



# MMWR™

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### Primary and Secondary Syphilis — United States, 2003–2004

In 2000, the rate of primary and secondary (P&S) syphilis in the United States was 2.1 cases per 100,000 population, the lowest since reporting began in 1941. From 2001 to 2004, the P&S syphilis rate increased to 2.7, primarily as a result of increases in cases among men who have sex with men (MSM). To characterize the recent epidemiology of syphilis in the United States, CDC analyzed national notifiable disease surveillance data for 2000–2004, focusing on 2003–2004.\* This report describes the results of that analysis, which indicated that the disparity between syphilis rates among blacks and whites<sup>†</sup> in 2004 increased for the first time since 1993 and is associated with a substantial increase of syphilis among black men. Syphilis rates continue to increase among MSM. After declining for 13 years, the rate of P&S syphilis in 2004, compared with 2003, increased in the South<sup>§</sup> and remained the same among women. The findings underscore the need for enhanced prevention measures among blacks and MSM. In addition, enhanced surveillance is needed to detect any early increases in P&S syphilis among women.

CDC analyzed surveillance data reported weekly from health departments nationwide during 2000–2004. Data included patient demographics (i.e., age, sex, race/ethnicity, and county of residence) and stage of syphilis. Data on P&S syphilis were

analyzed because these cases represent incidence (i.e., newly acquired infections within the specified period). P&S syphilis rates were calculated using population denominators from the U.S. Census Bureau (*1*). Because states do not routinely report information on sexual practices or sex of sex partners, male-to-female (M:F) rate ratios were used as a surrogate measure to monitor occurrence of syphilis among MSM and were calculated by dividing the male case rate by the female case rate for a specified period. M:F rate ratios in excess of 1:1 suggest male-to-male transmission.

From 2000 to 2004, the number of cases of P&S syphilis increased from 5,979 to 7,980, and the rate increased from 2.1 to 2.7 cases per 100,000 population. Of the 7,980 cases of P&S syphilis reported in 2004, approximately 84% (6,722) occurred among men. The rate of P&S syphilis among men increased from 2.6 to 4.7. Among women, the rate of P&S syphilis decreased from 1.7 to 0.8 from 2000 to 2003 and remained at 0.8 in 2004, the first time since 1991 that the rate among women did not decrease. The M:F rate ratio increased steadily from 1.5 in 2000 to 5.3 in 2003, but the

\*Data for 2003 are summarized for the reporting year December 29, 2002, through January 3, 2004. Data for 2004 are summarized for the reporting year January 4, 2004, through January 1, 2005.

<sup>†</sup>For this report, persons identified as white, black, Asian/Pacific Islander, American Indian/Alaska Native, and of other/unknown race are all non-Hispanic. Persons identified as Hispanic might be of any race.

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

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#### Notifiable Disease Morbidity and 122 Cities Mortality Data

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increase slowed in 2004 (M:F rate ratio: 5.9; 11% increase from 2003).

P&S syphilis incidence varied by race/ethnicity. From 2000 to 2003, the incidence among blacks decreased from 12 to 7.7 cases per 100,000 population but increased to 9.0 in 2004. Rates increased among whites each year from 2000 to 2004 (from 0.5 to 1.6), Hispanics (from 1.6 to 3.2), and Asian/Pacific Islanders (from 0.3 to 1.2). The rate among American Indian/Alaska Natives increased from 2000 to 2001 (from 2.2 to 3.8), decreased to 2.1 in 2002, and then increased to 3.2 in 2004.

Although the rate of P&S syphilis among blacks increased in 2004, substantial increases occurred only among black men (14 cases per 100,000 population in 2004 versus 12 in 2003). For the first time since 1991, rates among black women did not decrease (4.3 in 2004 versus 4.2 in 2003). From 2000 to 2004, the black M:F rate ratio increased from 1.4 to 3.3.

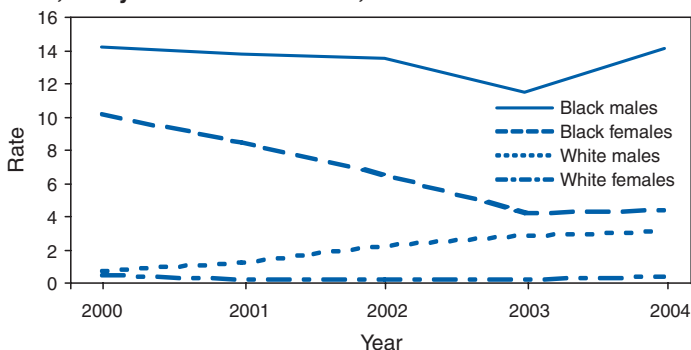
Racial/ethnic disparities in P&S syphilis persist. The increase in the overall P&S rate among blacks in 2004 represents the first year since 1993 that the disparity between black and white rates of P&S syphilis increased. In 2003, the rate among blacks was 5.1 times that among whites (7.7 versus 1.5 cases per 100,000 population). In 2004, the rate among blacks increased and was 5.6 times higher than that among whites (9.0 versus 1.6). From 2000 to 2004, rates of P&S syphilis were higher among black men and women than among white men and women, respectively (Figure). Rates among black men increased by 23% from 2003 to 2004, whereas rates among black women increased by 2% (Table 1). Among Hispanics, the rate among men increased by 12% and decreased among women by 13%. During 2000–2004, although the M:F rate ratio among whites was higher each year than for blacks and Hispanics, from 2003 to 2004, this ratio decreased among whites (from 14 to 10) and increased among blacks (from 2.7 to 3.3) and Hispanics (from 6.1 to 7.9) (Table 1).

By region, rate increases from 2003 to 2004 were highest in the South (3.1 versus 3.6 cases per 100,000 population; 16% increase), followed by the West (2.7 versus 2.9; 7.4% increase), and the Northeast (2.1 versus 2.2; 4.8% increase) (Table 1). For the Midwest, rates remained constant at 1.6. The rate increase in the South represents the first time since 1991 that rates of P&S syphilis increased in that region.

In 2004, rates of P&S syphilis varied within regions of the United States by race/ethnicity and sex (Table 2). In each region, P&S syphilis rates among black men and women exceeded those of whites and Hispanics.

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**FIGURE. Rates\* of primary and secondary syphilis cases among non-Hispanic blacks and non-Hispanic whites, by sex, race, and year — United States, 2000–2004**



\* Per 100,000 population.

**Editorial Note:** From 2000 to 2004, rates of P&S syphilis increased among men and were higher among blacks and Hispanics than among whites. The rate of P&S syphilis among blacks was 5.1 times higher than whites in 2003, but 5.6 times higher in 2004. This represents the first increase in the disparity between black and white rates since 1993. The increasing M:F rate ratio suggests that increases are still occurring among MSM. CDC has estimated that in 2004, approximately 64% of all P&S syphilis cases were among MSM.<sup>¶</sup> After 13 years

<sup>¶</sup> Method of estimation presented at the Infectious Diseases Society of America 43rd Annual Meeting, San Francisco, CA, October 8, 2005 (Poster #906).

**TABLE 1. Number and rate\* of primary and secondary syphilis cases, by race/ethnicity, region,<sup>†</sup> and sex — United States, 2003–2004**

Characteristic	2003							2004						
	Males		Females		Total		M:F <sup>§</sup> rate ratio	Males		Females		Total		M:F rate ratio
	No.	Rate	No.	Rate	No.	Rate		No.	Rate	No.	Rate	No.	Rate	
<b>Race/Ethnicity</b>														
White, non-Hispanic	2,783	2.8	227	0.2	3,010	1.5	14.0	2,947	3.1	256	0.3	3,203	1.6	10.3
Black, non-Hispanic	2,005	11.5	805	4.2	2,811	7.7	2.7	2,450	14.1	813	4.3	3,263	9.0	3.3
Hispanic	1,001	4.9	159	0.8	1,160	2.9	6.1	1,140	5.5	138	0.7	1,278	3.2	7.9
Asian/Pacific Islander	119	1.9	8	0.1	127	1.0	19.0	142	2.3	11	0.2	153	1.2	11.5
American Indian/Alaska Native	50	4.2	19	1.5	69	2.8	2.8	42	3.5	35	2.9	77	3.2	1.2
<b>Region</b>														
Northeast	1,014	3.8	122	0.4	1,137	2.1	9.5	1,084	4.1	104	0.4	1,188	2.2	10.3
Midwest	813	2.5	232	0.7	1,045	1.6	3.6	848	2.6	212	0.6	1,061	1.6	4.3
South	2,514	4.9	699	1.3	3,214	3.1	3.8	3,034	5.9	760	1.4	3,794	3.6	4.2
West	1,615	4.9	164	0.5	1,781	2.7	9.8	1,756	5.3	179	0.5	1,937	2.9	10.6
<b>Total</b>	<b>5,956</b>	<b>4.2</b>	<b>1,217</b>	<b>0.8</b>	<b>7,177</b>	<b>2.5</b>	<b>5.3</b>	<b>6,722</b>	<b>4.7</b>	<b>1,255</b>	<b>0.8</b>	<b>7,980</b>	<b>2.7</b>	<b>5.9</b>

\* Per 100,000 population.

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

<sup>§</sup> Male to female.

**TABLE 2. Number and rate\* of primary and secondary syphilis cases among whites, blacks, and Hispanics,<sup>†</sup> by sex and region<sup>§</sup> — United States, 2004**

Region	Non-Hispanic whites					Non-Hispanic blacks					Hispanics				
	Males		Females		M:F <sup>¶</sup> rate ratio	Males		Females		M:F rate ratio	Males		Females		M:F rate ratio
	No.	Rate	No.	Rate		No.	Rate	No.	Rate		No.	Rate	No.	Rate	
Northeast	428	2.2	24	0.1	22.0	347	11.8	61	1.8	6.6	284	9.8	20	0.7	14.0
Midwest	427	1.6	49	0.2	8.0	360	11.1	153	4.3	2.6	55	3.0	10	0.6	5.0
South	1,098	3.3	142	0.4	8.3	1,538	16.2	559	5.3	3.1	373	5.4	51	0.8	6.8
West	980	5.1	42	0.2	25.5	196	11.7	39	2.3	5.1	456	5.1	60	0.7	7.3

\* Per 100,000 population.

<sup>†</sup> Race/ethnicity data for some records are missing.

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

<sup>¶</sup> Male to female.

of decline, rates of P&S syphilis in 2004 increased in the South and did not decrease among women.

The national Syphilis Elimination Effort (SEE) began in 1999 (2) and focused primarily on heterosexual blacks living in the South. The findings described in this report indicate that prevention measures for MSM of all races/ethnicities should be strengthened throughout the United States. Moreover, gains already achieved in reducing heterosexual and congenital syphilis must be maintained to reach national health objectives to reduce P&S syphilis among women (1). The SEE program is assessing its activities and modifying its strategies for addressing the changing epidemiology of syphilis in the United States.

Reported increases in incidence of P&S syphilis among MSM have been characterized by high rates of human immunodeficiency virus (HIV) co-infection, high-risk sexual behavior, and use of drugs such as methamphetamines (3). Syphilis increases have occurred among MSM who have met sex partners in Internet chat rooms (4). As a result, local program staff are encouraged to consider the effect of the Internet on syphilis and HIV epidemiology and to explore the use of the Internet as a tool in the prevention of sexually transmitted diseases (STDs). Internet-based STD prevention and control activities have been used to reach high-risk MSM populations (5).

Infected non-gay-identified (NGI) MSM who also have female partners likely contribute to P&S syphilis among women (6). Targeting STD-prevention messages to high-risk NGI MSM remains a challenge, particularly among men in racial/ethnic minority populations. Suggested strategies for reaching this population include outreach through partnerships with community-based organizations already working within NGI MSM communities and Internet-based health information dissemination (7).

Public health STD programs should strengthen existing collaborations with private health-care providers and initiate new ones. A national survey revealed that many physicians fail to report STD cases to local health departments, despite being mandated to do so, and that physicians rely on patients to notify their partners of their STD diagnosis, a strategy with unknown efficacy for STD treatment (8). Increasing provider awareness of P&S syphilis among MSM has been demonstrated to increase case reporting (9), which is essential to successful partner notification and treatment activities implemented by local health departments. Concerns regarding the anonymity of sex partners of MSM and men's willingness to cooperate with health department staff for purposes of partner identification pose challenges to traditional partner-notification strategies (10). Health departments that

cooperate with other community and health-care organizations and place partner notification in the context of the broader health-care needs of MSM have been more successful in notifying the partners of MSM infected with syphilis (9).

The findings in this report are subject to at least three limitations. First, syphilis case-report data likely underestimate the true burden of disease in the United States because of underreporting, infected persons not accessing health-care, and persons who are not screened. Therefore, these data should be interpreted with caution. Second, analyses by race/ethnicity are limited by the small number of Asian/Pacific Islanders and American Indian/Alaska Natives reported with P&S syphilis. Finally, data on the sex of sex partners were not available.

In 2005, CDC requested that standardized data on the sex of sex partners be collected and submitted to CDC with the surveillance data already reported weekly from health departments nationwide. In addition, a new syphilis interview record is being developed to capture information about the sex of sex partners and other key risk factors. In the interim, high M:F rate ratios are used as a surrogate measure for MSM transmission.

Despite successes in decreasing the overall rate of P&S syphilis in the United States, challenges remain, particularly the need to improve the detection and prevention of syphilis among women and MSM. Rates among men continue to increase, and the decrease in rates among women that began in 1991 ended in 2004. Public health practitioners should consider the use of Internet-based strategies for health information dissemination and partner notification, realizing the challenge of locating sex partners about whom limited information is known (4,5). Nevertheless, public health practitioners should consider the use of Internet-based strategies for health information dissemination and partner notification. Reported use of methamphetamine is an added concern (3). Local health departments and SEE should focus on expanding public and private partnerships to improve case identification and reporting, partner-notification programs, and outreach to NGI MSM.

#### Acknowledgment

The findings in this report are based, in part, on contributions by state and local health departments.

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## **Methamphetamine Use and HIV Risk Behaviors Among Heterosexual Men — Preliminary Results from Five Northern California Counties, December 2001–November 2003**

Methamphetamine (meth) is a highly addictive stimulant that gained widespread popularity in California in the 1980s and has since spread to most regions of the United States, including rural areas (1). Analyses of survey data among noninjection-drug users from California in the mid-1990s determined that, among heterosexual persons and among men who had sex with men (MSM), meth users reported more sex partners, were less likely to report condom use, and were more likely to report sex in exchange for money or drugs, sex with an injection-drug user, and history of a sexually transmitted disease (STD) (2). Subsequent studies among MSM have indicated an association between meth use and sexual risk behaviors, syphilis infection, and incidence of human immunodeficiency virus (HIV) infection (3–5). Subsequent studies among heterosexual populations (6) have been less extensive than those among MSM and often have not used population-based samples nor adjusted for possible confounders. To further assess the association between meth use and high-risk sexual behaviors among heterosexual men, the California Department of Health Services, Office of AIDS, analyzed population-based data from five northern California counties in the HEY-Man (Health Evaluation in Young Men) Study. This report summarizes the results of that analysis, which determined that recent meth use was associated with high-risk sexual behaviors, including sex with a casual or

anonymous female partner, anal intercourse, and sex with an injection-drug user. The results suggest the need for states to consider including referrals to meth prevention and treatment programs in their HIV prevention programs and for broader assessment of the relation between meth use and high-risk sexual behaviors.

HEY-Man is a population-based, cross-sectional evaluation of HIV infection, STDs, and associated risk behaviors among men aged 18–35 years residing in low-income neighborhoods of Alameda, Contra Costa, San Francisco, San Joaquin, and San Mateo counties in northern California. The study protocol was approved by the institutional review boards of the State of California Health and Welfare Agency and the University of California, San Francisco. Within the five counties, low-income neighborhoods were defined as census block groups with median household incomes below the 10th percentile on the basis of data from the 2000 U.S. Census. City blocks were randomly sampled, without replacement, from these census-defined block groups. Trained field staff enumerated dwelling places in each sampled city block, then went door-to-door to locate male residents and request their participation. Repeat visits, including visits during evening hours and weekends, were made as necessary to identify all eligible men and request their participation. During December 2001–November 2003, the period for which data were available, 2,132 men were contacted; 1,692 (79%) were determined eligible (i.e., aged 18–35 years and residing in the selected neighborhoods), and 1,068 (63%) of those agreed to participate and were enrolled. A total of 1,011 participants completed a staff-administered interview conducted in English or Spanish. The study is scheduled for completion in June 2006.

The HEY-Man questionnaire included a sexual-activity matrix in which field staff recorded the first name, nickname, initials, or alias of up to 10 persons with whom participants said they had vaginal or anal sex during the preceding 6 months. Questions were asked to determine the sex and category (i.e., main, casual, or anonymous) of each sex partner and whether acts included vaginal or anal intercourse with the partner. For this report, analyses were restricted to men who reported having female sex partners exclusively during the preceding 6 months; 43 men (4.1%) who reported having one or more male sex partners during the preceding 6 months were excluded, leaving 968 participants. Frequency of condom use was derived from the study's matrix as the sum of reported acts of vaginal and anal intercourse during which condoms were used, divided by the total number of acts of vaginal and anal intercourse. Meth use was divided into two categories: recent use (any use during the preceding 6 months) and historical use (use but not during the preceding 6 months).

Participants also were asked if they had ever been tested for HIV or chlamydial infection and if they had ever given or received money or drugs for sex or been forced into sex by another male or female.

Chi-square tests were conducted to compare the characteristics of participants (i.e., recent versus no reported meth use, historical versus no reported meth use, and recent versus historical meth use). Separate regression models were used to examine associations between meth use (independent variable) and dichotomously categorized sexual risk and protective behaviors. Regression models were adjusted for demographic characteristics that were significantly associated with recent or historical meth use and use of any other illicit drugs. Prevalence ratios and 95% confidence intervals were calculated using regression procedures for binomially distributed variables (7).

Among the 968 participants, a larger percentage were non-white (Hispanic [51.1%] or non-Hispanic black [19.0%]), born in the United States (48.0%) or in Mexico (36.8%), single/never married (73.0%), and employed full- (47.8%) or part-time (34.4%). Meth use was reported among 151 (15.6%) participants, including 93 (9.6%) who reported historical use and 58 (6.0%) who reported recent use. The prevalence of recent meth use was higher among participants who were non-Hispanic white (11.9%), born in the United States (8.6%), single/never married (6.6%), and employed part-time (7.2%) or unemployed (8.3%).

A greater percentage of recent meth users (93.1%) than men who reported never using meth (72.2%) had been sexually active with a female partner during the preceding 6 months ( $p < 0.001$ ) (Table 1). A greater percentage of meth users reported having anal sex with a female during this period than never users (recent users [29.6%;  $p < 0.001$ ] and historical users [24.3%;  $p < 0.01$ ] versus never users [11.9%]). Statistically significant differences with respect to other high-risk sexual behaviors were observed between recent meth users and never users. These differences included having a casual or anonymous female sex partner (recent users [64.8%] versus never users [44.4%];  $p < 0.01$ ), having multiple partners (56.9% versus 26.3%;  $p < 0.001$ ), having a partner who injected drugs (11.1% versus 1.7%;  $p < 0.01$ ) during the preceding 6 months, and ever having received drugs or money for sex with a male or female partner (15.5% versus 3.5%;  $p < 0.001$ ).

Regression analyses determined that recent meth users were more likely than men who had never used meth to be sexually active with a female partner, have multiple female partners, have a casual or anonymous female partner, have anal intercourse with a casual or anonymous female partner, have a

female partner who injected drugs, or have ever received money or drugs for sex from a male or female partner (Table 2). Recent meth use was not associated with reported condom use during the preceding 6 months, but this might reflect overall infrequent condom use among the 968 men in the study population, who had a median of 48 reported acts of vaginal intercourse and a median of five uses of condoms during vaginal intercourse. Recent meth users were no more likely to have been tested for HIV or chlamydial infection than were men who had never used meth. Among historical meth users, sexual activity with higher HIV-transmission risk (i.e., anal sex) was identified primarily among those with main female sex partners only. Both recent and historical meth users were more likely to report they had ever been forced into sex by a male or female than men who had never used meth. After adjustment for demographic characteristics, recent and historical meth use was associated with recent use of one or more other illicit drugs,\* use of club drugs,<sup>†</sup> and specific use of marijuana, ecstasy, hallucinogens (e.g., LSD), crack cocaine, and cocaine (Table 2).

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**Editorial Note:** The population-based estimates of meth use among low-income men aged 18–35 years presented in this report support previous cross-sectional surveys linking meth use to sexual risk behaviors among heterosexual populations (2). Recent research on meth use has focused on MSM populations because of the greater prevalence of HIV in this population. Meth use was associated with increased HIV infections among MSM in San Francisco who were tested for HIV during 2001–2002 (3). Results from the study described in this report and additional data suggest that further attention should be given to the association between meth use and STD and HIV infection among heterosexuals. In southern California, 9.5% of primary and secondary syphilis cases in heterosexuals during 2004 were among persons with a history of meth use, continuing a trend of increases from 3.1% in 2001, 6.4% in

\* Marijuana, barbiturates, cocaine, crack cocaine, heroin, or phencyclidine (PCP).  
<sup>†</sup> Viagra<sup>®</sup>, ecstasy, nitrites, lysergic acid diethylamide (LSD), or gamma hydroxybutyrate (GHB).

**TABLE 1. Comparison of methamphetamine (meth) use among heterosexual males aged 18–35 years, by selected characteristics — five northern California counties, 2001–2003**

Characteristic	Meth use*†				Never used meth	
	Recent§ n = 58		Historical¶ n = 93		n = 817	
	No.	(%)	No.	(%)	No.	(%)
<b>Age (yrs)</b>						
<21	12	(20.7)	26	(28.0)	218	(26.7)
22–29	33	(56.9)	44	(47.3)	394	(48.2)
≥30	13	(22.4)	23	(24.7)	205	(25.1)
<b>Race/Ethnicity</b>						
White, non-Hispanic	12	(20.7)**	26	(28.0)††	63	(7.8)
Black, non-Hispanic	8	(13.8)	9	(9.7)	167	(20.6)
Hispanic	29	(50.0)	33	(35.5)	433	(53.3)
Other	3	(5.2)	8	(8.6)	76	(9.4)
Mixed	6	(10.3)	17	(18.3)	73	(9.0)
<b>Country of birth</b>						
United States	40	(69.0)††	61	(65.6)††	364	(44.6)
Mexico	13	(22.4)	16	(17.2)	327	(40.1)
Other	5	(8.6)	16	(17.2)	125	(15.3)
<b>Marital status</b>						
Married	8	(13.8)	9	(9.7)**	196	(24.0)
Single/Never married	47	(81.0)	78	(83.9)	582	(71.2)
Other	3	(5.2)	6	(6.5)	39	(4.8)
<b>Education</b>						
<High school	27	(46.6)	26	(28.0)§§	309	(37.8)
High school graduate	17	(29.3)	30	(32.3)	284	(34.8)
>High school	14	(24.1)	37	(39.8)	224	(27.4)
<b>Employment status</b>						
Employed full-time	21	(36.2)	43	(48.3)	399	(49.6)
Employed part-time	24	(41.4)	33	(37.1)	276	(34.3)
Unemployed	13	(22.4)	13	(14.6)	130	(16.2)
<b>Other illicit drugs, past 6 mos¶¶</b>	51	(87.9)††	62	(66.7)††	323	(39.5)
<b>Other club drugs, past 6 mos***</b>	18	(31.0)††	14	(15.1)††	40	(4.9)
<b>Use of specific drug, past 6 mos</b>						
Marijuana	49	(84.5)††	58	(62.4)††	294	(36.0)
Ecstasy	14	(24.1)††	10	(10.8)**	33	(4.0)
Hallucinogens	6	(10.3)††	5	(5.4)††	3	(0.4)
Crack cocaine	15	(25.9)††	7	(7.5)††	10	(1.2)
Cocaine	27	(46.6)††	21	(22.6)††	68	(8.3)

\* References to significant p-values under the "Recent" column are for comparisons of recent and never-use of meth; references to significant p-values under the "Historical" column are for comparisons of historical and never-use of meth.

† Comparisons of recent with historical meth users identified differences by education ( $p \leq 0.05$ ); other illicit drug use ( $p \leq 0.01$ ); other club drug use ( $p \leq 0.05$ ); use of marijuana ( $p \leq 0.01$ ), crack cocaine ( $p \leq 0.01$ ), cocaine ( $p \leq 0.01$ ), and ecstasy ( $p \leq 0.05$ ); being sexually active during the past 6 months ( $p \leq 0.05$ ); type of female partner ( $p \leq 0.05$ ); and number of female partners ( $p \leq 0.05$ ).

††  $p \leq 0.001$ .

§§  $p \leq 0.05$ .

¶¶ Use of marijuana, barbiturates, crack cocaine, cocaine, heroin, or phencyclidine (PCP).

\*\*\* Use of Viagra®, ecstasy, nitrites, lysergic acid diethylamide (LSD), or gamma hydroxybutyrate (GHB).

††† Among participants sexually active with a female partner during the past 6 months.

§§§ Human immunodeficiency virus.

**TABLE 1. (Continued) Comparison of methamphetamine (meth) use among heterosexual males aged 18–35 years, by selected characteristics — five northern California counties, 2001–2003**

Characteristic	Meth use*†				Never used meth	
	Recent§ n = 58		Historical¶ n = 93		n = 817	
	No.	(%)	No.	(%)	No.	(%)
<b>Sexually active, past 6 mos†††</b>	54	(93.1)††	74	(79.6)	583	(72.2)
<b>Type of female partner†††</b>						
Casual or anonymous	35	(64.8)**	34	(46.0)	259	(44.4)
Main partner only	19	(35.2)	40	(54.0)	326	(55.6)
<b>No. of female partners†††</b>						
1	21	(38.9)††	40	(54.1)	367	(63.1)
2	18	(33.3)	15	(20.3)	87	(14.8)
3–5	9	(16.7)	17	(23.0)	100	(17.2)
>5	6	(11.1)	2	(2.7)	28	(4.8)
<b>Type of sex†††</b>						
Anal, at least once	16	(29.6)††	18	(24.3)**	69	(11.9)
Vaginal only	38	(70.4)	56	(75.7)	513	(88.1)
<b>Partner who injected drugs†††</b>	6	(11.1)**	4	(4.6)	13	(1.7)
<b>Condom use, vaginal sex†††</b>						
0%	15	(28.3)	18	(24.3)††	178	(30.8)
1%–99%	28	(52.8)	47	(63.5)	230	(39.8)
100%	10	(18.9)	9	(12.2)	170	(29.4)
<b>Condom use, anal sex†††</b>						
0%	12	(75.0)	16	(88.9)	53	(76.8)
1%–99%	1	(6.3)	1	(5.6)	10	(14.5)
100%	3	(18.8)	1	(5.6)	6	(8.7)
<b>Ever forced into sex</b>	7	(12.1)**	12	(12.9)**	36	(4.4)
<b>Ever paid money or drugs for sex</b>	16	(27.6)	18	(19.4)	180	(22.2)
<b>Ever received money or drugs for sex</b>	9	(15.5)††	6	(6.5)	28	(3.5)
<b>Ever tested for HIV§§§</b>	30	(51.7)	49	(52.7)§§	332	(40.7)
<b>Ever tested for chlamydial infection</b>	18	(32.1)	23	(25.8)	177	(22.2)

**TABLE 2. Adjusted prevalence ratios (PRs) for high-risk sexual behaviors and prevention behaviors, recent and historical methamphetamine (meth) use versus no history of meth use among heterosexual men aged 18–35 years, by selected characteristics — five northern California counties, 2001–2003\***

Characteristic	Recent meth use <sup>†</sup>		Historical meth use <sup>§</sup>	
	PR	95% CI <sup>¶</sup>	PR	95% CI
<b>Sexually active, past 6 mos**</b>	1.1	(1.0–1.2)	1.0	(0.9–1.2)
<b>Type of female partner**</b>				
Casual or anonymous	1.4	(1.1–1.7)	1.0	(0.7–1.2)
Main partner only	1.0	Referent	1.0	Referent
<b>No. of female partners**</b>				
≥2	1.5	(1.2–1.9)	1.2	(0.9–1.5)
1	1.0	Referent	1.0	Referent
<b>Type of sex**</b>				
Anal, at least once <sup>††</sup>				
<b>Casual/anonymous partner</b>	2.4	(1.2–4.5)	1.5	(0.8–3.1)
<b>Main partner only</b>	1.5	(0.5–4.3)	2.3	(1.2–4.5)
Vaginal only	1.0	Referent	1.0	Referent
<b>Partner who injected drugs**</b>	4.6	(1.9–11.3)	2.3	(0.9–6.4)
<b>Condom use, vaginal sex**</b>				
0%–99%	1.1	(0.9–1.3)	1.2	(1.1–1.4)
100%	1.0	Referent	1.0	Referent
<b>Condom use, anal sex**</b>				
0%–99%	0.8	(0.6–1.1)	1.0	(0.9–1.1)
100%	1.0	Referent	1.0	Referent
<b>Ever forced into sex</b>	2.2	(1.0–4.8)	2.2	(1.2–4.3)
<b>Ever paid money or drugs for sex</b>	1.4	(0.9–2.1)	1.3	(0.9–2.0)
<b>Ever received money or drugs for sex</b>	3.7	(1.9–7.4)	1.5	(0.6–3.5)
<b>Ever tested for HIV<sup>§§</sup></b>	1.0	(0.8–1.3)	1.1	(0.9–1.3)
<b>Ever tested for chlamydial infection</b>	1.0	(0.7–1.5)	0.9	(0.7–1.3)
<b>Other illicit drugs, past 6 mos<sup>¶¶</sup></b>	2.0	(1.7–2.3)	1.5	(1.2–1.7)
<b>Other club drugs, past 6 mos<sup>***</sup></b>	5.3	(3.2–8.7)	2.4	(1.3–4.3)
<b>Use of specific drug, past 6 mos</b>				
Marijuana	2.0	(1.7–2.4)	1.4	(1.2–1.7)
Ecstasy	5.2	(2.9–9.2)	2.1	(1.1–4.2)
Hallucinogens	20.9	(5.4–80.1)	9.5	(2.1–42.2)
Crack cocaine	24.8	(11.8–52.2)	7.1	(2.9–17.0)
Cocaine	4.9	(3.3–7.2)	2.6	(1.7–4.0)

\* Each characteristic in bold represents a separate regression model. All PRs are adjusted for the following variables: age, race/ethnicity, country of birth, marital status, and use of other illicit drugs during the past 6 months. PRs for analyses of other illicit drugs are adjusted for demographic characteristics only.

† Meth use during the past 6 months, compared with never-use of meth.

§ Meth use but not during the past 6 months, compared with never-use of meth.

¶ Confidence interval.

\*\* Among participants sexually active with a female partner during the past 6 months.

†† Effect modification by type of female partner.

§§ Human immunodeficiency virus.

¶¶ Use of marijuana, barbiturates, crack cocaine, cocaine, heroin, or phencyclidine (PCP).

\*\*\* Use of Viagra<sup>®</sup>, ecstasy, nitrites, lysergic acid diethylamide (LSD), or gamma hydroxybutyrate (GHB).

2002, and 7.3% in 2003.<sup>§</sup> A gonorrhea outbreak in six central California counties in 2004 noted substantial meth use among heterosexual patients (men [38%], women [28%]), particularly when compared with MSM patients (8%) (MC Samuel, DrPH, California Department of Health Services, personal communication, 2005).

<sup>§</sup> Syphilis Elimination Surveillance Data, available at <http://www.dhs.ca.gov/ps/dcdc/std/mqreports.htm>.

Similar observations regarding STD incidence among MSM subpopulations (e.g., young minorities) often have indicated future trends of HIV incidence among MSM. Such projections typically have not been made for heterosexuals because of the lesser prevalence of HIV in that population. However, HIV/AIDS surveillance data from CDC and southern California indicate a growing burden of HIV among heterosexuals, particularly among females, non-Hispanic blacks, and Hispanics (8,9). Data from California HIV counseling and testing facilities also suggest the potential for meth use to connect populations with higher HIV prevalence to those with lower HIV prevalence; among bisexual males tested in California, meth users were 5.5 times more likely (99% CI = 1.4–22.3) to test HIV-positive compared with users of other stimulant drugs (CS Krawczyk, PhD, C Dahlgren, MA, unpublished data, 2002–2003). Increased HIV burden among heterosexuals, coupled with the increased use of meth nationwide and the findings of this report, suggest the potential for meth to influence heterosexual transmission of HIV. Users might initially use meth for either nonsexual (e.g., mental “escape” or weight loss) or sexual (e.g., increased sex drive, performance, and pleasure) effects; regardless of reason for use, the effects of the drug might lead to risk behaviors for transmission of STDs and HIV. In one study, 74% of male meth users reported that their sexual thoughts, feelings, and behaviors became associated with meth, 77% indicated that meth made them obsessed with having sex, and 53% said they had participated in riskier

sexual acts (i.e., anal sex) while under the influence of meth (10).

The findings in this report are subject to at least three limitations. First, because of the cross-sectional design of the study, no temporal or causal relations between meth use and sexual risk behaviors can be evaluated. Second, multiple data comparisons were used, increasing the potential for identifying associations by chance. Finally, because these analyses were conducted before completion of data collection, the current



results might differ from the results that will be obtained by analyzing data from the entire targeted study population.

The public health implications of a potential association between meth use and high-risk sexual behaviors among heterosexuals suggests the need for a broader approach in addressing meth use and risk for infection with HIV and STDs. States should consider enhancing HIV and STD prevention and treatment programs to include assessment for meth use, with referrals to meth treatment, primary meth prevention activities, and substance use treatment programs incorporating STD/HIV screening, testing, and sexual health promotion. In addition, policy initiatives should be considered to support further collaborations between professionals focusing on substance use and HIV/STDs, integrated prevention and treatment services, and research and demonstration projects evaluating the impact of treatment for meth use on sexual risk behavior reduction.

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## Increased Antiviral Medication Sales Before the 2005–06 Influenza Season — New York City

Oseltamivir, zanamivir, rimantadine, and amantadine are antiviral medications approved for the treatment and/or prophylaxis of influenza A and/or B (1), although high levels of resistance among circulating strains of influenza A led CDC to issue interim recommendations in January 2005, advising that amantadine and rimantadine not be used for the treatment or prevention of influenza A during the 2005–06 influenza season (2). As part of syndromic surveillance, the New York State Department of Health (NYSDOH) monitors sales of antiviral influenza medications paid for by the Medicaid system, and the New York City Department of Health and Mental Hygiene (NYCDOHMH) monitors sales of antiviral influenza medications by a retail pharmacy chain. Syndromic data are used in combination with data provided by laboratories, health-care facilities, and health-care providers to monitor influenza activity. In October 2005, a spike in antiviral medication sales was noted. The spike did not coincide with other markers of influenza activity but did coincide with the beginning of media coverage of avian influenza A (H5N1) and the potential for an influenza pandemic. Tracking prescription medication sales can detect spikes for which no immediate indication exists. Such syndromic data might be used to guide issuance of public health recommendations regarding the limited availability of certain medications and the inadvisability of personal stockpiling.

The New York State (NYS) Medicaid program provides health-care benefits for 34% of New York City (NYC) residents. Approximately 95% of Medicaid-paid medications are reported to NYSDOH within 1 day of sale. NYSDOH compiles a daily electronic batch file of sales with summary counts by medication category and patient postal code, age group, and sex. On average, 29,664 Medicaid-paid medications are reported from NYC each day. One medication category consists of the anti-influenza medications oseltamivir, zanamivir, and rimantadine (NYSDOH opted to exclude amantadine from its influenza antiviral category because the drug is also approved for treatment of Parkinson disease).

NYCDOHMH receives a daily electronic batch file listing certain prescription medications sold the previous day by a retail pharmacy chain. The anti-influenza medication category includes prescription sales of oseltamivir, zanamivir, rimantadine, and amantadine.

Each influenza season, during October–May (i.e., surveillance week 40 through week 20), World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System laboratories in the United States report to CDC

the weekly number of respiratory specimens received for influenza testing and the percentage of specimens testing positive for influenza by culture. In NYC, four WHO laboratories report these weekly percentages.

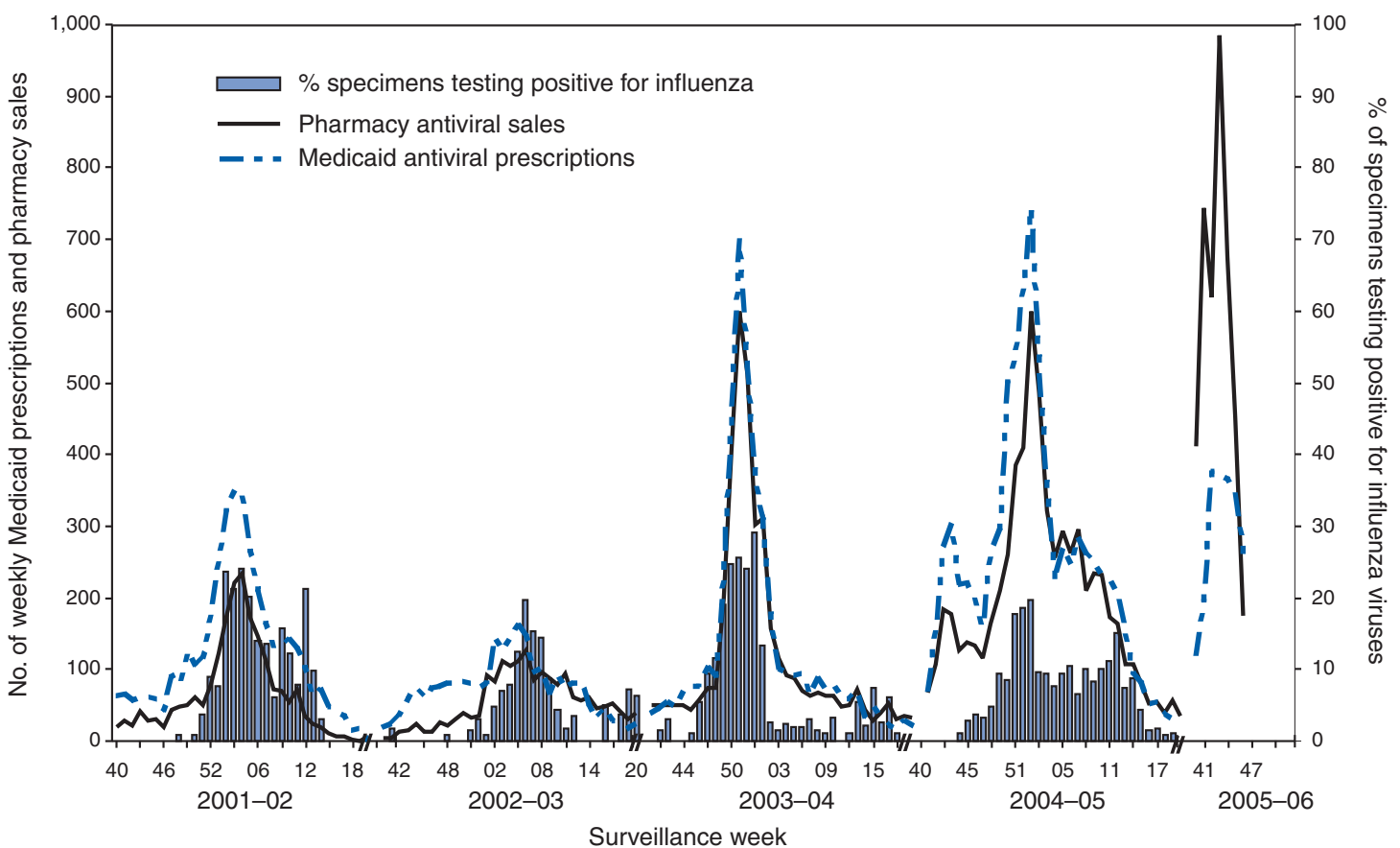
Previous peaks in sales of anti-influenza medication coincided with peaks in the percentage of specimens testing positive for influenza during influenza seasons 2001–02, 2002–03, 2003–04, and 2004–05 (Figure). However, a spike in antiviral influenza medication sales occurred during October 23–29, 2005 (i.e., week 43), 7 weeks before the first WHO laboratory evidence of influenza virus circulation was noted during December 11–17, 2005 (i.e., week 50). A smaller spike occurred during a similar period in 2004 (i.e., October 24–30; week 43), 1 week before any virologic evidence of circulating influenza virus. During October 2005, no other markers of influenza activity (i.e., nursing and congregate facility outbreaks, sentinel physician reporting, emergency department

visits, and pneumonia and influenza mortality) indicated activity in NYC that would have signaled the start of the 2005–06 influenza season.

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**Editorial Note:** Influenza vaccination remains the cornerstone for the control and treatment of influenza; however, antiviral influenza medications serve as an adjunct to vaccine (1). The increased sale of antiviral influenza medications in NYC during October 2005 did not coincide with any measures of influenza activity and therefore was unlikely to reflect the treatment or prophylaxis of persons against circulating influenza viruses. However, the period of increased sales did coincide with the beginning of media coverage (3) of avian influenza

**FIGURE.** Number of weekly Medicaid prescriptions\* and pharmacy sales† of antiviral influenza medications versus percentage of specimens testing positive for influenza viruses,§ by surveillance week — New York City, 2001–02, 2002–03, 2003–04, 2004–05, and 2005–06 influenza seasons¶



\* Reported for New York City by the New York State Department of Health.

† Reported by the New York City Department of Health and Mental Hygiene for one retail pharmacy chain.

§ Reported by the four World Health Organization laboratories in New York City.

¶ Through surveillance week 46, ending November 19, 2005.

(for which no human vaccine has yet been approved, although clinical trials are ongoing) and the potential for an influenza pandemic. Increased media attention to avian influenza in Asia and the resulting public concern might have produced the unprecedented demand for antiviral influenza medications in NYC before the start of the influenza season. A similar but smaller increase in sales during October 2004 coincided with media coverage of expected shortages in the influenza vaccine supply during the 2004–05 influenza season (4).

These findings suggest that persons requested and/or their health-care providers prescribed antiviral influenza medications to create personal stockpiles for use in the event of an outbreak of avian influenza or an influenza pandemic. Oseltamivir, the drug most commonly referred to in reports concerning the treatment and prophylaxis of avian influenza, has limited availability. In response to increased demand across the United States, Roche Pharmaceuticals (Nutley, New Jersey), manufacturer of oseltamivir (sold as Tamiflu®), restricted shipment of the drug in the United States during October 2005–January 2006 (5). Because the worldwide supply of antiviral influenza medications is limited, the U.S. Department of Health and Human Services, state and local health departments, and medical societies in the United States have discouraged health-care providers from prescribing antiviral medications for the purpose of creating personal stockpiles (6–8). NYSDOH posted a health advisory on its secure Health Alert Network discouraging private stockpiling on November 10, 2005. Most of these recommendations were issued after the October spike in NYC antiviral influenza medication sales.

Although private and personal stockpiling is discouraged, federal and state health authorities and health-care institutions are creating stockpiles of antiviral influenza medications for persons at greatest risk for complications from influenza. A potential consequence of personal stockpiling is depletion of existing supplies of antivirals so that they will not be available to those persons who most need them. In addition, widespread personal stockpiling and inappropriate use of antivirals (e.g., as a daily regimen regardless of the degree of influenza risk) might compound the risk for influenza by creating conditions for the emergence of resistant strains of influenza.

The findings in this report are subject to at least three limitations. First, the exact reasons for prescribing medications are unknown. Specific clinical information on persons for whom medications were prescribed, such as recent onset of respiratory illness or personal risk factors for potential complications from influenza, was not available. Second,

the degree to which media reports influenced either personal behavior or professional practice is unknown; moreover, the respective contribution of personal requests for antivirals versus physician recommendations is unknown. Finally, although county of residence is known for Medicaid prescriptions, commercial pharmacy data do not include home residence. Some sales might have been made in NYC to persons residing outside of NYC.

Monitoring both prescription and over-the-counter drug sales has become increasingly useful in public health surveillance (9,10). As indicated by the findings in this report, such syndromic data, when combined with laboratory, provider, and health-care facility surveillance, can detect spikes in sales of prescription medications for which no immediate indication exists. These data can be used to help guide public health recommendations and policies regarding limited supplies of medication and the inadvisability of personal stockpiling.

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## Inhalation Anthrax Associated with Dried Animal Hides — Pennsylvania and New York City, 2006

On February 21, 2006, the Pennsylvania Department of Health (PDOH) reported to CDC and the New York City (NYC) Department of Health and Mental Hygiene (DOHMH) a case of inhalation anthrax in a man who resided in New York City. This report summarizes the joint epidemiologic and environmental investigation conducted by local, state, and federal public health, animal health, and law enforcement authorities in Pennsylvania and NYC to determine the source of exposure and identify other persons who were potentially at risk.

On February 16, the patient had traveled from NYC to northern Pennsylvania for a performance with his dance troupe. He collapsed later that evening with rigors and was admitted to a local hospital, where he reported a 3-day history of shortness of breath, dry cough, and malaise. A chest radiograph revealed bilateral infiltrates and pleural effusions.

On February 17, the patient was transferred to a tertiary care center because of worsening respiratory status. All four blood culture bottles grew gram-positive rods. Isolates were sent to the PDOH laboratory and confirmed on February 21 as *Bacillus anthracis* by polymerase chain reaction and susceptibility to lysis by gamma phage. On February 22, CDC identified the isolate as *B. anthracis* genotype 1 by multiple-locus variable-number tandem repeat analysis (1). Isolates were susceptible to all antimicrobials tested. Preliminary anti-protective antigen (PA) antibody testing by enzyme-linked immunosorbent assay was below the lower limit of quantification of the assay (2), consistent with early infection. Anti-PA IgG was detectable in the patient's plasma on February 22 and reached a four-fold elevation above the assay reactivity threshold by February 23, thus confirming seroconversion. As of March 14, the patient remained hospitalized in Pennsylvania.

The joint epidemiologic and environmental investigation sought to 1) determine the source of exposure, 2) identify other persons who were exposed and required postexposure prophylaxis, 3) enhance surveillance for additional cases through outreach to the medical community, and 4) provide frequent updates as soon as available and consistent messages regarding risk to the public.

Interviews were conducted with the patient, his family, and his colleagues. The patient made traditional African drums by using hard-dried animal hides (e.g., air-dried until brittle enough to crack) obtained in NYC from importers who primarily sold African goat and cow hides. Making the drums

involved soaking hides for 1 hour in water and then scraping hair from the hides with a razor, which reportedly generated a large amount of aerosolized dust in the patient's workspace as the hides dried. The man did not wear any personal protective equipment (e.g., mask or gloves) while working. After working on the hides, he usually returned home to his apartment and immediately removed his clothing and showered.

On December 20, 2005, after a 3-week trip to Côte d'Ivoire, the patient returned to NYC with four hard-dried goat hides wrapped in a plastic bag. He transported them in his van to his storage facility workspace, a windowless unit (12 ft x 10 ft x 30 ft) with no operating air conditioning or window ventilation. The man did not take the hides to his home. He worked on the last of these hides on February 12, 2006, and cleaned the workspace on February 15.

To confirm the hypothesis that the primary source of exposure to aerosolized *B. anthracis* spores occurred in the workspace and to determine whether the patient's home and van were contaminated, a targeted environmental evaluation was conducted by CDC and NYCDOHMH. Surface wet swab, wet wipe, and vacuum samples were obtained at locations selected to maximize the possibility of detecting *B. anthracis* spores in the patient's residence, van, and workspace. Samples were sent to NYCDOHMH and CDC laboratories, both of which confirmed the presence of *B. anthracis* by culture and polymerase chain reaction; samples sent to CDC were identified as genotype 1 by multiple-locus variable-number tandem repeat analysis. All samples from the workspace were positive for *B. anthracis*, including those from an inactive air conditioning vent 12 feet above the floor. Consistent with secondary contamination, some samples from the patient's apartment (e.g., shoes and entryway) and van (e.g., floorboard) tested positive for *B. anthracis*; others were negative (e.g., most surfaces above ground level). Environmental and epidemiologic findings suggested that the patient's primary exposure to aerosolized *B. anthracis* spores resulted from scraping a contaminated hide in his workspace.

Postexposure prophylaxis for inhalation anthrax was recommended for four persons who had been present in the patient's workspace during procedures that generated aerosols from the animal hides and hair (e.g., mechanical hide manipulation with a razor or sweeping/vacuuming of hairs). As of March 14, interviews and enhanced surveillance had not identified additional cases of suspected or confirmed anthrax. NYCDOHMH provided regular updates on the status of the investigation and informed the public that other persons in the patient's apartment building or the storage facility where the patient's workspace was located had no risk of contracting inhalation anthrax.

**Reported by:** J Walsh, MD, Robert Packer Hospital, Sayre; G Fraser, E Hunt, B Husband, K Nalluswami, MD, K Pollard, S Reynolds, V Urdaneta, MD, A Weltman MD, Pennsylvania Dept of Health. C Aston, PhD, S Balter, MD, S Beatrice, PhD, G Beaudry, PhD, D Berg, MD, N Clark, MA, T Frieden, MD, A Karpati, MD, M Layton, MD, L Lee, MS, J Leighton, PhD, L Moskin, MD, S Mullin, M Phillips, MD, A Paykin, PhD, J Prud'homme, S Slavinski, DVM, A Tucker, I Weisfuse, MD, D Weiss, MD, G Wolsk, LMSW, New York City Dept of Health and Mental Hygiene. C Bacon, DVM, E Glasgow, T Gomez, DVM, W Swartz, Animal and Plant Health Inspection Svc, US Dept of Agriculture. D Baden, MD, T Clark, MD, LA Dauphin, PhD, P Diaz, MD, CA Dykewicz, MD, A Fleischauer, PhD, M Frank, MPH, JE Gee, PhD, A Hoffmaster, PhD, H Kim, PharmD, C Marston, R Meyer, PhD, J McQuiston, DVM, B Newton, MS, S Papagiotas, MPH, N Pesik, MD, T Piester, C Quinn, PhD, S Reagan, MPH, L Rotz, MD, P Rosenberg, MA, N Rosenstein, MD, S Shadomy, DVM, V Semanova, PhD, T Treadwell, DVM, P Wilkins, PhD, J Winchell, PhD, National Center for Infectious Diseases; G Burr, C Dowell, MS, J Hornsby-Myers, MS, M Kiefer, MS, B King, MPH, National Institute for Occupational Safety and Health; TQ Nguyen, PhD, N Arboleda, MD, B Tsoi, MD, EIS officers, CDC.

**Editorial Note:** This report describes the first case of naturally acquired inhalation anthrax in the United States since 1976 (3). Coordinated epidemiologic and environmental investigations and laboratory analyses indicated that the likely source of infection for this patient was exposure to *B. anthracis* spore-containing aerosols produced by mechanical scraping of a contaminated animal hide in a nonventilated workspace.

*B. anthracis* spores are present in soil in much of the world, causing infection in herbivorous mammals (e.g., cattle, sheep, goats, or antelope) when they ingest spores from soil. Anthrax can occur in humans exposed to infected animals or tissues such as hides or fur. Anthrax in humans takes one of three forms: cutaneous, gastrointestinal, or inhalation.

Industrial processing of animal hair or hides accounted for 153 (65%) of 236 anthrax cases reported to CDC during 1955–1999 (CDC, unpublished data, 2001). Commercial products made from animal hair or hides accounted for an additional five (2%) cases. The majority of these 158 cases were cutaneous anthrax; only 10 (6%) cases were inhalation anthrax. Improvements in industrial hygiene and introduction of practices such as improved ventilation, decreased use of imported animal materials, and vaccination of at-risk workers helped limit the incidence of industrial inhalation anthrax (4,5). In contrast, anthrax associated with the handling of individual animal hides is rare (4). One case of cutaneous anthrax reported in the United States was associated with a goat hide drum purchased in Haiti (6,7). No reported cases of inhalation anthrax in the United States have been associated with finished animal hide drums.

The U.S. Department of Agriculture regulates the importation of animal products, including animal hides,\* although these regulations are not specific to, nor are, in general, the hide import disinfection procedures evaluated for, *B. anthracis*. The safest way to eliminate risk for inhalation anthrax from animal hides or hair is to work only with hides that have been tanned or otherwise treated to render *B. anthracis* spores nonviable. Air drying does not destroy *B. anthracis* spores. If hard-dried hides are used, certain precautions can minimize but not necessarily eliminate exposures to *B. anthracis*, including 1) regularly washing hands thoroughly with soap and warm water, 2) wearing durable protective gloves and a designated pair of shoes in the workspace, and 3) working in a well-ventilated workspace. Spores on hides and tools can be inactivated by heating them to an internal temperature of 158°F (70°C) or by placing them in boiling water for ≥30 minutes (8). Clothes worn during work should be removed before leaving the workspace and laundered. The workspace should be cleaned using a high-efficiency particulate air vacuum. Workers should avoid vigorously shaking or beating hides, dry sweeping, using compressed air, and working in areas where other persons might be present. CDC does not routinely recommend prophylaxis for persons who have had contact with animal hide drums or animal hides. Drum makers, drum owners, or drummers should report new skin lesions or serious respiratory illnesses to their health-care providers and describe any contact with animal hide drums or animal hides.

A priority for local, state, and federal agencies involved in this investigation was providing updates on the investigation as soon as available and frequent outreach to the public and medical community and to persons who resided in the patient's apartment building or worked at the storage facility. Risk communication emphasized the patient's natural exposure, the rarity of inhalation anthrax, and that exposure risk was limited to persons in the patient's workspace during aerosol-generating procedures. Risk messages also highlighted the absence of any documented risk for inhalation anthrax from environmental contamination of the patient's apartment and workspace, playing or owning African drums, or attending African dance performances.

After the initial diagnosis of inhalation anthrax was made, the rapid epidemiologic response and environmental investigations by public health, animal health, and law enforcement authorities contributed to a prompt understanding of the patient's exposure and possible risk to others. The coordinated responses were critical to minimizing risk for exposure and infection and alleviating concern among the public.

\*9CFR Part 95; available at [http://www.access.gpo.gov/nara/cfr/waisidx\\_05/9cfr95\\_05.html](http://www.access.gpo.gov/nara/cfr/waisidx_05/9cfr95_05.html).

### Acknowledgments

The findings in this report are based, in part, on contributions by Soldiers and Sailors Memorial Hospital, Wellsboro, Pennsylvania; NYC Police Dept; NYC Office of Emergency Management; and NYC Dept of Environmental Protection; Customs and Border Protection; Federal Bureau of Investigation; US Dept of Homeland Security; US Environmental Protection Agency; and US Dept of Agriculture.

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## Hypothermia-Related Deaths — United States, 1999–2002 and 2005

Hypothermia, defined as a core body temperature of  $<95^{\circ}\text{F}$  ( $<35^{\circ}\text{C}$ ), is preventable. Excessive exposure to cold temperatures leads to potentially fatal central nervous system depression, arrhythmias, and renal failure (1). Advanced age, chronic medical conditions, substance abuse, and homelessness are among risk factors for hypothermia-related death. This report describes three hypothermia-related deaths that occurred during 2005 and reviews CDC data on hypothermia-related deaths during 1999–2002 in the United States. Public health strategies should target U.S. populations at increased risk for exposure to excessive cold and recommend behavior modification (e.g., dressing warmly, modifying activity levels, or avoiding alcohol) to help reduce mortality and morbidity from hypothermia.

### Case Reports

**Wyoming.** In May 2005, the body of a man aged 44 years from Florida was found in Wyoming, close to a cabin, where his all-terrain-vehicle had become mired. He had rigor mortis and was pronounced dead at the scene. The man had no known

medical history; however, an autopsy revealed cocaine and cannabinoids in his blood. He was partially dressed in a pull-over, T-shirt, pants, and one sock. Temperatures on the preceding day ranged from  $30^{\circ}\text{F}$  to  $38^{\circ}\text{F}$  ( $-1^{\circ}\text{C}$  to  $3^{\circ}\text{C}$ ). The coroner certified cause of death as hypothermia resulting from exposure to cold temperatures while acutely intoxicated.

**New Mexico.** In November 2005, the body of a woman aged 59 years was found in a field near her home in New Mexico. She was pronounced dead after attempts to revive her at a local emergency department were unsuccessful. She had a medical history of diabetes and chronic alcoholism. An autopsy revealed a vitreous humor glucose level of 410 mg/dL and a femoral blood alcohol concentration of 0.175 g/dL, more than twice the legal intoxication limit (0.08 g/dL) in New Mexico. The woman was dressed in light clothing and one shoe; her wool jacket and other shoe were found nearby. The night before the woman was found, the ambient temperature was  $0^{\circ}\text{F}$  ( $-18^{\circ}\text{C}$ ). The medical examiner certified cause of death as hypothermia resulting from exposure to excessive cold while acutely intoxicated.

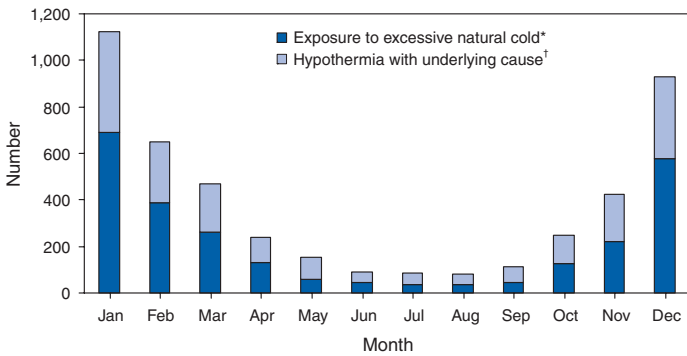
**Alaska.** In November 2005, the body of a man aged 59 years was found seated, frozen solid, at a table in his home (a converted bus) in Alaska. He was pronounced dead at the scene; he had no known medical conditions. He was inside a sleeping bag and was wearing a light jacket, long-sleeved flannel shirt, T-shirt, and pants. The temperature inside the bus was  $-15^{\circ}\text{F}$  ( $-26^{\circ}\text{C}$ ), and the oil in the heater tanks was exhausted. The medical examiner certified the cause of death as hypothermia resulting from exposure to excessive cold.

### Risk Factors for Hypothermia-Related Mortality

During 1999–2002, a total of 4,607 death certificates in the United States had hypothermia-related diagnoses listed as the underlying cause of death or nature of injury leading to the underlying cause of death (annual incidence: four per 1,000,000 population). Exposure to excessive natural cold (*International Classification of Diseases, Tenth Revision* [ICD-10] code X31) was the underlying cause in 2,622 deaths. Hypothermia (ICD-10 code T68) was the nature of injury in 1,985 deaths with underlying causes of death other than exposure to excessive natural cold (e.g. falls, atherosclerotic cardiovascular disease, or drowning).

During 1999–2002, among those who died from hypothermia, 49% were aged  $\geq 65$  years, 67% were male, and 22% were married (compared with 52% of the overall U.S. population) (2). A high proportion (83%) of the hypothermia-related deaths occurred during October–March (Figure 1);

FIGURE 1. Number of hypothermia-related deaths, by month — United States, 1999–2002

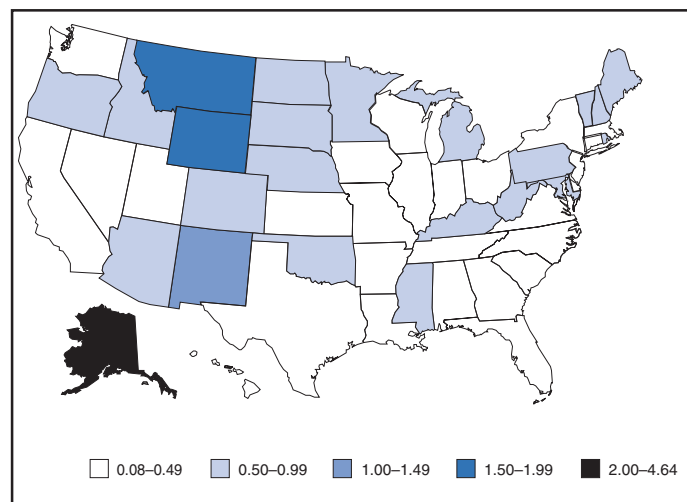


\* 2,622 deaths identified by code X31 of the *International Classification of Diseases, Tenth Revision* (ICD-10).  
 † 1,985 deaths with underlying causes of death other than exposure to excessive natural cold (e.g., falls, atherosclerotic cardiovascular disease, or drowning) identified by ICD-10 code T68.

these deaths occurred in all 50 states during 1999–2002 (range: four to 288 deaths per state), with the highest average annual rates per 100,000 population in Alaska (4.64), Montana (1.58), Wyoming (1.57), and New Mexico (1.30) (Figure 2). Most deaths were not work related (63%); 23% of affected persons were at home when they became hypothermic.

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FIGURE 2. Average annual rate\* of hypothermia-related deaths, by state — United States, 1999–2002



\* Per 100,000 population.

**Editorial Note:** Hypothermia occurs when the core body temperature is <95°F (<35°C). If persons exposed to excessive cold are unable to generate enough heat (e.g., through shivering) to maintain a normal core body temperature of 98.6°F (37°C), their organs (e.g., brain, heart, or kidneys) can malfunction. When brain function deteriorates, persons with hypothermia are less likely to perceive the need to seek shelter. Signs and symptoms of hypothermia (e.g., lethargy, weakness, loss of coordination, confusion, or uncontrollable shivering) (Box) can increase in severity as the body’s core temperature drops.

Certain populations are at greater risk for hypothermia. Whereas U.S. Army data suggest that males and females are equally susceptible to excessive cold, most persons who die from hypothermia among civilian populations are male (3). This disparity might reflect a difference in risk-taking behavior between males and females. Older persons with preexisting medical conditions such as congestive heart failure, diabetes, or gait disturbance also are at increased risk for hypothermia because their bodies have a reduced ability to generate heat and because they are less likely to recognize symptoms of hypothermia and seek shelter from the cold.

In addition, hypothermia can exacerbate certain medical conditions, with catastrophic consequences. For example, persons with cardiovascular disease can have fatal arrhythmias if their core body temperatures are <95°F (<35°C). Persons living in warm climates, high elevations, and areas with large daily temperature fluctuations also are at risk (4).

Persons can reduce their risk for hypothermia by taking the following precautions: 1) wear a hat, mittens, and clothing that creates a static layer of warm air, provides a barrier against the wind, and keeps the body dry; 2) avoid alcohol and other mood- and cognition-altering drugs; 3) recognize the signs and symptoms of hypothermia (e.g., shivering, slurred speech, and somnolence) that indicate the need to seek shelter and call for help; and 4) keep emergency kits containing blankets, radios, noncaffeinated fluids, high-energy food, and an extra supply of medications for chronic conditions readily available.

To reduce the incidence of hypothermia in the community, local health departments should implement strategies tailored to address the needs of vulnerable populations (Box). Community strategies to protect these populations include programs that check on older persons to ensure that they have heat, medications, and supplies; temporary homeless shelters; and subsidies for low-income households for heating costs. In an Alabama study, almost half of the hypothermia-related deaths occurred indoors (5). With rising energy costs, public service announcements advising persons to maintain thermostats at >60°F might become increasingly important to prevent cases of indoor hypothermia.

## BOX. Epidemiology, diagnosis, treatment, prevention, and reporting of hypothermia\*

### Epidemiology

- Hypothermia disproportionately affects persons aged >65 years and persons who are chronically ill.
- Immersion in water, wearing wet clothes, exposure to wind, and ingestion of alcohol and some medications accelerate heat loss during exposure to excessive cold.
- Mood- and cognition-altering drugs (e.g., alcohol or marijuana) impair judgment and are associated with mortality from hypothermia.

### Clinical findings

- Symptoms of hypothermia include sensation of cold, exhaustion, and numbness.
- Signs of hypothermia include shivering, pallor or flushed skin, decreased hand coordination, confusion, slurred speech, and paradoxical undressing.
- Mild hypothermia is diagnosed when the core body temperature is 90°F–95°F (32°C–35°C).
- Moderate hypothermia is diagnosed when the core body temperature is 82°F–90°F (28°C–32°C).
- Severe hypothermia is diagnosed when the core body temperature is <82°F (<28°C).

### Recommendations and treatment

- Mild hypothermia can be treated with passive rewarming using blankets.
- Moderate hypothermia requires active rewarming with warm intravenous fluids, oxygen, lavage, or immersion baths.
- Severe hypothermia might require active rewarming with cardiopulmonary bypass.
- Rewarm the core body temperature by 2°F–4°F (1°C–2°C) per hour.
- Provide supportive care, monitor the cardiac rhythm, and replenish electrolytes as needed.
- Rewarm and provide cardiopulmonary resuscitation and supportive care, even if a person appears dead.

### Prevention and reporting

- Monitor infants and older neighbors; open homeless shelters during excessively cold weather.
- Provide instructions on preparing emergency kits and a safe heat alternative for homes and cars.
- Educate the public regarding alcohol and drug use during excessive cold.
- Warn persons with cardiac conditions to avoid exertion during cold weather.
- Provide instructions on dressing for excessively cold weather.
- Report any cases of hypothermia to your local health department.

\* Additional information is available at <http://www.cdc.gov/nceh/hsb/extremecold>.

### Acknowledgments

The findings in this report are based, in part, on contributions by B Durnal, Landers, Wyoming; C McCaffrey, Wyoming Dept of Health; G Mizell, MD, North Dakota Dept of Health; and M Patel, National Center for Environmental Health, CDC.

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## Update: Influenza Activity — United States, February 26–March 4, 2006

During February 26–March 4, 2006,\* the number of states reporting widespread influenza activity<sup>†</sup> increased to 25. Thirteen states reported regional activity, eight reported local activity, and four reported sporadic activity (Figure 1).<sup>§</sup>

The percentage of specimens testing positive for influenza increased in the United States overall. During the preceding 3 weeks (weeks 7–9), the percentage of specimens testing positive for influenza ranged from 29.5% in the East South Central region to 10.8% in the Pacific region. During this period, 36.2% and 26.3% of isolates from the Mountain and West South Central regions, respectively, have been influenza B. Combined, the influenza B isolates reported from these

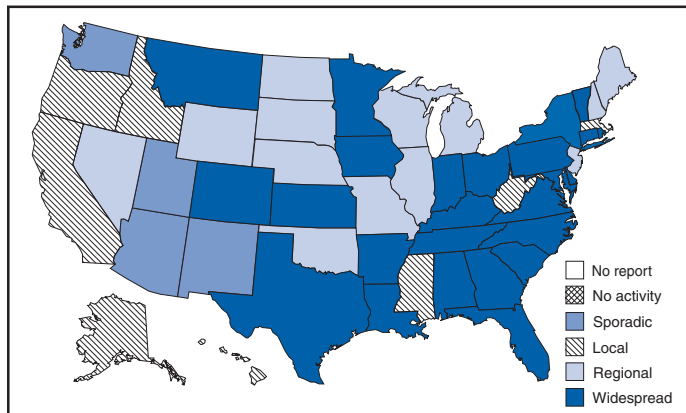
\* Provisional data reported as of March 10. Additional information about influenza activity is updated each Friday and is available from CDC at <http://www.cdc.gov/flu>.

<sup>†</sup> Levels of activity are 1) *widespread*: outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory-confirmed influenza in at least half the regions of a state; 2) *regional*: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least two but less than half the regions of a state; 3) *local*: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of a state; 4) *sporadic*: small numbers of laboratory-confirmed influenza cases or a single influenza outbreak reported but no increase in cases of ILI; and 5) *no activity*.

<sup>§</sup> *Widespread*: Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Montana, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, and Virginia; *regional*: Illinois, Maine, Michigan, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, North Dakota, Oklahoma, South Dakota, Wisconsin, and Wyoming; *local*: Alaska, California, Hawaii, Idaho, Massachusetts, Mississippi, Oregon, and West Virginia; *sporadic*: Arizona, New Mexico, Utah, and Washington; *no activity*: none; *no report*:



**FIGURE 1. Estimated influenza activity levels reported by state epidemiologists, by state and level of activity\* — United States, February 26–March 4, 2006**



\* Levels of activity are 1) *widespread*: outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory-confirmed influenza in at least half the regions of a state; 2) *regional*: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least two but less than half the regions of a state; 3) *local*: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of a state; 4) *sporadic*: small numbers of laboratory-confirmed influenza cases or a single influenza outbreak reported but no increase in cases of ILI; and 5) *no activity*.

regions account for 66.3% of the B isolates reported during the preceding 3 weeks. The percentage of outpatient visits for influenza-like illness (ILI)<sup>†</sup> decreased during the week ending March 4 but remains above the national baseline.\*\* The percentage of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold for the week ending March 4.

## Laboratory Surveillance

During February 26–March 4, World Health Organization (WHO) collaborating laboratories and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories in the United States reported testing 3,239 specimens for influenza viruses, of which 701 (21.6%) were positive. Of these, 175 were influenza A (H3N2) viruses, 20 were influenza A (H1N1) viruses, 399 were influenza A viruses that were not subtyped, and 107 were influenza B viruses.

Since October 2, 2005, WHO and NREVSS laboratories have tested 89,513 specimens for influenza viruses, of which 9,143 (10.2%) were positive. Of these, 8,546 (93.5%) were

<sup>†</sup> Temperature of  $\geq 100.0^{\circ}\text{F}$  ( $\geq 37.8^{\circ}\text{C}$ ) and cough and/or sore throat in the absence of a known cause other than influenza.

\*\* The national baseline was calculated as the mean percentage of visits for ILI during noninfluenza weeks for the preceding three seasons, plus two standard deviations. Noninfluenza weeks are those in which  $<10\%$  of laboratory specimens are positive for influenza. Wide variability in regional data precludes calculating region-specific baselines; therefore, applying the national baseline to regional data is inappropriate.

influenza A viruses, and 597 (6.5%) were influenza B viruses. Of the 8,546 influenza A viruses, 3,675 (43.0%) have been subtyped; 3,590 (97.7%) were influenza A (H3N2) viruses, and 85 (2.3%) were influenza A (H1N1) viruses.

## P&I Mortality and ILI Surveillance

During the week ending March 4, P&I accounted for 7.0% of all deaths reported through the 122 Cities Mortality Reporting System. This percentage is below the epidemic threshold<sup>††</sup> of 8.3% (Figure 2).

The percentage of patient visits for ILI was 3.0%, which is above the national baseline of 2.2% (Figure 3). The percentage of patient visits for ILI ranged from 1.3% in the Pacific region to 4.2% in the West South Central region.

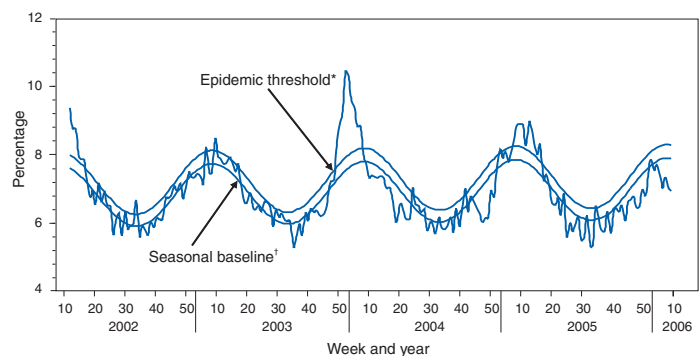
## Pediatric Deaths and Hospitalizations

During October 2, 2005–March 4, 2006, CDC received reports of 16 influenza-associated deaths in U.S. residents aged  $<18$  years. Fourteen of the deaths occurred during the current influenza season, and two occurred during the 2004–05 influenza season.

During October 1, 2005–February 18, 2006, the preliminary laboratory-confirmed influenza-associated hospitalization

<sup>††</sup> The expected seasonal baseline proportion of P&I deaths reported by the 122 Cities Mortality Reporting System is projected using a robust regression procedure in which a periodic regression model is applied to the observed percentage of deaths from P&I that occurred during the preceding 5 years. The epidemic threshold is 1.645 standard deviations above the seasonal baseline.

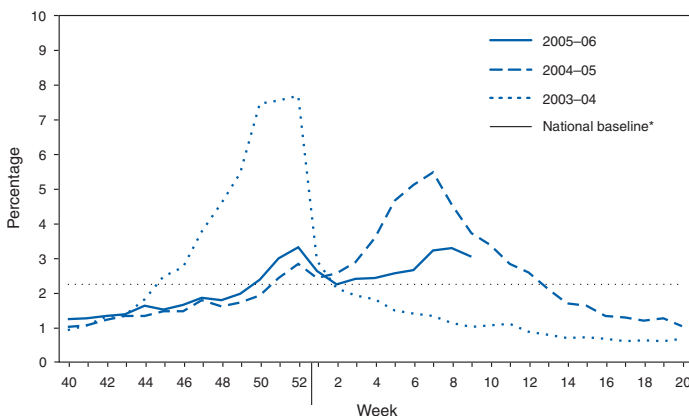
**FIGURE 2. Percentage of deaths attributed to pneumonia and influenza (P&I) reported by the 122 Cities Mortality Reporting System, by week and year — United States, 2002–2006**



\* The epidemic threshold is 1.645 standard deviations above the seasonal baseline.

<sup>†</sup> The seasonal baseline is projected using a robust regression procedure that applies a periodic regression model to the observed percentage of deaths from P&I during the preceding 5 years.

**FIGURE 3. Percentage of visits for influenza-like illness (ILI) reported by the Sentinel Provider Surveillance Network, by week — United States, 2003–04, 2004–05, and 2005–06 influenza seasons**



\* The national baseline was calculated as the mean percentage of visits for ILI during noninfluenza weeks for the preceding three seasons, plus two standard deviations. Noninfluenza weeks are those in which <10% of laboratory specimens are positive for influenza. Wide variability in regional data precludes calculating region-specific baselines; therefore, applying the national baseline to regional data is inappropriate.

rate reported by the Emerging Infections Program (EIP)<sup>§§</sup> for children aged 0–17 years was 0.48 per 10,000. For children aged 0–4 years and 5–17 years, the rate was 1.11 per 10,000 and 0.15 per 10,000, respectively. During October 30, 2005–February 18, 2006, the preliminary laboratory-confirmed

<sup>§§</sup> The EIP Influenza Project conducts surveillance in 60 counties associated with 12 metropolitan areas: San Francisco, California; Denver, Colorado; New Haven, Connecticut; Atlanta, Georgia; Baltimore, Maryland; Minneapolis/St. Paul, Minnesota; Albuquerque, New Mexico; Las Cruces, New Mexico; Albany, New York; Rochester, New York; Portland, Oregon; and Nashville, Tennessee.

influenza-associated hospitalization rate for children aged 0–4 years in the New Vaccine Surveillance Network (NVSN)<sup>¶¶</sup> was 0.48 per 10,000.

### Human Avian Influenza A (H5N1)

No human avian influenza A (H5N1) virus infection has ever been identified in the United States. From December 2003 through March 13, 2006, a total of 177 laboratory-confirmed human avian influenza A (H5N1) infections were reported to WHO from Cambodia, China, Indonesia, Iraq, Thailand, Turkey, and Vietnam.<sup>\*\*\*</sup> Of these, 98 (55%) were fatal (Table). This represents an increase of one death in China and two cases and two deaths in Indonesia since March 6, 2006. The majority of infections appear to have been acquired from direct contact with infected poultry. No evidence of sustained human-to-human transmission of H5N1 has been detected, although rare instances of human-to-human transmission likely have occurred (1).

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<sup>¶¶</sup> NVSN conducts surveillance in Monroe County, New York; Hamilton County, Ohio; and Davidson County, Tennessee.

<sup>\*\*\*</sup> Available at [http://www.who.int/csr/disease/avian\\_influenza/en](http://www.who.int/csr/disease/avian_influenza/en).

**TABLE. Number of laboratory-confirmed human cases and deaths from avian influenza A (H5N1) infection reported to the World Health Organization, by country — worldwide, 2003–2006\***

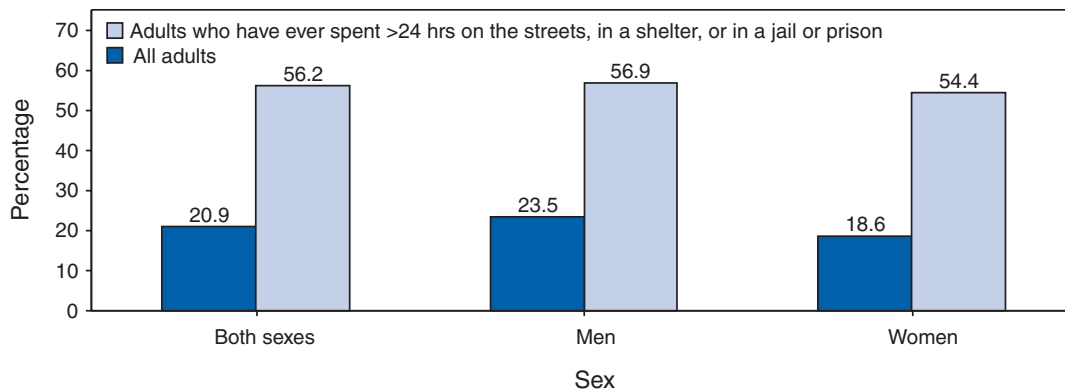
Country	Year of onset									
	2003		2004		2005		2006		Total	
	No. of cases	Deaths	No. of cases	Deaths	No. of cases	Deaths	No. of cases	Deaths	No. of cases	Deaths
Cambodia	0	0	0	0	4	4	0	0	4	4
China	0	0	0	0	8	5	7	5	15	10
Indonesia	0	0	0	0	17	11	12	11	29	22
Iraq	0	0	0	0	0	0	2	2	2	2
Thailand	0	0	17	12	5	2	0	0	22	14
Turkey	0	0	0	0	0	0	12	4	12	4
Vietnam	3	3	29	20	61	19	0	0	93	42
<b>Total</b>	<b>3</b>	<b>3</b>	<b>46</b>	<b>32</b>	<b>95</b>	<b>41</b>	<b>31</b>	<b>19</b>	<b>177</b>	<b>98</b>

\* As of March 13, 2006.

## QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

### Cigarette Smoking Prevalence Among Adults Aged $\geq 18$ Years Who Have Ever Spent $>24$ Hours on the Streets, in a Shelter, or in a Jail or Prison, by Sex — United States, 2004\*



\* Estimates are based on household interviews of a sample of the noninstitutionalized U.S. civilian population.

In 2004, an estimated 9.5 million adults (4.5% of the adult population; 6.8% of men and 2.3% of women) had ever spent  $>24$  hours on the streets, in a shelter, or in a jail or prison. The prevalence of cigarette smoking for both men and women in this population was more than twice that observed among the overall adult population.

**SOURCE:** National Health Interview Survey, 2004. Available at <http://www.cdc.gov/nchs/nhis.htm>.

**TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending March 11, 2006 (10th Week)\***

Disease	Current week	Cum 2006	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2005	2004	2003	2002	2001	
Anthrax	—	—	0	—	—	—	2	23	
Botulism:									
foodborne	—	—	0	19	16	20	28	39	
infant	2	4	2	87	87	76	69	97	PA (2)
other (wound & unspecified)	1	10	0	25	30	33	21	19	CA (1)
Brucellosis	2	13	2	114	114	104	125	136	CA (2)
Chancroid	—	2	1	27	30	54	67	38	
Cholera	—	—	—	6	5	2	2	3	
Cyclosporiasis§	—	7	4	737	171	75	156	147	
Diphtheria	—	—	—	—	—	1	1	2	
Domestic arboviral diseases§§:									
California serogroup	—	—	0	73	112	108	164	128	
eastern equine	—	—	—	21	6	14	10	9	
Powassan	—	—	—	1	1	—	1	N	
St. Louis	—	—	—	10	12	41	28	79	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis§:									
human granulocytic	2	7	2	731	537	362	511	261	NY (1), MN (1)
human monocytic	—	34	1	454	338	321	216	142	
human (other & unspecified)	1	2	0	120	59	44	23	6	CA (1)
<i>Haemophilus influenzae</i> ,**									
invasive disease (age <5 yrs):									
serotype b	—	2	0	8	19	32	34	—	
nonsertotype b	1	13	4	115	135	117	144	—	OK (1)
unknown serotype	4	40	4	209	177	227	153	—	PA (1), OH (1), CO (1), AZ (1)
Hansen disease§	—	10	2	89	105	95	96	79	
Hantavirus pulmonary syndrome§	—	2	0	22	24	26	19	8	
Hemolytic uremic syndrome, postdiarrheal§	—	7	2	201	200	178	216	202	
Hepatitis C viral, acute	7	128	35	754	713	1,102	1,835	3,976	NY (1), PA (1), MN (1), MO (1), MD (1), VA (1), TX (1)
HIV infection, pediatric (age <13 yrs)§††	—	—	6	382	436	504	420	543	
Influenza-associated pediatric mortality§§,¶¶	—	11	1	45	—	N	N	N	
Listeriosis	10	75	9	842	753	696	665	613	NY (2), MI (1), MD (1), WV (1), NC (2), FL (1), CA (2)
Measles	—	3***	2	63	37	56	44	116	
Meningococcal disease,††† invasive:									
A, C, Y, & W-135	1	40	7	292	—	—	—	—	FL (1)
serogroup B	3	24	4	162	—	—	—	—	MO (1), VA (1), WA (1)
other serogroup	1	4	1	24	—	—	—	—	TX (1)
Mumps	5	62	5	293	258	231	270	266	NY (2), PA (1), MD (2)
Plague	—	—	—	7	3	1	2	2	
Poliomyelitis, paralytic	—	—	—	1	—	—	—	—	
Psittacosis§	—	1	0	22	12	12	18	25	
Q fever§	7	20	1	135	70	71	61	26	NY (1), MI (1), CO (5)
Rabies, human	—	—	—	2	7	2	3	1	
Rubella	—	—	0	10	10	7	18	23	
Rubella, congenital syndrome	—	—	0	1	—	1	1	3	
SARS-CoV§§	—	—	0	—	—	8	N	N	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	20	4	104	132	161	118	77	WV (1)
<i>Streptococcus pneumoniae</i> ,§									
invasive disease (age <5 yrs)	18	181	17	1,036	1,162	845	513	498	NH (1), MA (1), NY (5), PA (1), OH (3), MI (1), MD (2), AR (1), CO (2), AZ (1)
Syphilis, congenital (age <1 yr)	—	38	9	324	353	413	412	441	
Tetanus	—	1	0	20	34	20	25	37	
Toxic-shock syndrome (other than streptococcal)§	4	16	3	88	95	133	109	127	PA (1), MN (1), TN (1), CO (1)
Trichinellosis	—	2	0	20	5	6	14	22	
Tularemia§	—	4	0	135	134	129	90	129	
Typhoid fever	1	34	6	292	322	356	321	368	CT (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	—	—	2	—	N	N	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	—	—	1	N	N	N	
Yellow fever	—	—	—	—	—	—	1	—	

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

\* Incidence data for reporting years 2004, 2005, and 2006 are provisional, whereas data for 2001, 2002, and 2003 are finalized.

† Calculated by summing the incidence counts for the current week, the two weeks preceding the current week, and the two weeks following the current week, for a total of 5 preceding years. Additional information is available at <http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf>.

§ Not notifiable in all states.

¶ Includes both neuroinvasive and non-neuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNET Surveillance).

\*\* 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, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Data for HIV/AIDS are available in Table IV quarterly.

§§ Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases.

¶¶ Of the 16 cases reported since October 2, 2005 (week 40), only 14 occurred during the current 2005–06 season.

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

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





**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending March 11, 2006, and March 12, 2005 (10th Week)\***

Reporting area	Hepatitis (viral, acute), by type										Legionellosis				
	A					B									
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	43	78	187	649	790	100	96	234	795	1,022	15	39	111	200	220
<b>New England</b>	3	7	23	47	89	—	5	12	37	54	—	2	11	8	9
Connecticut	2	1	3	7	13	—	0	5	—	15	—	0	8	4	2
Maine	—	0	2	2	—	—	0	2	1	2	—	0	1	1	—
Massachusetts	—	5	14	24	68	—	4	10	31	34	—	1	5	2	6
New Hampshire	1	1	12	8	7	—	0	3	4	2	—	0	1	—	1
Rhode Island	—	0	4	1	1	—	0	2	1	—	—	0	7	—	—
Vermont†	—	0	2	5	—	—	0	1	—	1	—	0	3	1	—
<b>Mid. Atlantic</b>	2	11	23	43	151	1	10	24	60	127	5	11	53	64	64
New Jersey	—	3	10	6	27	—	2	6	16	30	—	1	12	5	9
New York (Upstate)	2	1	20	10	21	1	1	13	6	16	2	3	28	21	15
New York City	—	5	12	15	74	—	2	7	10	29	—	2	20	9	3
Pennsylvania	—	1	6	12	29	—	4	9	28	52	3	5	17	29	37
<b>E.N. Central</b>	8	6	18	48	82	3	10	25	51	110	4	6	24	28	55
Illinois	—	1	9	2	33	—	2	7	—	30	—	0	2	—	9
Indiana	1	1	10	3	5	—	0	11	1	5	—	0	5	1	4
Michigan	3	2	11	26	19	1	3	7	29	38	—	2	6	9	13
Ohio	4	1	4	16	16	2	2	8	19	32	4	3	19	18	24
Wisconsin	—	1	5	1	9	—	0	6	2	5	—	0	2	—	5
<b>W.N. Central</b>	1	2	31	25	23	—	4	13	16	49	—	1	12	5	9
Iowa	—	0	2	—	4	—	0	2	1	2	—	0	1	—	—
Kansas	—	0	5	17	4	—	0	3	3	6	—	0	1	—	1
Minnesota	1	0	31	1	—	—	0	6	1	—	—	0	10	—	1
Missouri	—	0	4	4	13	—	3	7	11	33	—	0	3	4	6
Nebraska†	—	0	3	1	2	—	0	2	—	7	—	0	1	1	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	1
South Dakota	—	0	1	2	—	—	0	1	—	1	—	0	6	—	—
<b>S. Atlantic</b>	8	13	33	113	112	38	23	53	197	303	3	9	19	54	48
Delaware	—	0	1	2	2	—	0	4	4	9	—	0	4	1	—
District of Columbia	—	0	2	1	—	—	0	4	1	—	—	0	2	—	1
Florida	8	5	18	47	39	13	9	21	83	101	2	2	6	22	15
Georgia	—	1	6	8	21	1	2	7	12	58	—	1	3	3	4
Maryland	—	2	6	17	10	1	2	8	36	40	—	2	9	15	15
North Carolina	—	0	20	31	22	23	0	19	42	34	—	0	3	7	6
South Carolina†	—	1	3	5	4	—	3	9	11	22	1	0	2	1	—
Virginia†	—	1	11	2	14	—	2	14	4	36	—	1	8	4	4
West Virginia	—	0	2	—	—	—	0	11	4	3	—	0	3	1	3
<b>E.S. Central</b>	1	3	16	19	34	—	7	20	37	75	1	1	6	5	3
Alabama†	1	0	6	1	4	—	1	7	11	18	—	0	2	1	3
Kentucky	—	0	3	9	3	—	1	5	11	22	—	0	4	—	—
Mississippi	—	0	2	—	6	—	1	4	4	10	—	0	1	—	—
Tennessee†	—	2	13	9	21	—	2	12	11	25	1	1	4	4	—
<b>W.S. Central</b>	—	7	25	27	58	30	12	69	137	84	—	0	5	2	2
Arkansas	—	0	3	—	2	—	1	3	2	13	—	0	1	—	1
Louisiana	—	1	5	1	16	—	1	5	5	16	—	0	2	2	—
Oklahoma	—	0	2	4	1	—	0	5	—	6	—	0	3	—	—
Texas†	—	6	22	22	39	30	9	67	130	49	—	0	5	—	1
<b>Mountain</b>	2	6	21	61	73	27	11	58	193	96	—	2	6	6	14
Arizona	2	3	20	38	43	27	5	55	175	59	—	0	3	—	3
Colorado	—	1	5	12	7	—	1	6	7	10	—	0	3	1	3
Idaho†	—	0	3	1	5	—	0	2	2	3	—	0	2	—	—
Montana	—	0	1	1	6	—	0	7	—	—	—	0	1	—	—
Nevada†	—	0	2	3	2	—	1	4	6	9	—	0	2	3	3
New Mexico†	—	0	3	3	4	—	0	3	1	6	—	0	1	—	1
Utah	—	0	3	3	5	—	0	5	2	9	—	0	2	2	2
Wyoming	—	0	0	—	1	—	0	1	—	—	—	0	1	—	2
<b>Pacific</b>	18	15	148	266	168	1	10	54	67	124	2	1	10	28	16
Alaska	—	0	2	—	1	—	0	2	—	—	—	0	1	—	—
California	18	13	147	249	141	1	6	39	51	87	2	1	10	28	16
Hawaii	—	0	2	5	4	—	0	1	—	1	—	0	1	—	—
Oregon†	—	1	5	6	10	—	2	6	10	27	N	0	0	N	N
Washington	—	1	11	6	12	—	1	11	6	9	—	0	0	—	—
American Samoa	U	0	1	U	—	U	0	0	U	—	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	1	6	3	9	—	1	6	2	2	—	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 notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2005 and 2006 are provisional.

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

**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending March 11, 2006, and March 12, 2005 (10th Week)\***

Reporting area	Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max		
<b>United States</b>	144	298	1,333	676	1,282	17	24	46	176	207
<b>New England</b>	9	50	232	44	105	1	1	12	7	6
Connecticut	7	9	154	29	3	1	0	10	1	—
Maine	—	2	25	6	5	—	0	1	—	—
Massachusetts	—	18	164	—	84	—	0	4	5	4
New Hampshire	2	3	17	8	11	—	0	1	—	2
Rhode Island	—	0	12	—	1	—	0	1	—	—
Vermont†	—	0	5	1	1	—	0	2	1	—
<b>Mid. Atlantic</b>	108	180	913	414	830	3	6	15	36	53
New Jersey	—	27	307	58	289	—	1	7	—	11
New York (Upstate)	102	48	824	189	130	2	1	10	6	5
New York City	—	0	0	—	—	—	3	8	23	31
Pennsylvania	6	61	464	167	411	1	1	2	7	6
<b>E.N. Central</b>	—	13	157	18	57	3	2	6	23	19
Illinois	—	0	6	—	1	—	0	2	4	6
Indiana	—	0	4	—	1	2	0	3	5	—
Michigan	—	1	7	3	1	—	0	2	4	7
Ohio	—	1	5	1	13	1	0	3	7	3
Wisconsin	—	10	148	14	41	—	0	2	3	3
<b>W.N. Central</b>	6	12	99	18	29	—	1	5	5	7
Iowa	—	1	8	—	4	—	0	1	1	2
Kansas	—	0	3	1	2	—	0	1	—	1
Minnesota	6	8	96	15	23	—	0	3	2	1
Missouri	—	0	2	1	—	—	0	3	1	3
Nebraska†	—	0	1	1	—	—	0	2	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	1	—	—	—	0	1	1	—
<b>S. Atlantic</b>	15	34	124	140	234	6	6	15	54	39
Delaware	1	9	37	50	86	—	0	1	—	1
District of Columbia	—	0	2	5	1	—	0	2	—	—
Florida	—	1	8	9	9	1	1	6	6	7
Georgia	—	0	1	—	1	1	0	6	16	7
Maryland	12	16	86	68	112	—	1	9	18	12
North Carolina	2	0	5	7	11	4	0	8	8	5
South Carolina†	—	0	3	1	5	—	0	2	1	1
Virginia†	—	3	20	—	9	—	0	6	5	5
West Virginia	—	0	6	—	—	—	0	2	—	1
<b>E.S. Central</b>	—	1	4	—	3	1	0	2	3	5
Alabama†	—	0	1	—	—	—	0	1	1	1
Kentucky	—	0	1	—	—	—	0	2	1	1
Mississippi	—	0	0	—	—	—	0	0	—	—
Tennessee†	—	0	4	—	3	1	0	2	1	3
<b>W.S. Central</b>	—	1	7	—	10	—	1	10	4	20
Arkansas	—	0	2	—	—	—	0	2	—	1
Louisiana	—	0	1	—	1	—	0	1	—	1
Oklahoma	—	0	0	—	—	—	0	6	1	—
Texas†	—	0	7	—	9	—	1	10	3	18
<b>Mountain</b>	—	0	4	1	—	1	1	5	10	12
Arizona	—	0	4	1	—	—	0	4	1	2
Colorado	—	0	1	—	—	1	0	3	4	6
Idaho†	—	0	1	—	—	—	0	0	—	—
Montana	—	0	0	—	—	—	0	0	—	—
Nevada†	—	0	2	—	—	—	0	2	—	—
New Mexico†	—	0	1	—	—	—	0	1	—	1
Utah	—	0	1	—	—	—	0	2	5	2
Wyoming	—	0	1	—	—	—	0	1	—	1
<b>Pacific</b>	6	3	12	41	14	2	4	12	34	46
Alaska	—	0	1	—	1	—	0	1	1	1
California	6	2	12	41	12	2	3	9	27	41
Hawaii	N	0	0	N	N	—	0	4	—	2
Oregon†	—	0	3	—	1	—	0	2	2	2
Washington	—	0	3	—	—	—	0	5	4	—
American Samoa	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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

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

\* Incidence data for reporting years 2005 and 2006 are provisional.

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



TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending March 11, 2006, and March 12, 2005 (10th Week)\*

Reporting area	Meningococcal disease, invasive										Pertussis				
	All serogroups					Serogroup unknown									
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	16	23	64	234	323	11	14	51	166	178	144	427	1,080	1,973	4,309
<b>New England</b>	3	1	5	11	27	3	0	3	11	9	1	29	54	227	269
Connecticut	1	0	2	3	6	1	0	2	3	1	—	0	4	—	18
Maine	—	0	1	2	1	—	0	1	2	1	—	0	5	7	9
Massachusetts	1	0	3	5	13	1	0	2	5	3	—	23	44	200	202
New Hampshire	1	0	2	1	3	1	0	2	1	3	1	1	15	7	—
Rhode Island	—	0	1	—	2	—	0	0	—	—	—	0	8	—	—
Vermont†	—	0	1	—	2	—	0	1	—	1	—	1	6	13	40
<b>Mid. Atlantic</b>	1	3	14	30	37	1	2	13	27	28	28	22	126	209	354
New Jersey	—	0	2	—	11	—	0	2	—	11	—	3	7	12	47
New York (Upstate)	1	0	6	5	9	1	0	5	4	3	23	10	115	81	108
New York City	—	0	5	11	6	—	0	5	11	6	—	2	6	—	19
Pennsylvania	—	1	3	14	11	—	1	3	12	8	5	7	16	116	180
<b>E.N. Central</b>	—	2	9	16	29	—	1	6	13	25	7	61	121	273	1,124
Illinois	—	0	4	5	6	—	0	4	5	6	—	14	31	8	202
Indiana	—	0	3	—	4	—	0	2	—	2	—	5	23	21	62
Michigan	—	1	3	4	6	—	0	3	1	4	1	5	26	74	43
Ohio	—	1	5	7	7	—	0	4	7	7	6	19	43	153	444
Wisconsin	—	0	1	—	6	—	0	1	—	6	—	21	40	17	373
<b>W.N. Central</b>	1	1	4	9	23	—	0	3	3	9	7	56	205	259	625
Iowa	—	0	2	—	8	—	0	2	—	1	—	9	55	45	229
Kansas	—	0	1	—	3	—	0	1	—	3	—	11	29	99	74
Minnesota	—	0	2	—	4	—	0	1	—	—	—	0	148	—	93
Missouri	1	0	3	6	6	—	0	2	1	3	7	9	39	100	107
Nebraska†	—	0	1	3	2	—	0	1	2	2	—	2	12	11	59
North Dakota	—	0	1	—	—	—	0	1	—	—	—	0	28	4	19
South Dakota	—	0	1	—	—	—	0	0	—	—	—	2	9	—	44
<b>S. Atlantic</b>	5	3	14	42	49	3	2	7	17	21	16	23	90	157	251
Delaware	—	0	1	2	—	—	0	1	2	—	—	0	1	1	11
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	3	2	—
Florida	3	1	7	17	15	2	1	6	7	5	4	4	14	49	30
Georgia	—	0	2	1	7	—	0	2	1	7	—	1	3	3	9
Maryland	—	0	2	3	6	—	0	1	1	—	2	4	8	42	53
North Carolina	—	0	11	11	6	—	0	3	3	—	4	0	21	27	19
South Carolina†	1	0	1	4	9	1	0	1	2	7	2	5	21	17	87
Virginia†	1	0	3	4	5	—	0	3	1	1	4	1	72	14	27
West Virginia	—	0	1	—	1	—	0	1	—	1	—	0	5	2	15
<b>E.S. Central</b>	—	1	3	8	15	—	1	3	6	10	3	8	25	30	101
Alabama†	—	0	1	1	—	—	0	1	1	—	—	1	9	11	21
Kentucky	—	0	2	1	5	—	0	2	1	5	—	3	10	2	31
Mississippi	—	0	1	1	3	—	0	1	1	3	—	1	4	8	15
Tennessee†	—	0	2	5	7	—	0	2	3	2	3	3	17	9	34
<b>W.S. Central</b>	1	2	12	23	28	—	1	7	14	8	1	41	111	86	98
Arkansas	—	0	3	2	5	—	0	2	2	1	—	5	19	13	16
Louisiana	—	0	4	15	10	—	0	3	11	2	—	0	3	2	7
Oklahoma	—	0	3	5	3	—	0	3	1	—	—	0	1	2	—
Texas†	1	0	6	1	10	—	0	2	—	5	1	36	98	69	75
<b>Mountain</b>	1	2	7	23	20	1	0	5	15	2	74	74	145	626	821
Arizona	—	0	5	11	6	—	0	5	11	2	17	15	86	94	46
Colorado	1	0	2	10	9	1	0	1	3	—	25	25	41	306	383
Idaho†	—	0	2	—	—	—	0	2	—	—	—	3	14	11	59
Montana	—	0	0	—	—	—	0	0	—	—	—	8	29	25	191
Nevada†	—	0	2	—	2	—	0	1	—	—	—	0	8	8	10
New Mexico†	—	0	2	—	1	—	0	2	—	—	—	2	9	1	55
Utah	—	0	2	2	2	—	0	1	1	—	32	13	38	172	71
Wyoming	—	0	0	—	—	—	0	0	—	—	—	1	4	9	6
<b>Pacific</b>	4	5	28	72	95	3	4	16	60	66	7	70	648	106	666
Alaska	—	0	1	—	—	—	0	1	—	—	3	2	15	22	10
California	3	2	11	50	40	3	2	11	50	40	—	40	460	1	366
Hawaii	—	0	1	1	6	—	0	1	1	2	—	3	10	14	27
Oregon†	—	1	6	9	39	—	0	5	3	22	—	5	33	32	206
Washington	1	0	25	12	10	—	0	11	6	2	4	11	185	37	57
American Samoa	U	0	1	—	—	U	0	1	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	—	—	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	1	—	1	—	0	2	—	1	—	0	2	—	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 notifiable. Cum: Cumulative year-to-date counts.

Med: Median. Max: Maximum.

\* Incidence data for reporting years 2005 and 2006 are provisional.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending March 11, 2006, and March 12, 2005 (10th Week)\*

Reporting area	Rabies, animal					Rocky Mountain spotted fever					Salmonellosis				
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	65	105	160	534	999	25	34	98	250	103	296	863	1,458	4,269	4,507
<b>New England</b>	9	13	33	74	121	—	0	1	—	—	4	41	77	215	220
Connecticut	2	3	13	20	19	—	0	0	—	—	—	9	49	49	36
Maine	—	1	4	9	8	N	0	0	N	N	—	3	8	6	15
Massachusetts	5	4	22	34	82	—	0	1	—	—	2	20	41	134	138
New Hampshire	—	0	3	2	2	—	0	1	—	—	1	2	12	15	15
Rhode Island	—	0	4	1	2	—	0	1	—	—	1	0	15	9	5
Vermont†	2	1	7	8	8	—	0	0	—	—	—	1	10	2	11
<b>Mid. Atlantic</b>	—	18	40	113	114	—	1	7	2	5	35	93	221	416	536
New Jersey	N	0	0	N	N	—	0	2	—	—	—	17	41	18	105
New York (Upstate)	—	12	24	59	45	—	0	2	—	—	27	21	183	105	109
New York City	—	0	3	—	6	—	0	2	1	1	—	24	43	109	166
Pennsylvania	—	7	22	54	63	—	1	6	1	4	8	31	61	184	156
<b>E.N. Central</b>	1	3	19	4	9	—	0	6	1	2	34	94	243	521	555
Illinois	—	1	4	—	3	—	0	3	—	1	—	30	160	94	163
Indiana	—	0	3	—	1	—	0	1	—	—	10	10	71	67	27
Michigan	—	0	4	2	2	—	0	1	—	—	3	17	35	105	118
Ohio	1	0	13	2	3	—	0	3	1	1	21	23	52	195	125
Wisconsin	N	0	3	N	N	—	0	1	—	—	—	15	45	60	122
<b>W.N. Central</b>	2	7	23	20	46	—	2	16	4	4	7	43	91	268	297
Iowa	—	1	10	3	9	—	0	2	—	—	—	7	18	38	59
Kansas	—	1	5	4	10	—	0	2	—	—	—	7	17	45	28
Minnesota	1	1	5	2	12	—	0	1	—	—	5	10	31	62	76
Missouri	1	1	7	2	4	—	1	14	4	4	2	14	40	90	83
Nebraska†	—	0	0	—	—	—	0	2	—	—	—	2	8	14	25
North Dakota	—	0	4	2	1	—	0	0	—	—	—	0	5	—	3
South Dakota	—	1	6	7	10	—	0	2	—	—	—	2	11	19	23
<b>S. Atlantic</b>	45	31	54	253	494	24	16	94	238	72	102	255	509	1,255	1,215
Delaware	—	0	0	—	—	—	0	2	1	—	—	2	9	12	10
District of Columbia	—	0	0	—	—	—	0	1	—	—	—	1	7	13	6
Florida	5	0	14	31	201	—	0	3	5	3	44	99	230	560	467
Georgia	—	4	15	16	53	—	1	9	14	1	16	32	76	212	158
Maryland	7	6	16	38	56	1	2	7	10	3	3	14	39	86	92
North Carolina	8	8	19	46	75	23	5	87	206	59	36	30	114	272	243
South Carolina†	—	0	0	—	5	—	1	6	2	5	1	21	146	44	96
Virginia†	19	10	26	106	102	—	1	10	—	—	—	19	66	47	128
West Virginia	6	0	13	16	2	—	0	2	—	1	2	2	13	9	15
<b>E.S. Central</b>	2	3	9	31	19	—	5	24	2	4	5	56	134	231	263
Alabama†	—	1	5	11	14	—	0	9	1	1	2	14	39	100	81
Kentucky	—	0	3	1	—	—	0	1	—	—	—	7	26	41	29
Mississippi	—	0	1	—	—	—	0	3	—	—	—	13	66	23	33
Tennessee†	2	1	4	19	5	—	3	18	1	3	3	15	40	67	120
<b>W.S. Central</b>	2	13	42	11	146	1	2	32	3	1	30	80	165	420	322
Arkansas	—	0	3	1	9	1	0	32	3	—	25	13	67	144	40
Louisiana	—	0	0	—	—	—	0	2	—	1	—	15	42	41	82
Oklahoma	2	1	7	10	12	—	0	23	—	—	4	7	26	43	35
Texas†	—	11	39	—	125	—	0	8	—	—	1	44	132	192	165
<b>Mountain</b>	3	4	18	15	35	—	0	4	—	13	16	47	99	265	280
Arizona	3	2	11	15	29	—	0	4	—	11	2	13	28	63	91
Colorado	—	0	2	—	—	—	0	1	—	—	10	10	45	89	67
Idaho†	—	0	12	—	—	—	0	2	—	—	—	2	17	14	15
Montana	—	0	3	—	—	—	0	1	—	—	—	2	16	14	17
Nevada†	—	0	2	—	—	—	0	0	—	—	—	3	8	16	33
New Mexico†	—	0	1	—	1	—	0	1	—	—	—	4	14	15	24
Utah	—	0	5	—	—	—	0	1	—	2	4	6	31	42	26
Wyoming	—	0	2	—	5	—	0	1	—	—	—	1	12	12	7
<b>Pacific</b>	1	4	15	13	15	—	0	2	—	2	63	102	407	678	819
Alaska	—	0	3	5	1	—	0	0	—	—	2	1	5	18	10
California	1	3	15	8	14	—	0	1	—	2	38	77	282	528	641
Hawaii	—	0	0	—	—	—	0	0	—	—	—	5	15	36	67
Oregon†	—	0	1	—	—	—	0	1	—	—	—	8	25	52	46
Washington	U	0	0	U	U	N	0	0	N	N	23	8	116	44	55
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	2	U	1
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	3	2	4	21	15	N	0	0	N	N	1	7	23	7	60
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands. U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum. \* Incidence data for reporting years 2005 and 2006 are provisional. † Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending March 11, 2006, and March 12, 2005 (10th Week)\***

Reporting area	Shiga toxin-producing <i>E. coli</i> (STEC) <sup>†</sup>					Shigellosis					Streptococcal disease, invasive, group A				
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	10	51	197	115	228	108	280	466	1,480	1,847	95	82	153	958	979
<b>New England</b>	—	3	13	9	22	1	5	17	45	37	1	3	8	23	39
Connecticut	—	1	4	—	8	—	1	5	5	5	U	0	0	U	U
Maine	—	0	5	—	1	—	0	1	—	—	—	0	2	3	2
Massachusetts	—	2	7	9	11	1	3	11	33	25	1	2	6	12	26
New Hampshire	—	0	2	—	—	—	0	4	3	3	—	0	2	5	3
Rhode Island	—	0	2	—	1	—	0	6	3	1	—	0	3	2	3
Vermont <sup>§</sup>	—	0	2	—	1	—	0	4	1	3	—	0	2	1	5
<b>Mid. Atlantic</b>	—	6	77	—	27	12	21	69	122	193	22	15	37	172	197
New Jersey	—	1	6	—	7	—	5	18	32	58	—	2	8	9	33
New York (Upstate)	2	2	75	8	12	10	4	53	48	45	17	4	27	58	64
New York City	—	0	2	—	1	—	6	22	27	79	—	3	9	31	33
Pennsylvania	—	2	8	—	7	2	2	48	15	11	5	5	12	74	67
<b>E.N. Central</b>	1	8	33	29	55	11	16	78	118	144	17	15	41	171	208
Illinois	—	1	7	—	11	—	6	24	23	36	—	3	9	20	59
Indiana	1	1	7	7	2	3	1	56	18	10	6	1	12	29	21
Michigan	—	1	8	7	9	1	3	9	35	70	5	6	15	49	73
Ohio	—	2	14	9	21	7	3	11	30	12	6	4	14	59	38
Wisconsin	—	2	15	6	12	—	3	9	12	16	—	1	8	14	17
<b>W.N. Central</b>	3	7	39	28	32	5	38	64	163	131	4	5	13	42	59
Iowa	—	1	10	7	5	—	1	9	2	18	N	0	0	N	N
Kansas	—	1	4	—	3	—	4	20	15	5	—	1	5	21	8
Minnesota	3	2	23	21	4	1	2	6	17	6	—	1	8	—	22
Missouri	—	1	7	9	12	3	22	45	102	77	4	1	6	13	17
Nebraska <sup>§</sup>	—	0	4	1	6	—	1	9	12	18	—	0	4	5	6
North Dakota	—	0	2	—	—	1	0	2	2	1	—	0	3	3	2
South Dakota	—	0	5	—	2	—	1	17	13	6	—	0	2	—	4
<b>S. Atlantic</b>	3	7	39	14	35	35	47	116	424	276	25	19	37	259	193
Delaware	—	0	2	—	—	—	0	2	—	1	—	0	2	1	—
District of Columbia	—	0	1	—	—	—	0	2	3	1	—	0	2	4	2
Florida	3	1	31	13	12	15	23	66	188	131	6	5	12	64	62
Georgia	—	0	6	—	6	7	12	36	136	73	6	3	9	66	40
Maryland	—	1	5	—	5	3	2	8	26	12	12	4	9	57	51
North Carolina	1	0	11	10	9	10	2	22	49	26	—	1	13	28	19
South Carolina <sup>§</sup>	—	0	2	1	—	—	2	6	18	18	—	1	3	16	9
Virginia <sup>§</sup>	—	2	9	—	3	—	2	9	4	14	1	2	11	17	8
West Virginia	—	0	1	—	—	—	0	1	—	—	—	0	5	6	2
<b>E.S. Central</b>	—	2	12	4	9	2	19	54	90	223	5	3	8	38	41
Alabama <sup>§</sup>	—	0	3	—	3	1	3	20	20	46	N	0	0	N	N
Kentucky	—	1	9	4	—	—	6	31	42	14	—	0	3	7	10
Mississippi	—	0	2	—	—	—	2	7	15	17	—	0	0	—	—
Tennessee <sup>§</sup>	—	1	3	8	6	1	4	47	13	146	5	3	6	31	31
<b>W.S. Central</b>	—	2	18	—	10	2	62	122	133	389	2	6	21	61	44
Arkansas	—	0	2	—	1	2	1	3	10	13	1	0	2	2	6
Louisiana	—	0	2	—	5	—	2	11	24	32	—	0	2	5	4
Oklahoma	—	0	3	—	1	—	10	41	20	78	1	2	13	40	21
Texas <sup>§</sup>	—	1	18	—	3	—	46	106	79	266	—	3	15	14	13
<b>Mountain</b>	3	6	15	10	24	5	16	53	100	100	19	12	41	175	174
Arizona	—	0	4	—	2	2	9	29	46	45	11	4	27	90	79
Colorado	3	1	6	10	5	3	3	18	21	13	6	4	17	51	56
Idaho <sup>§</sup>	—	1	8	—	5	—	0	4	3	—	—	0	2	1	1
Montana	—	0	2	—	1	—	0	1	—	—	—	0	0	—	—
Nevada <sup>§</sup>	—	0	4	—	2	—	1	6	9	18	—	0	6	—	—
New Mexico <sup>§</sup>	—	0	3	2	2	—	2	9	9	16	—	1	6	11	22
Utah	—	1	7	1	6	—	1	4	11	8	2	2	6	20	15
Wyoming	—	0	3	—	1	—	0	1	1	—	—	0	1	2	1
<b>Pacific</b>	—	6	52	21	14	35	40	136	285	354	—	2	8	17	24
Alaska	—	0	3	—	2	—	0	1	1	6	—	0	0	—	—
California	—	1	6	16	6	23	34	97	207	314	—	0	0	—	—
Hawaii	—	0	4	—	1	—	1	4	10	7	—	2	8	17	24
Oregon <sup>§</sup>	—	1	47	8	—	—	2	28	40	18	N	0	0	N	N
Washington	—	1	40	5	5	12	2	38	27	9	N	0	0	N	N
American Samoa	U	0	0	U	U	U	0	2	U	—	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	1	—	1	—	0	1	—	—	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

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

<sup>†</sup> Incidence data for reporting years 2005 and 2006 are provisional.<sup>‡</sup> Includes *E. coli* O157:H7; Shiga toxin positive, serogroup non-O157; and Shiga toxin positive, not serogrouped.<sup>§</sup> Contains data reported through the National Electronic Disease Surveillance System (NEDSS).



**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending March 11, 2006, and March 12, 2005 (10th Week)\***

Reporting area	West Nile virus disease <sup>†</sup>									
	Neuroinvasive					Non-neuroinvasive				
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max		
<b>United States</b>	—	1	154	1	—	—	1	202	—	2
<b>New England</b>	—	0	3	—	—	—	0	2	—	—
Connecticut	—	0	2	—	—	—	0	1	—	—
Maine	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	3	—	—	—	0	1	—	—
New Hampshire	—	0	0	—	—	—	0	0	—	—
Rhode Island	—	0	1	—	—	—	0	0	—	—
Vermont <sup>§</sup>	—	0	0	—	—	—	0	0	—	—
<b>Mid. Atlantic</b>	—	0	9	—	—	—	0	3	—	—
New Jersey	—	0	1	—	—	—	0	2	—	—
New York (Upstate)	—	0	6	—	—	—	0	1	—	—
New York City	—	0	2	—	—	—	0	2	—	—
Pennsylvania	—	0	3	—	—	—	0	2	—	—
<b>E.N. Central</b>	—	0	39	—	—	—	0	18	—	—
Illinois	—	0	25	—	—	—	0	16	—	—
Indiana	—	0	2	—	—	—	0	1	—	—
Michigan	—	0	14	—	—	—	0	3	—	—
Ohio	—	0	9	—	—	—	0	4	—	—
Wisconsin	—	0	3	—	—	—	0	2	—	—
<b>W.N. Central</b>	—	0	26	—	—	—	0	80	—	—
Iowa	—	0	3	—	—	—	0	5	—	—
Kansas	—	0	2	—	—	N	0	2	N	N
Minnesota	—	0	5	—	—	—	0	5	—	—
Missouri	—	0	4	—	—	—	0	3	—	—
Nebraska <sup>§</sup>	—	0	9	—	—	—	0	24	—	—
North Dakota	—	0	4	—	—	—	0	15	—	—
South Dakota	—	0	7	—	—	—	0	33	—	—
<b>S. Atlantic</b>	—	0	6	—	—	—	0	4	—	—
Delaware	—	0	1	—	—	—	0	0	—	—
District of Columbia	—	0	1	—	—	—	0	1	—	—
Florida	—	0	2	—	—	—	0	4	—	—
Georgia	—	0	3	—	—	—	0	3	—	—
Maryland	—	0	2	—	—	—	0	1	—	—
North Carolina	—	0	1	—	—	—	0	1	—	—
South Carolina <sup>§</sup>	—	0	1	—	—	—	0	0	—	—
Virginia <sup>§</sup>	—	0	0	—	—	—	0	0	—	—
West Virginia	—	0	0	—	—	N	0	0	N	N
<b>E.S. Central</b>	—	0	10	1	—	—	0	5	—	—
Alabama <sup>§</sup>	—	0	1	—	—	—	0	2	—	—
Kentucky	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	9	1	—	—	0	5	—	—
Tennessee <sup>§</sup>	—	0	3	—	—	—	0	1	—	—
<b>W.S. Central</b>	—	0	32	—	—	—	0	21	—	2
Arkansas	—	0	3	—	—	—	0	2	—	—
Louisiana	—	0	20	—	—	—	0	8	—	2
Oklahoma	—	0	6	—	—	—	0	3	—	—
Texas <sup>§</sup>	—	0	16	—	—	—	0	13	—	—
<b>Mountain</b>	—	0	16	—	—	—	0	39	—	—
Arizona	—	0	8	—	—	—	0	8	—	—
Colorado	—	0	5	—	—	—	0	13	—	—
Idaho <sup>§</sup>	—	0	2	—	—	—	0	3	—	—
Montana	—	0	3	—	—	—	0	9	—	—
Nevada <sup>§</sup>	—	0	3	—	—	—	0	8	—	—
New Mexico <sup>§</sup>	—	0	3	—	—	—	0	4	—	—
Utah	—	0	6	—	—	—	0	8	—	—
Wyoming	—	0	2	—	—	—	0	1	—	—
<b>Pacific</b>	—	0	50	—	—	—	0	89	—	—
Alaska	—	0	0	—	—	—	0	0	—	—
California	—	0	50	—	—	—	0	88	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—
Oregon <sup>§</sup>	—	0	1	—	—	—	0	2	—	—
Washington	—	0	0	—	—	—	0	0	—	—
American Samoa	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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

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

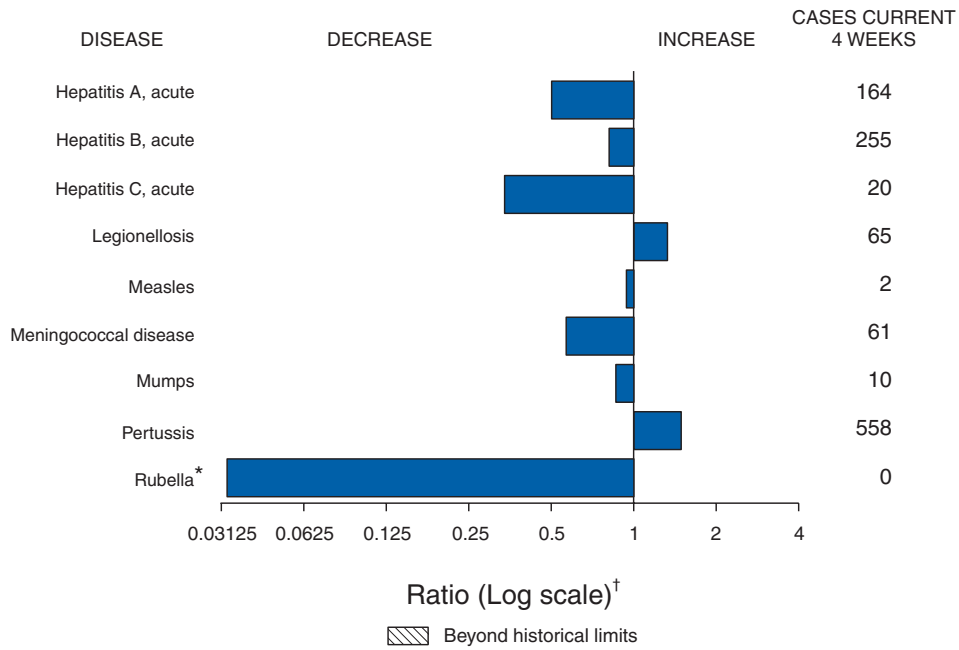
\* Incidence data for reporting years 2005 and 2006 are provisional.

† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

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



**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals March 11, 2006, with historical data**



\* No rubella cases were reported for the current 4-week period yielding a ratio for week 10 of zero (0).  
 † Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

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