	1	6	57	40	—	0	3	15	5	—	0	3	30	23
Michigan	—	1	10	106	83	1	0	3	26	16	—	0	5	18	32
Ohio	—	0	5	51	45	1	1	6	34	28	2	1	3	39	38
Wisconsin	—	13	190	1,732	1,972	—	0	1	7	20	—	0	2	10	20
W.N. Central	7	4	336	233	893	—	1	8	60	66	3	1	9	63	89
Iowa	—	1	14	89	105	—	0	1	10	11	—	0	1	8	18
Kansas	—	0	2	14	16	—	0	1	4	9	—	0	2	8	6
Minnesota	6	0	326	100	752	—	0	8	24	24	—	0	4	11	22
Missouri	—	0	2	10	6	—	0	2	13	14	2	0	3	24	25
Nebraska§	1	0	3	19	11	—	0	1	8	8	1	0	1	9	12
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	1	3
South Dakota	—	0	1	1	3	—	0	1	1	—	—	0	1	2	3
S. Atlantic	27	61	233	3,430	3,909	3	6	17	296	265	1	2	9	140	143
Delaware	—	12	64	897	714	—	0	1	5	2	—	0	1	4	2
District of Columbia	—	0	5	19	70	—	0	2	6	4	—	0	0	—	—
Florida	9	1	12	114	77	1	2	7	83	52	1	1	4	49	48
Georgia	—	0	6	49	35	—	1	5	63	53	—	0	2	29	16
Maryland§	16	25	123	1,601	2,033	1	1	5	60	76	—	0	1	10	17
North Carolina	—	0	14	58	38	—	0	5	21	26	—	0	5	19	12
South Carolina§	—	0	3	31	26	—	0	1	4	9	—	0	1	11	21
Virginia§	2	10	61	497	789	1	1	5	52	41	—	0	2	12	22
West Virginia	—	0	33	164	127	—	0	1	2	2	—	0	2	6	5
E.S. Central	—	0	2	28	45	—	0	3	27	21	—	0	4	31	50
Alabama§	—	0	1	2	9	—	0	3	8	5	—	0	1	8	10
Kentucky	—	0	1	1	5	—	0	2	9	5	—	0	1	6	8
Mississippi	—	0	0	—	1	—	0	1	1	1	—	0	1	3	11
Tennessee§	—	0	2	25	30	—	0	3	9	10	—	0	2	14	21
W.S. Central	—	1	21	40	110	—	1	10	41	74	—	1	12	75	109
Arkansas§	—	0	0	—	—	—	0	1	4	1	—	0	2	9	13
Louisiana	—	0	0	—	3	—	0	1	3	3	—	0	3	11	23
Oklahoma	—	0	2	—	—	—	0	2	1	2	—	0	2	12	17
Texas§	—	1	21	40	107	—	0	9	33	68	—	1	9	43	56
Mountain	—	1	13	40	49	—	0	5	27	32	—	1	4	54	56
Arizona	—	0	2	6	8	—	0	2	8	14	—	0	2	13	9
Colorado	—	0	1	4	3	—	0	3	8	4	—	0	2	18	13
Idaho§	—	0	2	12	9	—	0	1	2	3	—	0	1	7	5
Montana§	—	0	13	3	4	—	0	3	5	—	—	0	2	4	4
Nevada§	—	0	1	4	11	—	0	1	—	4	—	0	1	2	7
New Mexico§	—	0	1	5	8	—	0	0	—	3	—	0	1	3	8
Utah	—	0	1	4	4	—	0	2	4	4	—	0	1	2	8
Wyoming§	—	0	1	2	2	—	0	0	—	—	—	0	2	5	2
Pacific	1	3	13	192	118	—	3	9	136	145	1	3	14	164	254
Alaska	—	0	1	2	6	—	0	1	2	6	—	0	2	6	8
California	—	2	10	143	66	—	2	6	101	107	—	2	8	104	183
Hawaii	N	0	0	N	N	—	0	1	1	3	—	0	1	4	5
Oregon§	—	0	4	33	36	—	0	2	11	4	1	0	6	37	34
Washington	1	0	12	14	10	—	0	3	21	25	—	0	6	13	24
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	3	2	—	0	0	—	3
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† 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 November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	89	277	1,697	12,168	9,238	18	64	140	3,296	3,847	4	25	179	1,294	2,163
New England	—	12	27	523	914	5	6	24	311	380	—	0	2	10	7
Connecticut	—	0	4	37	51	—	2	22	132	186	—	0	0	—	—
Maine†	—	1	10	74	37	1	1	4	49	52	—	0	2	5	1
Massachusetts	—	7	19	307	703	—	0	0	—	—	—	0	1	4	2
New Hampshire	—	1	7	66	36	—	0	7	28	46	—	0	0	—	1
Rhode Island†	—	0	7	29	75	2	1	6	47	31	—	0	0	—	3
Vermont†	—	0	1	10	12	2	1	4	55	65	—	0	1	1	—
Mid. Atlantic	11	22	64	1,001	1,034	4	11	23	543	851	—	1	29	64	119
New Jersey	—	3	12	151	192	—	0	0	—	—	—	0	2	—	79
New York (Upstate)	11	4	41	220	386	4	7	22	404	461	—	0	29	12	14
New York City	—	1	21	86	65	—	0	3	21	18	—	0	4	30	11
Pennsylvania	—	12	33	544	391	—	0	17	118	372	—	0	2	22	15
E.N. Central	19	60	238	2,645	1,553	—	2	19	215	250	—	1	6	86	146
Illinois	—	13	43	545	405	—	1	9	86	103	—	0	6	48	108
Indiana	—	5	158	264	92	—	0	6	21	10	—	0	3	13	6
Michigan	4	12	40	723	244	—	1	6	63	77	—	0	2	6	3
Ohio	15	20	57	983	652	—	0	5	45	60	—	0	4	18	29
Wisconsin	—	3	12	130	160	N	0	0	N	N	—	0	1	1	—
W.N. Central	4	33	872	1,531	1,089	1	6	18	318	287	—	3	27	313	428
Iowa	—	5	12	178	192	—	0	3	24	27	—	0	2	5	8
Kansas	—	4	9	142	69	—	1	6	60	61	—	0	1	2	—
Minnesota	—	0	808	165	226	1	0	11	61	60	—	0	1	2	—
Missouri	3	20	51	854	351	—	1	5	65	61	—	3	26	292	397
Nebraska†	1	3	21	136	186	—	1	6	77	32	—	0	2	12	20
North Dakota	—	0	24	26	1	—	0	9	4	25	—	0	1	—	—
South Dakota	—	0	6	30	64	—	0	4	27	21	—	0	0	—	3
S. Atlantic	10	32	71	1,449	845	8	24	111	1,457	1,524	3	9	40	427	825
Delaware	—	0	2	13	17	—	0	0	—	—	—	0	3	17	32
District of Columbia	—	0	2	3	5	—	0	0	—	—	—	0	0	—	6
Florida	5	9	31	487	255	—	0	95	143	138	1	0	2	9	13
Georgia	—	3	11	180	92	—	0	72	346	352	—	0	7	44	77
Maryland†	1	2	8	113	138	3	7	15	363	396	—	1	3	34	85
North Carolina	—	0	65	223	79	N	2	4	N	N	1	4	36	250	414
South Carolina†	4	4	18	229	110	—	0	0	—	—	—	0	5	18	52
Virginia†	—	3	24	172	138	—	10	26	494	566	1	1	8	51	138
West Virginia	—	0	5	29	11	5	3	6	111	72	—	0	1	4	8
E.S. Central	1	14	33	677	354	—	1	6	83	176	—	4	16	246	322
Alabama†	—	4	19	258	52	—	0	0	—	—	—	1	7	59	89
Kentucky	—	4	15	204	118	—	1	4	45	45	—	0	1	1	1
Mississippi	—	1	4	51	97	—	0	1	4	7	—	0	1	7	10
Tennessee†	1	3	14	164	87	—	0	4	34	124	—	3	14	179	222
W.S. Central	38	64	389	2,684	1,472	—	0	13	66	82	1	1	161	127	269
Arkansas†	—	6	38	256	105	—	0	10	33	44	1	0	61	59	57
Louisiana	—	2	8	90	78	—	0	0	—	—	—	0	1	2	6
Oklahoma	—	0	45	74	53	—	0	13	32	36	—	0	98	53	158
Texas†	38	55	304	2,264	1,236	—	0	1	1	2	—	0	6	13	48
Mountain	—	17	32	758	751	—	1	6	82	101	—	0	3	20	44
Arizona	—	3	10	173	204	N	0	0	N	N	—	0	1	5	16
Colorado	—	5	12	220	135	—	0	0	—	—	—	0	1	1	1
Idaho†	—	1	5	65	29	—	0	0	—	11	—	0	1	1	1
Montana†	—	0	6	51	82	—	0	4	25	12	—	0	2	8	3
Nevada†	—	0	3	9	26	—	0	1	1	12	—	0	0	—	3
New Mexico†	—	1	10	57	64	—	0	2	24	28	—	0	1	1	4
Utah	—	4	19	163	194	—	0	2	11	14	—	0	1	1	6
Wyoming†	—	0	5	20	17	—	0	4	21	24	—	0	1	3	10
Pacific	6	24	67	900	1,226	—	4	12	221	196	—	0	1	1	3
Alaska	—	1	21	38	214	—	0	2	12	14	N	0	0	N	N
California	—	7	22	351	470	—	4	12	194	169	—	0	1	1	—
Hawaii	—	0	3	25	14	—	0	0	—	—	N	0	0	N	N
Oregon†	1	3	17	237	159	—	0	3	15	13	—	0	0	—	3
Washington	5	6	58	249	369	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	3	38	58	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	534	878	2,323	39,565	43,087	43	80	255	3,864	4,607	128	294	1,268	12,995	18,326
New England	1	30	408	1,845	2,054	13	3	67	243	238	—	4	41	296	218
Connecticut	—	0	383	383	491	—	0	67	67	47	—	0	36	36	40
Maine§	—	2	7	112	139	—	0	3	17	22	—	0	2	5	20
Massachusetts	—	21	48	942	1,101	—	1	6	75	105	—	3	26	210	138
New Hampshire	—	3	42	228	138	—	1	3	35	26	—	0	4	17	5
Rhode Island§	1	2	11	122	98	13	0	11	25	8	—	0	7	23	12
Vermont§	—	1	5	58	87	—	0	3	24	30	—	0	2	5	3
Mid. Atlantic	23	92	163	4,298	5,228	3	6	21	316	428	6	57	87	2,435	2,228
New Jersey	—	13	30	530	1,181	—	1	4	32	125	—	11	27	501	812
New York (Upstate)	15	23	66	1,177	1,268	3	3	9	135	162	5	4	23	196	542
New York City	—	21	43	1,041	1,181	—	1	5	54	50	—	9	17	396	676
Pennsylvania	8	30	64	1,550	1,598	—	1	8	95	91	1	27	63	1,342	198
E.N. Central	29	91	151	4,175	4,650	2	14	27	637	804	9	51	132	2,112	3,597
Illinois	—	24	50	1,121	1,361	—	2	10	127	131	—	10	25	443	886
Indiana	—	6	50	339	572	—	1	7	68	82	—	1	21	55	561
Michigan	3	18	34	837	855	1	3	8	143	199	—	5	24	193	145
Ohio	26	28	52	1,314	1,165	1	2	11	122	183	9	24	80	1,025	1,485
Wisconsin	—	12	29	564	697	—	3	12	177	209	—	7	25	396	520
W.N. Central	19	47	109	2,304	2,536	2	11	37	650	753	46	19	61	994	812
Iowa	—	8	16	356	382	—	2	14	145	199	—	1	12	50	157
Kansas	—	6	18	269	430	—	0	4	33	49	—	3	11	159	55
Minnesota	4	12	51	529	647	—	2	19	205	172	—	2	10	78	277
Missouri	13	12	34	605	687	2	2	10	120	142	46	8	54	670	201
Nebraska§	2	6	41	324	212	—	2	6	81	140	—	0	3	28	13
North Dakota	—	0	30	65	40	—	0	28	6	2	—	0	9	5	33
South Dakota	—	2	22	156	138	—	0	12	60	49	—	0	1	4	76
S. Atlantic	334	265	446	11,923	11,109	6	12	30	576	740	27	45	85	2,067	2,821
Delaware	—	2	9	123	143	—	0	2	13	11	1	2	8	125	8
District of Columbia	—	0	5	23	57	—	0	1	1	6	—	0	2	6	19
Florida	214	115	278	5,828	4,596	4	3	7	158	133	13	9	24	422	730
Georgia	29	39	97	2,155	2,099	—	1	4	63	81	7	13	29	593	1,023
Maryland§	15	15	29	699	771	1	2	5	85	121	2	6	19	342	98
North Carolina	17	18	92	978	1,240	—	2	21	82	100	2	6	27	288	199
South Carolina§	43	16	64	991	1,064	1	0	3	27	41	—	3	9	104	520
Virginia§	16	21	88	929	954	—	2	16	119	215	2	5	59	179	192
West Virginia	—	4	23	197	185	—	0	5	28	32	—	0	3	8	32
E.S. Central	7	50	113	2,608	3,215	3	4	12	196	265	3	14	47	709	1,761
Alabama§	—	15	32	683	916	—	1	4	41	60	—	3	11	117	380
Kentucky	4	8	18	415	437	2	1	4	65	95	1	2	25	196	252
Mississippi	—	14	45	783	996	—	0	1	6	5	—	1	4	43	292
Tennessee§	3	14	33	727	866	1	2	10	84	105	2	7	36	353	837
W.S. Central	88	102	1,333	4,338	6,313	4	5	139	243	340	27	52	967	2,254	4,227
Arkansas§	9	12	25	567	722	—	1	4	40	53	5	6	16	283	511
Louisiana	—	9	43	599	1,045	—	0	1	—	8	—	2	9	108	604
Oklahoma	5	13	102	575	741	2	0	82	30	46	5	5	61	257	154
Texas§	74	57	1,204	2,597	3,805	2	4	55	173	233	17	34	889	1,606	2,958
Mountain	10	53	128	2,552	3,013	3	10	26	498	576	6	22	49	1,039	1,071
Arizona	5	20	50	929	1,007	1	1	4	66	58	5	16	42	761	538
Colorado	—	12	33	563	637	—	3	13	153	192	—	2	11	92	115
Idaho§	2	3	10	158	167	1	2	7	88	135	—	0	2	9	13
Montana§	—	2	7	96	112	—	0	7	33	32	—	0	5	13	8
Nevada§	3	3	11	157	212	—	0	3	14	16	1	1	7	58	217
New Mexico§	—	5	29	300	488	1	1	3	33	49	—	1	11	88	139
Utah	—	6	15	270	318	—	2	10	98	81	—	0	3	16	35
Wyoming§	—	1	8	79	72	—	0	2	13	13	—	0	1	2	6
Pacific	23	126	537	5,522	4,969	7	9	31	505	463	4	25	66	1,089	1,591
Alaska	—	1	7	66	50	—	0	0	—	6	—	0	1	2	1
California	—	95	516	4,167	3,615	—	5	15	231	218	—	20	65	882	1,367
Hawaii	—	5	13	215	238	—	0	2	8	13	—	0	4	34	40
Oregon§	2	8	18	381	393	1	1	11	75	61	1	1	3	34	91
Washington	21	11	85	693	673	6	2	17	191	165	3	3	11	137	92
American Samoa	—	0	1	—	2	—	0	0	—	—	—	1	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	13	—	0	0	—	—	—	0	0	—	15
Puerto Rico	—	8	40	363	690	—	0	0	—	—	—	0	2	10	30
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. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† 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 November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	Streptococcal diseases, invasive, group A					*Streptococcus pneumoniae*, invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
United States	25	102	239	4,426	4,834	26	32	122	1,504	1,600
New England	—	5	28	259	338	—	1	6	51	89
Connecticut	—	0	21	72	92	—	0	4	—	11
Maine§	—	0	2	17	26	—	0	1	5	2
Massachusetts	—	2	10	107	158	—	0	4	30	55
New Hampshire	—	0	4	34	24	—	0	2	11	11
Rhode Island§	—	0	2	11	25	—	0	1	1	10
Vermont§	—	0	3	18	13	—	0	1	4	—
Mid. Atlantic	5	20	43	886	960	4	4	33	216	197
New Jersey	—	3	7	124	171	—	1	4	38	65
New York (Upstate)	3	7	25	289	295	3	2	17	108	89
New York City	—	4	12	165	181	1	0	31	70	43
Pennsylvania	2	6	18	308	313	N	0	2	N	N
E.N. Central	1	17	42	787	889	7	5	18	228	295
Illinois	—	5	12	221	237	—	0	5	23	83
Indiana	—	2	23	124	116	—	0	13	32	31
Michigan	—	3	11	125	165	2	1	4	59	75
Ohio	1	4	13	193	241	5	1	6	69	55
Wisconsin	—	2	11	124	130	—	1	3	45	51
W.N. Central	1	6	37	355	344	—	2	11	135	89
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	5	37	36	N	0	1	N	N
Minnesota	—	0	34	161	154	—	1	10	79	28
Missouri	—	2	8	80	85	—	0	4	32	34
Nebraska§	1	1	3	41	37	—	0	1	12	8
North Dakota	—	0	4	15	10	—	0	3	5	9
South Dakota	—	0	3	21	22	—	0	2	7	10
S. Atlantic	11	22	49	1,023	1,012	8	6	18	286	309
Delaware	—	0	1	10	8	—	0	0	—	—
District of Columbia	—	0	3	12	14	N	0	0	N	N
Florida	4	5	12	251	238	2	1	6	63	60
Georgia	2	5	13	244	228	1	2	6	76	87
Maryland§	2	3	12	172	174	2	1	7	68	50
North Carolina	—	2	12	86	125	N	0	0	N	N
South Carolina§	1	1	5	65	66	3	1	6	44	60
Virginia§	2	3	9	146	123	—	0	4	23	42
West Virginia	—	1	4	37	36	—	0	3	12	10
E.S. Central	2	3	10	176	172	2	2	7	89	84
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	1	1	5	34	38	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	18	9
Tennessee§	1	3	9	142	134	2	1	6	71	75
W.S. Central	3	8	79	395	446	5	5	46	262	255
Arkansas§	—	0	3	17	11	2	0	4	26	12
Louisiana	—	0	3	11	17	—	0	3	13	13
Oklahoma	—	3	20	123	101	—	1	7	52	61
Texas§	3	5	59	244	317	3	3	34	171	169
Mountain	2	9	22	396	519	—	4	16	206	238
Arizona	2	3	8	139	179	—	2	10	99	104
Colorado	—	2	7	115	131	—	1	4	44	55
Idaho§	—	0	2	10	16	—	0	2	8	5
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	4	13	—	0	1	—	3
New Mexico§	—	2	7	74	124	—	0	4	23	34
Utah	—	1	6	53	50	—	0	5	32	35
Wyoming§	—	0	1	1	6	—	0	0	—	2
Pacific	—	3	9	149	154	—	0	4	31	44
Alaska	—	1	4	34	34	—	0	3	23	27
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	2	8	115	120	—	0	2	8	17
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	0	—	30	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (NNDSS event code 11717).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	*Streptococcus pneumoniae*, invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Aged <5 years									
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	40	58	276	2,393	2,720	5	8	20	381	446	103	270	452	11,691	11,505
New England	—	1	16	49	107	—	0	2	3	15	5	5	15	284	285
Connecticut	—	0	15	—	55	—	0	2	—	5	2	1	5	51	29
Maine§	—	0	2	16	17	—	0	1	1	2	—	0	1	2	10
Massachusetts	—	0	1	3	—	—	0	1	2	—	3	4	10	205	199
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	13	19
Rhode Island§	—	0	6	13	21	—	0	1	—	6	—	0	5	13	18
Vermont§	—	0	2	12	14	—	0	0	—	2	—	0	1	—	10
Mid. Atlantic	2	3	14	157	274	1	0	3	24	27	28	35	50	1,605	1,487
New Jersey	—	0	0	—	—	—	0	0	—	—	—	4	13	192	195
New York (Upstate)	1	1	10	70	61	1	0	2	13	8	4	2	8	106	120
New York City	—	0	4	6	113	—	0	2	—	3	21	22	39	988	935
Pennsylvania	1	1	8	81	100	—	0	2	11	16	3	7	13	319	237
E.N. Central	6	11	41	535	546	—	1	7	76	75	10	24	45	1,039	1,123
Illinois	N	0	0	N	N	N	0	0	N	N	—	10	18	393	466
Indiana	—	3	32	176	183	—	0	6	25	23	—	2	10	131	120
Michigan	—	0	2	24	19	—	0	1	3	2	10	3	18	214	168
Ohio	6	7	18	335	344	—	1	4	48	50	—	6	19	269	309
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	3	32	60
W.N. Central	—	2	161	106	188	—	0	3	21	37	—	6	11	269	370
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	19	15
Kansas	—	0	5	38	74	—	0	2	13	6	—	0	3	26	26
Minnesota	—	0	156	—	25	—	0	3	—	25	—	1	4	67	102
Missouri	—	1	5	54	79	—	0	1	6	3	—	3	7	136	211
Nebraska§	—	0	1	2	—	—	0	0	—	—	—	0	3	16	15
North Dakota	—	0	3	10	2	—	0	0	—	—	—	0	1	4	—
South Dakota	—	0	2	2	8	—	0	2	2	3	—	0	1	1	1
S. Atlantic	25	26	53	1,151	1,120	3	4	14	189	207	47	64	262	2,851	2,520
Delaware	—	0	2	18	3	—	0	2	3	—	—	0	3	27	14
District of Columbia	N	0	0	N	N	N	0	0	N	N	5	3	8	159	127
Florida	16	15	36	674	624	2	2	13	112	124	2	19	32	874	924
Georgia	9	8	25	362	390	1	1	5	66	70	2	14	227	671	594
Maryland§	—	0	1	4	4	—	0	0	—	1	3	6	16	257	293
North Carolina	N	0	0	N	N	N	0	0	N	N	31	9	21	488	244
South Carolina§	—	0	0	—	—	—	0	0	—	—	—	2	6	101	83
Virginia§	N	0	0	N	N	N	0	0	N	N	4	7	15	270	229
West Virginia	—	1	13	93	99	—	0	2	8	12	—	0	2	4	12
E.S. Central	6	4	25	225	285	1	0	3	32	55	7	22	36	997	993
Alabama§	N	0	0	N	N	N	0	0	N	N	1	8	18	378	394
Kentucky	2	1	5	68	70	—	0	2	8	11	—	1	10	59	76
Mississippi	—	0	3	4	36	—	0	1	3	13	—	4	16	188	153
Tennessee§	4	2	23	153	179	1	0	3	21	31	6	8	15	372	370
W.S. Central	1	1	6	81	85	—	0	3	16	12	3	55	80	2,346	2,037
Arkansas§	1	1	5	49	15	—	0	3	11	3	—	5	35	227	153
Louisiana	—	1	5	32	70	—	0	1	5	9	—	14	41	595	601
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	62	72
Texas§	—	0	0	—	—	—	0	0	—	—	3	32	49	1,462	1,211
Mountain	—	1	7	86	113	—	0	2	18	16	—	8	18	356	539
Arizona	—	0	0	—	—	—	0	0	—	—	—	3	9	145	279
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	4	70	124
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	1	3	7
Montana§	—	0	0	—	1	—	0	0	—	—	—	0	7	1	—
Nevada§	—	0	4	28	52	—	0	2	6	6	—	1	10	87	70
New Mexico§	—	0	1	1	—	—	0	0	—	—	—	1	5	47	35
Utah	—	1	5	46	59	—	0	2	10	10	—	0	2	—	21
Wyoming§	—	0	2	11	1	—	0	1	2	—	—	0	1	3	3
Pacific	—	0	1	3	2	—	0	1	2	2	3	44	68	1,944	2,151
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
California	N	0	0	N	N	N	0	0	N	N	—	40	61	1,760	1,939
Hawaii	—	0	1	3	2	—	0	1	2	2	—	0	3	27	25
Oregon§	N	0	0	N	N	N	0	0	N	N	3	0	4	38	22
Washington	N	0	0	N	N	N	0	0	N	N	—	2	7	119	164
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	3	17	195	140
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. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† Includes cases of invasive pneumococcal disease caused by drug-resistant *S. pneumoniae* (DRSP) (NNDSS event code 11720).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 21, 2009, and November 15, 2008 (46th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	64	399	1,035	15,189	25,917	—	0	42	332	686	—	0	40	280	666
New England	—	7	45	296	1,516	—	0	0	—	7	—	0	0	—	3
Connecticut	—	0	18	—	777	—	0	0	—	5	—	0	0	—	3
Maine¶	—	0	12	69	239	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	2	2	—	—	0	0	—	1	—	0	0	—	—
New Hampshire	—	4	11	178	227	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	4	—	—	0	0	—	1	—	0	0	—	—
Vermont¶	—	0	16	43	273	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	9	34	57	1,395	2,125	—	0	2	7	49	—	0	1	1	20
New Jersey	N	0	0	N	N	—	0	1	2	5	—	0	0	—	4
New York (Upstate)	N	0	0	N	N	—	0	1	3	24	—	0	1	1	7
New York City	—	0	0	—	—	—	0	1	2	8	—	0	0	—	7
Pennsylvania	9	34	57	1,395	2,125	—	0	0	—	12	—	0	0	—	2
E.N. Central	46	147	254	5,565	6,657	—	0	3	7	44	—	0	3	4	20
Illinois	—	32	73	1,355	1,228	—	0	2	4	12	—	0	0	—	8
Indiana	—	5	30	348	—	—	0	1	2	3	—	0	1	2	1
Michigan	10	42	87	1,663	2,679	—	0	0	—	11	—	0	0	—	6
Ohio	36	40	91	1,766	2,002	—	0	0	—	14	—	0	2	2	1
Wisconsin	—	9	55	433	748	—	0	1	1	4	—	0	0	—	4
W.N. Central	1	15	114	773	1,093	—	0	5	24	51	—	0	8	61	134
Iowa	N	0	0	N	N	—	0	0	—	3	—	0	1	5	3
Kansas	—	3	22	183	401	—	0	1	4	14	—	0	2	6	17
Minnesota	—	0	0	—	—	—	0	1	1	2	—	0	1	3	8
Missouri	1	9	51	516	641	—	0	2	3	12	—	0	0	—	3
Nebraska¶	N	0	0	N	N	—	0	2	10	7	—	0	6	31	40
North Dakota	—	0	108	57	—	—	0	0	—	2	—	0	1	1	35
South Dakota	—	0	2	17	51	—	0	3	6	11	—	0	2	15	28
S. Atlantic	8	37	146	1,730	4,204	—	0	3	9	20	—	0	1	3	20
Delaware	—	0	2	12	44	—	0	0	—	—	—	0	0	—	1
District of Columbia	—	0	3	12	21	—	0	0	—	4	—	0	0	—	4
Florida	7	23	67	1,067	1,436	—	0	1	2	3	—	0	1	1	—
Georgia	N	0	0	N	N	—	0	1	4	4	—	0	0	—	4
Maryland¶	N	0	0	N	N	—	0	0	—	6	—	0	1	2	8
North Carolina	N	0	0	N	N	—	0	0	—	2	—	0	0	—	1
South Carolina¶	—	0	54	154	788	—	0	2	3	—	—	0	0	—	1
Virginia¶	—	0	119	28	1,298	—	0	0	—	—	—	0	0	—	1
West Virginia	1	9	32	457	617	—	0	0	—	1	—	0	0	—	—
E.S. Central	—	7	28	377	1,045	—	0	6	35	48	—	0	4	25	57
Alabama¶	—	7	28	372	1,032	—	0	0	—	11	—	0	0	—	7
Kentucky	N	0	0	N	N	—	0	1	3	3	—	0	0	—	—
Mississippi	—	0	2	5	13	—	0	5	29	22	—	0	4	21	43
Tennessee¶	N	0	0	N	N	—	0	1	3	12	—	0	1	4	7
W.S. Central	—	85	747	3,822	7,237	—	0	16	99	68	—	0	6	29	62
Arkansas¶	—	1	30	115	675	—	0	1	4	7	—	0	0	—	2
Louisiana	—	1	7	76	69	—	0	2	7	17	—	0	4	6	31
Oklahoma	N	0	0	N	N	—	0	2	6	4	—	0	2	2	5
Texas¶	—	82	721	3,631	6,493	—	0	13	82	40	—	0	4	21	24
Mountain	—	25	71	1,143	1,917	—	0	10	68	103	—	0	15	96	184
Arizona	—	0	0	—	—	—	0	4	12	62	—	0	2	6	52
Colorado	—	10	33	472	780	—	0	7	35	17	—	0	14	66	54
Idaho¶	N	0	0	N	N	—	0	1	2	4	—	0	2	6	35
Montana¶	—	0	20	105	282	—	0	1	2	—	—	0	1	3	5
Nevada¶	N	0	0	N	N	—	0	2	7	9	—	0	1	5	7
New Mexico¶	—	0	20	134	201	—	0	2	6	5	—	0	1	2	3
Utah	—	10	32	432	644	—	0	0	—	6	—	0	0	—	20
Wyoming¶	—	0	1	—	10	—	0	1	4	—	—	0	2	8	8
Pacific	—	2	7	88	123	—	0	12	83	296	—	0	11	61	166
Alaska	—	1	6	53	63	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	7	57	291	—	0	6	44	152
Hawaii	—	1	4	35	60	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	1	1	3	—	0	3	6	13
Washington	N	0	0	N	N	—	0	6	25	2	—	0	3	11	1
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	1	—	62	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	7	26	401	530	—	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. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional. Data for HIV/AIDS, AIDS, and TB, when available, 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/epo/dphsi/phs/infdis.htm.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE III. Deaths in 122 U.S. cities,* week ending November 21, 2009 (46th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	477	312	117	27	10	11	58
Boston, MA	142	82	42	8	4	6	21
Bridgeport, CT	39	25	8	2	4	—	2
Cambridge, MA	3	3	—	—	—	—	1
Fall River, MA	22	19	3	—	—	—	1
Hartford, CT	53	31	14	7	1	—	6
Lowell, MA	24	19	3	2	—	—	3
Lynn, MA	12	7	5	—	—	—	3
New Bedford, MA	25	19	4	1	1	—	2
New Haven, CT	33	16	12	2	—	3	4
Providence, RI	40	30	9	1	—	—	2
Somerville, MA	5	4	—	1	—	—	—
Springfield, MA	U	U	U	U	U	U	U
Waterbury, CT	23	18	3	2	—	—	1
Worcester, MA	56	39	14	1	—	2	12
Mid. Atlantic	2,251	1,554	495	124	45	33	163
Albany, NY	57	36	15	5	1	—	6
Allentown, PA	17	16	1	—	—	—	—
Buffalo, NY	83	58	15	3	7	—	15
Camden, NJ	25	15	6	2	—	2	—
Elizabeth, NJ	11	6	3	1	1	—	—
Erie, PA	48	37	10	—	1	—	6
Jersey City, NJ	23	16	4	3	—	—	4
New York City, NY	1,132	814	232	54	16	16	59
Newark, NJ	37	8	12	10	5	2	1
Paterson, NJ	5	2	3	—	—	—	—
Philadelphia, PA	423	259	113	32	10	9	32
Pittsburgh, PA§	25	18	5	—	1	1	—
Reading, PA	36	28	6	1	1	—	4
Rochester, NY	147	113	26	5	1	2	16
Schenectady, NY	16	8	7	1	—	—	3
Scranton, PA	17	11	4	2	—	—	—
Syracuse, NY	77	59	14	3	1	—	12
Trenton, NJ	40	27	11	1	—	1	1
Utica, NY	13	10	3	—	—	—	3
Yonkers, NY	19	13	5	1	—	—	1
E.N. Central	1,738	1,168	397	100	41	32	149
Akron, OH	46	34	7	3	1	1	5
Canton, OH	50	38	11	—	—	1	4
Chicago, IL	U	U	U	U	U	U	U
Cincinnati, OH	71	46	14	6	2	3	5
Cleveland, OH	236	169	50	11	3	3	24
Columbus, OH	165	120	34	6	4	1	17
Dayton, OH	148	105	31	8	2	2	19
Detroit, MI	171	81	61	19	5	5	9
Evansville, IN	41	35	6	—	—	—	2
Fort Wayne, IN	98	71	19	5	2	1	11
Gary, IN	14	5	6	1	2	—	—
Grand Rapids, MI	61	46	7	4	—	4	7
Indianapolis, IN	191	107	51	14	12	7	17
Lansing, MI	48	33	10	2	3	—	6
Milwaukee, WI	81	46	27	5	1	2	4
Peoria, IL	44	27	11	5	1	—	7
Rockford, IL	55	36	11	7	—	1	3
South Bend, IN	50	37	10	1	2	—	2
Toledo, OH	122	94	23	3	1	1	7
Youngstown, OH	46	38	8	—	—	—	—
W.N. Central	713	432	194	50	23	13	49
Des Moines, IA	75	56	14	4	1	—	5
Duluth, MN	42	26	12	3	1	—	5
Kansas City, KS	35	23	9	3	—	—	1
Kansas City, MO	89	53	23	4	4	5	7
Lincoln, NE	38	25	10	2	—	1	—
Minneapolis, MN	64	34	18	7	3	2	5
Omaha, NE	103	70	30	—	1	2	13
St. Louis, MO	99	49	25	14	9	1	3
St. Paul, MN	63	34	24	4	1	—	5
Wichita, KS	105	62	29	9	3	2	5
S. Atlantic	1,205	767	311	79	25	23	71
Atlanta, GA	167	106	46	9	2	4	3
Baltimore, MD	146	75	52	12	3	4	11
Charlotte, NC	118	80	24	9	3	2	10
Jacksonville, FL	146	84	43	13	3	3	11
Miami, FL	88	61	20	5	1	1	5
Norfolk, VA	72	48	16	5	3	—	3
Richmond, VA	56	35	16	1	3	1	2
Savannah, GA	55	36	14	4	—	1	6
St. Petersburg, FL	56	31	16	6	1	2	4
Tampa, FL	199	140	41	13	4	1	12
Washington, D.C.	89	63	18	2	2	4	1
Wilmington, DE	13	8	5	—	—	—	3
E.S. Central	991	642	270	42	20	17	93
Birmingham, AL	197	135	51	6	3	2	20
Chattanooga, TN	93	65	27	1	—	—	7
Knoxville, TN	112	74	29	4	4	1	9
Lexington, KY	64	38	18	5	1	2	8
Memphis, TN	194	114	61	9	4	6	22
Mobile, AL	99	69	26	2	1	1	6
Montgomery, AL	62	42	13	4	1	2	8
Nashville, TN	170	105	45	11	6	3	13
W.S. Central	978	618	246	62	29	23	76
Austin, TX	83	53	24	2	2	2	13
Baton Rouge, LA	U	U	U	U	U	U	U
Corpus Christi, TX	64	46	10	4	3	1	7
Dallas, TX	200	103	60	15	11	11	15
El Paso, TX	53	38	8	4	2	1	2
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	U	U	U	U	U	U	U
Little Rock, AR	87	58	21	3	3	2	3
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	266	181	53	25	3	4	21
Shreveport, LA	100	67	30	2	—	1	5
Tulsa, OK	125	72	40	7	5	1	10
Mountain	1,060	661	272	80	26	20	72
Albuquerque, NM	125	82	36	2	4	1	6
Boise, ID	U	U	U	U	U	U	U
Colorado Springs, CO	38	25	9	3	1	—	1
Denver, CO	108	60	35	7	2	4	10
Las Vegas, NV	323	196	84	30	9	4	23
Ogden, UT	28	17	7	2	1	1	1
Phoenix, AZ	138	78	36	15	3	5	10
Pueblo, CO	29	18	8	—	2	1	2
Salt Lake City, UT	107	75	23	6	1	2	9
Tucson, AZ	164	110	34	15	3	2	10
Pacific	1,516	1,046	324	88	34	24	164
Berkeley, CA	8	5	2	1	—	—	1
Fresno, CA	130	97	20	7	3	3	17
Glendale, CA	26	23	3	—	—	—	3
Honolulu, HI	48	36	7	2	2	1	3
Long Beach, CA	U	U	U	U	U	U	U
Los Angeles, CA	238	144	64	19	7	4	32
Pasadena, CA	24	19	4	—	1	—	2
Portland, OR	U	U	U	U	U	U	U
Sacramento, CA	197	136	45	7	5	4	20
San Diego, CA	167	102	45	11	3	6	22
San Francisco, CA	116	78	28	5	3	2	18
San Jose, CA	216	160	40	9	4	3	22
Santa Cruz, CA	28	22	6	—	—	—	1
Seattle, WA	138	95	23	16	3	1	16
Spokane, WA	63	48	12	3	—	—	6
Tacoma, WA	117	81	25	8	3	—	1
Total¶	**10,929**	**7,200**	**2,626**	**652**	**253**	**196**	**895**

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.

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format. To receive an electronic copy each week, visit *MMWR*'s free subscription page at *http://www.cdc.gov/mmwr/mmwrsubscribe.html*. Paper copy subscriptions are available through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone 202-512-1800.

Data presented by the Notifiable Disease Data Team and 122 Cities Mortality Data Team in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. Address all inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop E-90, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333 or to *mmwrq@cdc.gov.*

☆ U.S. Government Printing Office: 2009-523-019/41215 Region IV ISSN: 0149-2195