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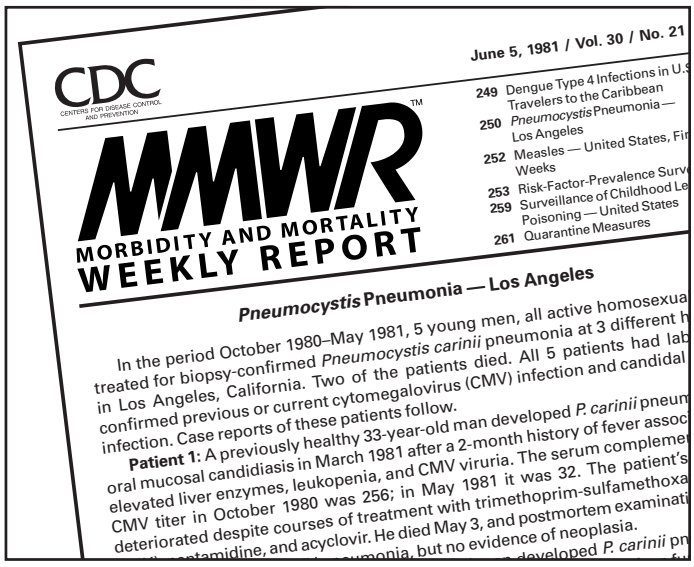
Twenty-Five Years of HIV/AIDS — United States, 1981–2006

On June 5, 1981, *MMWR* published a report of *Pneumocystis carinii* pneumonia in five previously healthy young men in Los Angeles, California (Figure) (*1*). These cases were later recognized as the first reported cases of acquired immunodeficiency syndrome (AIDS) in the United States. Since that time, this disease has become one of the greatest public health challenges both nationally and globally. Human immunodeficiency virus (HIV) and AIDS have claimed the lives of more than 22 million persons worldwide, including more than 500,000 persons in the United States.

In 2006, more than 1 million persons are living with HIV/AIDS in the United States, and an estimated 40,000 new HIV infections are expected to occur this year (*2*). Since the beginning of the epidemic, countless persons and organizations, inside and outside of government, have mobilized to prevent and treat this disease. These efforts have been enhanced by the commitment and involvement of those living with HIV/AIDS. At this milestone marking the 25th year of AIDS, one way to recognize those persons who have died and those who have been affected by this epidemic is to accelerate the development of measures for preventing HIV transmission.

FIGURE. *MMWR* report on *Pneumocystis* pneumonia in five previously healthy young men in Los Angeles — June 5, 1981



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WEEKLY REPORT

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***Pneumocystis* Pneumonia — Los Angeles**

In the period October 1980–May 1981, 5 young men, all active homosexua treated for biopsy-confirmed *Pneumocystis carinii* pneumonia at 3 different h in Los Angeles, California. Two of the patients died. All 5 patients had lab confirmed previous or current cytomegalovirus (CMV) infection and candidal infection. Case reports of these patients follow.

Patient 1: A previously healthy 33-year-old man developed *P. carinii* pneum oral mucosal candidiasis in March 1981 after a 2-month history of fever assoc elevated liver enzymes, leukopenia, and CMV viruria. The serum complemer CMV titer in October 1980 was 256; in May 1981 it was 32. The patient's deteriorated despite courses of treatment with trimethoprim-sulfamethoxa ...tamidine, and acyclovir. He died May 3, and postmortem examinati ...monia, but no evidence of neoplasia. ...developed *P. carinii* pn

Successes in HIV Prevention

CDC's overarching HIV-prevention goal is to reduce the number of new HIV infections and to eliminate racial and ethnic disparities by the promotion of HIV counseling, testing, and referral and by encouraging HIV prevention among both persons living with HIV and those at high risk for contracting the virus (*3*).

The decrease in mother-to-child (perinatal) HIV transmission is a public health achievement in HIV prevention in the United States. The number of infants infected with HIV through perinatal transmission has decreased from 1,650 during the early- to mid-1990s to 144–236 in 2002 (*4*). This decline is attributed to multiple interventions, including routine voluntary HIV testing of pregnant women, the use of rapid HIV tests at delivery for women of unknown HIV status, and the use of antiretroviral therapy by HIV-infected women during pregnancy and by infants after birth.

Widespread availability and use of diagnostic and screening tests for HIV infection to promote individual knowledge of

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HIV serostatus and to ensure the safety of the nation's blood supply has been another success. Since the mid-1980s, blood donor screening methods and testing technology have steadily improved; today, with nucleic acid testing, the risk for HIV transmission is estimated at as low as one per 2 million blood donations (*5*). Widespread HIV testing promotion and uptake have resulted in approximately 50% of persons aged 15–44 years in the United States reporting that they have had an HIV test (*6*), with a high proportion of those at increased risk (e.g., men who have sex with men [MSM] and injection-drug users) reporting having an HIV test during the preceding year (*6,7*).

National HIV-prevention initiatives have been supported by HIV-prevention programs of state and local health departments, community-based organizations, and other partners (*8*). Prevention interventions, including drug treatment programs, peer outreach, and risk reduction, have contributed to a steady decline in new HIV/AIDS diagnoses among injection-drug users in 35 areas with HIV reporting, from an estimated 8,048 in 2001 to 5,962 in 2004 (*9*). Another prevention success has been the diffusion of evidence-based effective behavioral interventions (DEBIs) for primary and secondary HIV prevention among persons, small groups, and communities (*3*). These interventions help to ensure that those persons at greatest risk for HIV transmission or acquisition are able to obtain intensive support to reduce risk behaviors and adopt protective strategies for their health and the health of their partners.

Remaining Challenges

Despite these successes, several challenges remain. HIV/AIDS continues to be a leading cause of illness and death in the United States. An estimated 252,000–312,000 HIV-infected persons in the United States are unaware of their HIV infection (*2*). Not only are they at high risk for transmitting HIV to others, but they are much less likely to take advantage of effective medical treatments.

Certain subpopulations remain at increased risk. MSM account for approximately 45% of newly reported HIV/AIDS diagnoses and nearly 54% of cumulative AIDS diagnoses (*10,11*). A recent survey indicated that in several large U.S. cities, approximately one in four MSM surveyed in social venues is infected with HIV, and nearly 50% of MSM are unaware of their HIV infections (*12*). Moreover, young MSM were least likely to know they were infected, and MSM from racial/ethnic minority populations consistently demonstrated higher prevalence than white MSM. Annual HIV incidence among MSM is high, ranging from 1.2% to 8.0% (*12*). Racial and ethnic minority communities also are disproportionately affected by HIV/AIDS (*13*). During 2001–2004, in

35 areas with HIV reporting, 51% of all new HIV/AIDS diagnoses were among blacks, who account for approximately 13% of the U.S. population (*14*). Of these, 11% (12,650) of HIV/AIDS diagnoses in men were in black men who were infected through heterosexual contact, and 54% (23,820) of HIV/AIDS diagnoses in women were in black women infected through heterosexual contact. Today, women account for approximately one quarter of all new HIV/AIDS diagnoses and, in 2002, HIV infection was the leading cause of death for black women aged 25–34 years.

A scaling up of the diffusion of effective behavioral interventions (e.g., DEBIs) is required; however, limitations exist in CDC's ability to meet current training and technical assistance needs, as well as states' abilities to implement them widely. Other gaps include the lack of data regarding the effectiveness of adapting DEBIs to all at-risk populations (*15*). In many locales, the community-level workforce might be weakened by attrition, fatigue, and inadequate program skills (*15,16*). Changing public perceptions of HIV/AIDS in the United States, coupled with the widespread availability of highly active antiretroviral treatment, has led to the widespread belief that AIDS is no longer a problem or a severe disease in the United States (*17*). Although 26% of persons in the United States consider AIDS as a top health concern for the nation (second only to cancer [35%]), the proportion who see it as the number one health problem has declined during the past few years (*18*). Complacency, stigma, and discrimination persist and all decrease motivation among persons and communities to adopt risk-reduction behaviors, get tested for HIV, and access prevention and treatment services (*19*).

New Strategies

Despite these challenges, substantial opportunities remain to enhance and demonstrate the effectiveness of HIV-prevention measures. New strategies will need to be combined with a scaling up of traditionally effective interventions that are tailored for local epidemiology and context to maximize public health impact despite resource constraints.

Partnerships. Eliminating HIV/AIDS in the United States cannot be achieved by any single agency or group, but will require public health partnerships comprising persons, communities, agencies, and the private sector. Strong partnerships are especially important to address stigma and discrimination and to promote greater acceptance of those living with HIV/AIDS. Religious and business communities and correctional and mental health services all need to be part of a national mobilization in the prevention of HIV transmission (*20*). Improved collaboration across government agencies is also required to provide a unified public health infrastructure dedicated to research, prevention, treatment, care, and rehabilitative services for persons affected by HIV/AIDS.

Increased access to voluntary HIV testing. For the estimated quarter of a million persons living with HIV who are unaware of their HIV infection, testing is the gateway to life-saving treatment. Persons who know they are infected with HIV are more likely to take steps to prevent themselves from transmitting the virus to others (*21*). To reduce the number of persons with undiagnosed HIV infections, a sustained expansion of access to and uptake of HIV testing will be required. This reduction can be achieved by making voluntary HIV testing a routine part of medical care, reducing the barriers to HIV testing, and ensuring easy access to new rapid HIV tests that, in many jurisdictions, can be performed by trained persons who are not clinicians (*22–24*).

Prevention messages focused on both HIV-positive and HIV-negative persons. Providing culturally and contextually appropriate messages is essential to help persons at risk avoid contracting HIV infection and to help those who are infected with HIV avoid transmitting the virus. Prevention messages also need to focus on the role of alcohol and drug abuse in HIV risk. Substance abuse (via injection drugs, alcohol, or methamphetamines) can facilitate risky behaviors among persons who might otherwise protect themselves and others from HIV. Preventing substance abuse and increasing access to substance-abuse treatment are examples of effective interventions for reducing HIV transmission.

Integrated prevention programs. Federal, state, and local prevention measures are increasingly focused on maximizing public health impact for any given program. One approach to increasing program effectiveness is increasing the development and implementation of integrated HIV-prevention programs. Several integrated programs exist across the nation, combining HIV, sexually transmitted disease (STD), viral hepatitis, mental health, and substance abuse services (*25–27*). Effective integration requires that program leaders 1) better define program integration goals, 2) identify best practices in the field and ensure that they are disseminated and implemented widely, 3) implement policies and regulations that enhance and support integration at local levels, and 4) evaluate the most cost-effective strategies.

Improved monitoring of new HIV infections. Reliable, population-based data are essential to track the HIV epidemic and target prevention measures accurately. For decades, AIDS surveillance has been a cornerstone of national, state, and local efforts to monitor the scope and impact of the HIV epidemic. However, AIDS surveillance data no longer accurately describe the full extent of the epidemic because effective therapies have slowed the progression of the disease. Since 1999,

CDC has recommended that states conduct HIV reporting using the same name-based approach currently used for AIDS surveillance nationwide. Currently, 43 states and five territories use confidential, name-based HIV case reporting. Several of the remaining states intend to implement name-based HIV surveillance in 2006. Moreover, in 2006, data from a new national HIV incidence surveillance system will provide the most accurate estimates of new HIV infections. These data, combined with improved surveillance of the patterns and distributions of risk behaviors in the population, will refine the targeting and delivery of HIV-prevention efforts.

New prevention technologies. Certain prevention technologies still under development, including preexposure prophylaxis, microbicides, and vaccines, are unlikely to provide full protection against HIV, might offer little or no protection against other STDs such as gonorrhea and chlamydia infections, and will not prevent unwanted pregnancies. Instead, new technologies are more likely to be incorporated into the spectrum of tools for comprehensive approaches to disease prevention. Effective behavior-change programs will still be needed to address possible behavioral disinhibition (i.e., continuing or returning to high-risk behaviors when one feels protected) among persons who receive these interventions. Prevention counseling that addresses informed choice and consent; the HIV-prevention behaviors of abstinence and delay of sexual debut, being monogamous, having fewer sex partners, and using condoms correctly and consistently; and other reproductive health needs (e.g., STD treatment and family planning) must be incorporated alongside these new prevention interventions.

Special Issue of *MMWR*

HIV/AIDS remains a potentially deadly chronic disease. Prevention of HIV infection requires a continued commitment from persons at risk, persons infected, and society as a whole. Prevention efforts need to keep pace with a changing epidemic. Most importantly, younger generations, who might not remember the deadlier, early days of the epidemic, continually need to receive basic HIV-prevention messages. Twenty-five years after first reporting on AIDS, *MMWR* dedicates this issue to retrospectives on the epidemic, including the changing epidemiology of HIV/AIDS, the public health achievement in reducing perinatal transmission of HIV, and the evolution of measures to prevent HIV/AIDS.

Reported by: *KA Fenton, RO Valdiserri, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention (proposed), CDC.*

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Epidemiology of HIV/AIDS — United States, 1981–2005

In June 1981, the first cases of what was later called acquired immunodeficiency syndrome (AIDS) in the United States were reported in *MMWR* (*1*). Since 1981, the human immunodeficiency virus (HIV) epidemic has continued to expand in the United States; at the end of 2003, approximately 1,039,000–1,185,000 persons in the United States were living with HIV/AIDS, an estimated 24%–27% of whom were unaware of their infection (*2*). This report highlights several major epidemiologic features of the U.S. HIV epidemic, including the decrease in overall AIDS incidence, the substantial increase in survival after AIDS diagnosis (especially since highly active antiretroviral therapy [HAART] became the standard of care in 1996), and the continued disparities among racial/ethnic minority populations. These findings emphasize the need for a comprehensive national surveillance system, expanding the use of new HIV-testing technologies, promoting knowledge of HIV serostatus, and improving access to care and prevention interventions.

The analysis described in this report included 1) HIV/AIDS case reports (i.e., HIV infection with or without AIDS) from the 35 areas (33 states, Guam, and the U.S. Virgin Islands) with integrated, confidential, name-based HIV/AIDS surveillance of sufficient duration to produce reliable data (i.e., 2001–2004) and 2) AIDS case reports from the District of Columbia, the 50 states, and U.S. territories received by CDC through June 30, 2005. Cases of AIDS and HIV/AIDS were analyzed by year of earliest reported diagnosis of AIDS or HIV infection, respectively. Estimated case counts reflect adjustments made to annual numbers to account for case reporting delays and deaths. Cases without an assigned HIV-transmission category were redistributed based on historical trends in risk factors (*3*). For the analysis of trends and the impact of HAART on these trends, AIDS cases were divided into three cohorts on the basis of year of diagnosis: 1981–1995 (pre-HAART), 1996–2000 (early HAART), and 2001–2004 (HAART era). Survival analysis was conducted using the Kaplan-Meier method.

At the end of 2004, an estimated 1,147,697 HIV or AIDS cases had been diagnosed and reported to CDC (3). AIDS cases increased rapidly in the 1980s and peaked in 1992 (an estimated 78,000 cases diagnosed) before stabilizing in 1998; since then, approximately 40,000 AIDS cases have been diagnosed annually (*3*). Over the course of the epidemic, before this stabilization and during early prevention and treatment advances, the number of AIDS cases decreased 47% from 1992 to 1998, and decreases occurred in all demographic and transmission categories (*4*) (Table, Figure 1). The majority of AIDS cases continue to occur among males; however, the proportion of all AIDS cases increased from 15% (1981–1995) to 27% (2001–2004) for females (Table). Among age groups, the proportion of all AIDS cases decreased from 1.4% (1981–1995) to 0.2% (2001–2004) for persons aged <13 years (Table).

Racial and ethnic minority populations have been disproportionately affected by the HIV epidemic. During 1981–1995, non-Hispanic whites were the predominant racial/ethnic group among persons who had AIDS diagnosed (47%); however, over time the proportion of cases among racial and ethnic minorities increased (2001–2004 cohort: non-Hispanic blacks accounted for 50%, and Hispanics accounted for 20%) (Table). Over time, all HIV-transmission categories demonstrated decreases in AIDS case numbers; however, the proportion of all AIDS cases for high-risk heterosexual contact (i.e., sexual contact with a person at high risk for or infected with HIV) during 1981–1995 was 10% and increased to 30% during 2001–2004 (Table).

During 2001–2004, an estimated 157,468 persons had HIV/AIDS diagnosed in the 35 areas reporting to CDC (Table), with the annual case number decreasing from 41,270 in 2001 to 38,730 in 2004. Fifty-one percent of HIV/AIDS cases diagnosed during 2001–2004 were among blacks. In 2004, estimated HIV/AIDS case rates for blacks (76.3 per 100,000 population) and Hispanics (29.5 per 100,000) were 8.5 and 3.3 times higher, respectively, than rates for whites (9.0 per 100,000) (*3*). Among males and females, case rates among blacks (males: 131.6 per 100,000; females: 67.0 per 100,000) were seven and 21 times higher, respectively, than rates for whites (males: 18.7 per 100,000; females: 3.2 per 100,000) (*3*). Among HIV/AIDS cases reported during 2001–2004, the most common route of HIV infection was attributed to male-to-male sexual contact (men who have sex with men [MSM]) (44%), followed by heterosexual contact (34%), injection-drug use (IDU) (17%), MSM/IDU (4%), and perinatal (0.6%) (Table). Although the HIV/AIDS case trend (2001–2004) for MSM was stable, the estimated annual percentage change for all other transmission categories indicated

TABLE. Estimated numbers* and percentages of HIV/AIDS† and AIDS cases, by year of diagnosis and selected characteristics — United States, 1981–2004

Characteristic	AIDS 1981–1995 No.	AIDS 1981–1995 (%)	AIDS 1996–2000 No.	AIDS 1996–2000 (%)	AIDS 2001–2004 No.	AIDS 2001–2004 (%)	HIV/AIDS 2001–2004 No.	HIV/AIDS 2001–2004 (%)
Sex								
Male	467,286	(84.7)	173,608	(75.9)	120,242	(73.4)	112,237	(71.3)
Female	84,229	(15.3)	55,253	(24.1)	43,576	(26.6)	45,231	(28.7)
Age group (yrs)								
<13	7,668	(1.4)	1,426	(0.6)	341	(0.2)	1,025	(0.7)
13–19	2,748	(0.5)	1,659	(0.7)	1,480	(0.9)	4,336	(2.8)
20–29	98,990	(18.0)	30,161	(13.2)	19,632	(12.0)	31,503	(20.0)
30–44	336,967	(61.1)	137,963	(60.3)	90,581	(55.3)	80,063	(50.8)
45–59	89,530	(16.2)	49,658	(21.7)	44,862	(27.4)	34,882	(22.2)
≥60	15,612	(2.8)	7,996	(3.5)	6,921	(4.2)	5,660	(3.6)
Race/Ethnicity								
White, non-Hispanic	256,460	(46.5)	72,314	(31.6)	46,325	(28.3)	45,497	(28.9)
Black, non-Hispanic	190,561	(34.6)	107,618	(47.0)	81,057	(49.5)	80,310	(51.0)
Hispanic	98,438	(17.9)	45,529	(19.9)	33,185	(20.3)	28,725	(18.2)
Asian/Pacific Islander	3,660	(0.7)	1,868	(0.8)	1,788	(1.1)	1,360	(0.9)
American Indian/Alaska Native	1,490	(0.3)	858	(0.4)	736	(0.5)	768	(0.5)
Transmission category								
Male-to-male sexual contact	282,234	(51.2)	92,301	(40.3)	66,781	(40.8)	68,484	(43.5)
Injection-drug use (IDU)	147,724	(26.8)	63,766	(27.9)	37,308	(22.8)	27,227	(17.3)
Male-to-male sexual contact/IDU	42,966	(7.8)	13,903	(6.1)	7,954	(4.9)	5,725	(3.6)
Heterosexual contact§	55,449	(10.1)	54,384	(23.8)	49,276	(30.1)	53,489	(34.0)
Perinatal	7,028	(1.3)	1,410	(0.6)	333	(0.2)	882	(0.6)
Other¶	16,113	(2.9)	3,098	(1.4)	2,166	(1.3)	1,661	(1.1)
Vital status								
Living	119,606	(21.7)	156,170	(68.2)	141,755	(86.5)	146,431	(93.0)
Deceased	429,582	(77.9)	71,520	(31.3)	21,621	(13.2)	10,957	(7.0)
Total**	**551,515**	**(100)**	**228,863**	**(100)**	**163,818**	**(100)**	**157,468**	**(100)**

* Numbers do not represent reported case counts, but instead are point estimates, which result from adjustments of reported case counts. The reported case counts are adjusted for reporting delays and for redistribution of cases in persons initially reported without an identified risk factor. The estimates do not include adjustment for incomplete reporting. Data are from case reports received by CDC as of June 30, 2005.

† Data include persons with a diagnosis of HIV infection. This includes persons with a diagnosis of HIV infection only, a diagnosis of HIV infection and a later AIDS diagnosis, and concurrent diagnoses of HIV infection and AIDS. Since 2000, the following 35 areas have had laws or regulations requiring confidential name-based HIV infection reporting: Alabama, Alaska, Arizona, Arkansas, Colorado, Florida, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, Wyoming, Guam, and the U.S. Virgin Islands. Since July 1997, Florida has had confidential name-based HIV infection reporting only for new diagnoses.

§ Heterosexual contact defined as sexual contact with a person at high risk for or infected with HIV.

¶ Includes hemophilia, blood transfusion, and risk factor not reported or not identified.

** Includes persons with unknown sex, multiple races, unknown race or ethnicity, and unknown vital status. Columns might not sum to the column total because of rounding.

a substantial decrease, with the greatest decrease occurring for IDU (9.1%) (*5*).

During 1981–2004, a total of 522,723 deaths among persons with AIDS have been reported to CDC (Table). Substantial increases in survival after diagnosis of AIDS have been observed, particularly since 1996 (Figure 2). The proportion of persons living at 2 years after AIDS diagnosis was 44% for those with AIDS diagnosed from 1981–1992, 64% for 1993–1995, and 85% for 1996–2000. Survival for more than 1 year after diagnosis for persons with AIDS diagnosed during 1996–2003 was greater among Asians/Pacific Islanders, whites, and Hispanics, than among blacks and American Indians/Alaska Natives (Figure 3).

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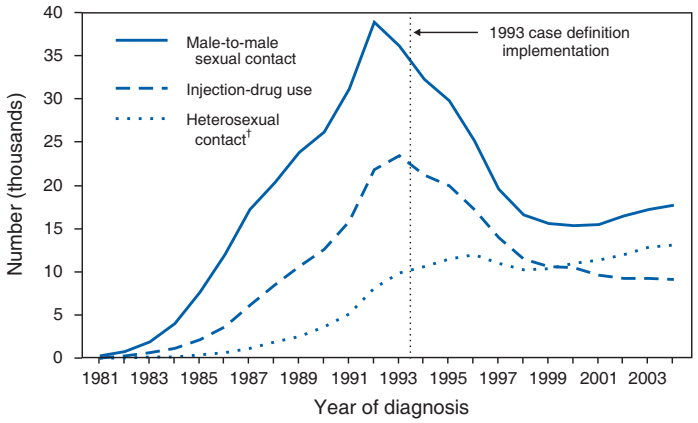
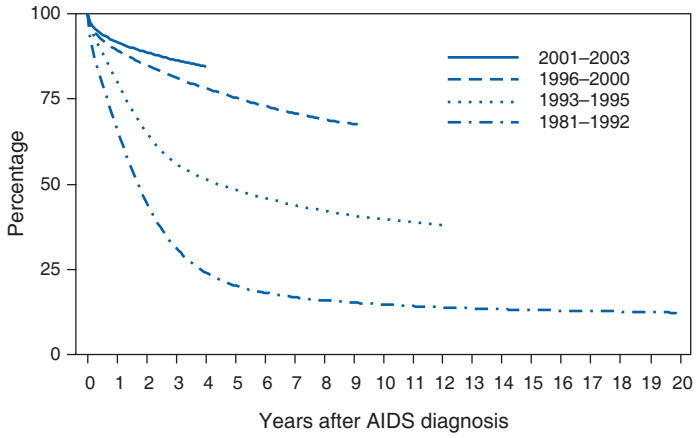
Editorial Note: HIV epidemiology continues to evolve. Although considerable progress has been made in reducing the impact of the HIV epidemic, certain populations, especially racial and ethnic minorities, continue to bear a disproportionate burden (*6*). Survival differences among racial and ethnic minorities might be attributed in part to late HIV diagnosis and differential access to care (*7*). Comprehensive and culturally sensitive approaches to prevention, treatment, and care are needed to reduce disparities in infection rates and disease progression.

FIGURE 1. Number of acquired immunodeficiency syndrome (AIDS) cases, by major transmission category and year of diagnosis — United States, 1981–2004*



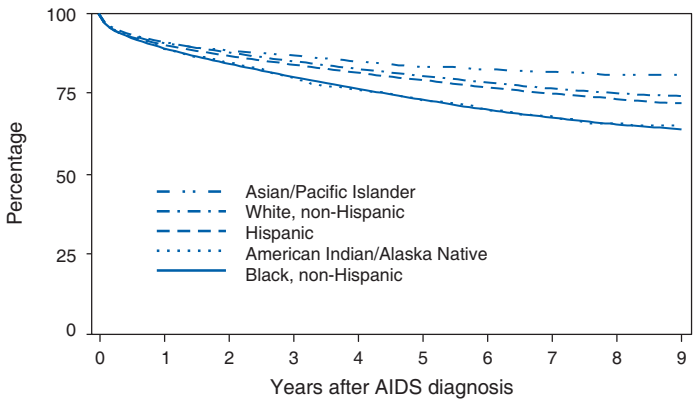
* Data adjusted for reporting delays. Cases without an assigned transmission category were redistributed on the basis of historical trends in risk factors.
† Defined as sexual contact with a person at high risk for or infected with HIV.

FIGURE 2. Percentage of persons surviving through June 2005, by years after acquired immunodeficiency syndrome (AIDS) diagnosis cohorts during 1981–2003 and by year of diagnosis — United States



An estimated 252,000–312,000 persons in the United States are unaware that they are infected with HIV and, therefore, are unaware of their risk for HIV transmission (*2*). CDC and its partners are working together using a comprehensive approach to better understand risk behaviors and barriers that prevent persons from getting tested for HIV and accessing medical and preventive services (*8*). Analysis of data collected by the National HIV Behavioral Surveillance System, which surveys populations at high risk for HIV to assess prevalence and trends in risk behavior, HIV testing, and use of prevention services, revealed that of MSM surveyed in five U.S. cities, 25% were infected with HIV and of those, 48% were unaware of their infection (*9*). These results underscore the need to increase HIV testing and prevention efforts among populations at high risk.

FIGURE 3. Percentage of persons surviving through June 2005, by years after acquired immunodeficiency syndrome (AIDS) diagnosis during 1996–2003 and by race/ethnicity — United States



With the advent of HAART, the overall progression of HIV infection to AIDS and from AIDS to death has slowed (*10*). Consequently, AIDS surveillance no longer serves as a reliable surrogate for monitoring HIV-infection trends. Conducting timely, accurate, complete, and confidential name-based HIV surveillance, which includes both the initial and subsequent collection of relevant clinical and laboratory information (e.g., CD4 count, viral load), is critical for monitoring the changing spectrum of HIV disease (*11*). The use of potent combination antiretroviral therapy has also been linked to the development of adverse consequences (e.g., metabolic complications and viral resistance), which can pose challenges to clinical management (*12*). CDC and its partners conduct supplemental studies to monitor clinical outcomes of HIV/AIDS cases, including integrating laboratory technologies with HIV/AIDS surveillance to monitor variant, atypical, and drug-resistant strains of HIV (*13*).

The national surveillance system for HIV/AIDS has evolved with advances in the understanding of this epidemic (*4,11*). The system now includes surveillance data from persons diagnosed with HIV to describe the epidemiology more accurately. CDC and the Council of State and Territorial Epidemiologists recommend that all states and territories conduct confidential, name-based HIV surveillance. As of May 2006, a total of 43 states and five territories had implemented confidential, name-based HIV-infection reporting. This integrated surveillance provides the only population-based monitoring of the HIV epidemic in the United States and provides invaluable epidemiologic data to local, state, and federal agencies to improve resource allocation, program planning, and evaluation for HIV-prevention and treatment services.

Diagnosis of asymptomatic HIV infection in a person does not necessarily signify recent infection. On average, 8–11 years elapse before a person has onset of symptoms of HIV infection (*14*). To provide a population-based estimate of HIV incidence (i.e., new HIV infections), CDC, in conjunction with 34 state and local health departments, is conducting HIV-incidence surveillance by using STARHS (Serologic Testing Algorithm for Recent HIV Seroconversion) (*15*). Knowledge of newly acquired (e.g., <6 months) HIV infections will enable more accurate monitoring of trends among persons recently infected. This will allow more effective targeting of treatment and prevention measures, thereby increasing opportunities to interrupt HIV transmission. CDC expects to report data from this system in late 2006.

Despite impressive accomplishments, many new challenges have arisen since the beginning of the HIV epidemic. A comprehensive national surveillance system must be complete and timely to better identify and monitor trends in HIV risk, HIV infection, and HIV infection outcomes. Twenty-five years into the HIV epidemic, surveillance data continue to highlight the need for a multifaceted approach that promotes knowledge of serostatus (e.g., via routine HIV testing), linkage to care, and risk-reduction strategies for seronegative persons at high risk for HIV infection and persons living with HIV.

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Achievements in Public Health

Reduction in Perinatal Transmission of HIV Infection — United States, 1985–2005

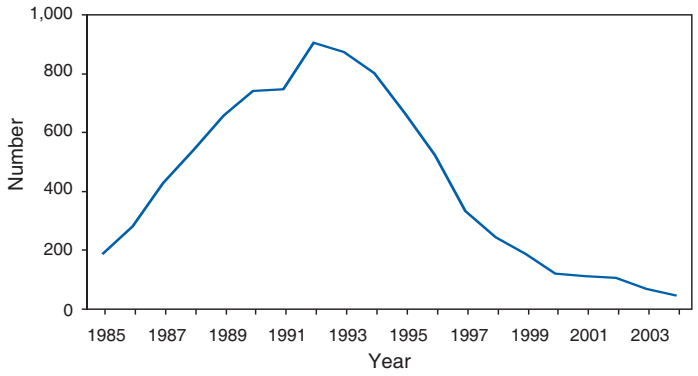
During 2005, an estimated 92% of acquired immunodeficiency syndrome (AIDS) cases reported among children aged <13 years in the United States were attributed to mother-to-child transmission of human immunodeficiency virus (HIV) (CDC, unpublished data, 2006). Transmission can occur during pregnancy, labor, delivery, or breastfeeding. Estimates of the number of perinatal HIV infections peaked in 1991 at 1,650 (*1*) and declined to an estimated range of 144–236 in 2002 (CDC, unpublished data, 2006). This reduction is attributed to routine HIV screening of pregnant women, use of antiretroviral (ARV) drugs for treatment and prophylaxis, avoidance of breastfeeding, and use of elective cesarean delivery when appropriate. With these interventions, rates of HIV transmission during pregnancy, labor, or delivery from mothers infected with HIV have been reduced to less than 2% (*2*), compared with transmission rates of 25%–30% with no interventions (*3*).

Despite these gains, substantial challenges to reducing perinatal transmission of HIV remain. Every perinatal HIV infection represents a sentinel health event, often indicating a woman who had undiagnosed HIV infection before pregnancy or did not receive appropriate interventions to prevent transmission of the virus to her infant. Therefore, to strengthen and sustain measures to maximally reduce perinatal transmission, public health activities should give high priority to collection of data to identify where missed opportunities occur and target prevention efforts accordingly.

Trends in Perinatal HIV/AIDS

AIDS cases. Pediatric AIDS cases were reported as early as 1982 (*4*) . The estimated number of perinatally acquired AIDS cases in the United States peaked at 945 in 1992 (Figure) and

FIGURE. Estimated number of cases of perinatally acquired AIDS,* by year of diagnosis — United States, 1985–2004†



* Acquired immunodeficiency syndrome.
† Data adjusted for reporting delays and for estimated proportional redistribution of cases in persons reported without an identified risk factor.

declined rapidly with expanding prenatal testing and implementation of appropriate preventive interventions. In 2004, an estimated 48 perinatally acquired cases of AIDS were reported (*5*), a decrease of approximately 95% from 1992. In 2004, approximately 38% of perinatally acquired AIDS cases were reported in children aged <1 year. As with adults, reporting of children with AIDS underestimates the current burden of HIV infection in children.

HIV cases. Because not all states conduct name-based HIV-infection reporting,* estimates of HIV infections among children over time are more uncertain than for AIDS cases. Availability of highly active antiretroviral therapy (HAART) has changed the progression time to AIDS; therefore, using reported AIDS cases to estimate HIV cases among children has been more difficult in recent years. Previous estimates placed the peak of HIV-infected infants at approximately 1,650 in 1991, followed by a steep decline (*6*). A similar procedure, which did not produce a point estimate, yielded a range of 284–367 for the estimated number of HIV-infected infants born in 2000 (*7*).

More recent estimates have used perinatal HIV data from 35 states† with confidential, name-based HIV reporting of pediatric HIV infections since at least 2002 to extrapolate proportionately, on the basis of perinatal AIDS cases, to the entire U.S. population. Using this procedure, an estimated 144–236 HIV-infected infants were born in the United States in 2002 (CDC, unpublished data, 2006). The precision of perinatal HIV case estimates should improve as additional states adopt name-based HIV-infection reporting.

Milestones in the Reduction of Perinatal HIV Transmission

HIV testing. The observed decreases in pediatric AIDS and HIV cases likely resulted primarily from increased identification of infected mothers and exposed infants and timely intervention to prevent perinatal HIV transmission (*1*). The need for pregnant women to know their HIV status was recognized early in the epidemic as a key step to preventing perinatal transmission. In 1985, CDC recommended that pregnant women in groups at high risk be offered counseling and voluntary HIV testing (*8*). At the time, risk-based screening for HIV was recommended because no treatment was available for HIV infection; however, many women with HIV infection were not identified by risk-based screening.

In 1995, after a clinical trial determined that zidovudine (ZDV) was able to reduce perinatal HIV transmission (*3*), CDC and the American Academy of Pediatrics (AAP) recommended universal voluntary counseling and HIV testing for all pregnant women to allow timely prophylactic use of ZDV (*9,10*). In 1999, the Institute of Medicine reported that the lack of timely HIV diagnosis in pregnant women was the largest contributor to continued perinatal transmission in the United States (*11*) and recommended universal HIV screening of pregnant women with patient notification and the ability to decline screening (i.e., the opt-out approach). AAP and the American College of Obstetricians and Gynecologists (ACOG) published a joint statement in 1999 recommending universal opt-out HIV screening for pregnant women (*12*). CDC testing guidelines in 2001 recommended routine HIV screening as early as possible during pregnancy for all pregnant women with streamlined counseling and consent processes to reduce barriers to testing (*13*), and in 2003, a letter from CDC to U.S. health professionals also recommended the opt-out screening approach (*14*).

Despite such measures, from 2001 to 2004, nearly 7% of HIV-infected pregnant women reported from 28 states with confidential, name-based perinatal HIV exposure reporting since at least 2001 had HIV that remained undiagnosed by the time of delivery (Table 1). However, the majority of these women delivered in hospital settings, where they might be tested. In 2001, CDC recommended rapid or expedited testing for all women during labor and delivery with undocu-

* As of May 2006, the following areas conducted name-based HIV-infection reporting for children: Alabama, Alaska, American Samoa, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Guam, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Northern Mariana Islands, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Tennessee, Texas, U.S. Virgin Islands, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.
† Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Florida, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

mented HIV status (*13*). With the approval of a rapid HIV test by the Food and Drug Administration (FDA) in 2002, providing testing for women with undocumented HIV status in labor became more feasible. Such testing allows provision of interventions to reduce the risk for transmission of HIV infection even in the absence of treatment during pregnancy. In 2004, the Mother-Infant Rapid Intervention at Delivery study demonstrated that rapid testing was acceptable and feasible in the delivery setting (*15*), and ACOG also expanded its recommendations to include rapid testing for women in labor with unknown HIV status (*16*).

As HIV testing during pregnancy became more routine, some areas (e.g., New York state) documented an increasing proportion of neonatal HIV infections transmitted by women who tested HIV negative earlier in pregnancy (*17*). In response, ACOG and CDC recommended a routine second HIV test during the third trimester for women known to have elevated risk for HIV infection (e.g., history of sexually transmitted disease [STD] or illicit drug use) and in areas with elevated HIV prevalence among women of childbearing age (*13,16*).

Although nationally representative data on prenatal HIV testing rates do not exist, in four states the proportion of HIV-infected pregnant women in whom HIV infection was diagnosed before giving birth increased from 68% in 1993 to 81% in 1996 (*18*). Recently, among all HIV-exposed infants reported to CDC through the HIV/AIDS Reporting System (HARS) (i.e., from 28 states with confidential, name-based perinatal HIV exposure reporting for infants who were born during 2001–2004), 93% of mothers had known HIV status before or at the births of their infants (Table 1).

Antiretroviral use. In February 1994 the Pediatric AIDS Clinical Trials Group (PACTG) 076 trial demonstrated a breakthrough prevention intervention with a 67% reduction in perinatal HIV transmission by using a three-part regimen consisting of administration of ZDV to the mother during pregnancy, intravenous ZDV during labor, and ZDV to the infant for 6 weeks (*3*). In April 1994, CDC issued provisional guidelines for ZDV use to reduce perinatal transmission (*19*), and, in July 1994, FDA approved ZDV for this use. In August 1994, the U.S. Public Health Service Task Force (USPHSTF) and CDC issued consensus recommendations for use of this regimen to reduce perinatal HIV transmission (*20*).

In the late 1990s, additional ARV medications were developed and licensed, and administration of HAART became the standard of care, which usually consists of three or more drugs used in combination to inhibit viral replication at multiple steps of the replication cycle. Such therapy is capable of reducing viral replication to levels undetectable by available assays. In 1998, USPHSTF and CDC recommended HAART for pregnant women who required the therapy for their own health and recommended that all HIV-infected pregnant women be offered combination therapy, while acknowledging uncertainty about benefits and risks to the fetus (*21*).

Subsequent studies determined that maternal treatment with HAART reduced perinatal transmissions to <2% of deliveries by women with HIV; the risk of mother-to-child transmission was independently correlated with the complexity of ARV therapy (i.e., the number and types of different medications) and with maternal HIV RNA levels (*2*). Current guidelines recommend use of HAART (including ZDV whenever possible) for women who require it for their own health and for all women whose plasma HIV RNA levels are ≥1,000 copies/mL and also recommend that such therapy be considered instead of ZDV alone for women with plasma HIV RNA levels <1,000 copies/mL (*22*). Certain less complex regimens, administered only intrapartum and postnatally to infants, also have been shown to reduce perinatal transmission, although to a lesser extent than when antepartum therapy also was administered (*23*). Such regimens are recommended in the United States when the mother has not received ARV prophylaxis during pregnancy, such as women first identified dur-

TABLE 1. Number and percentage of HIV*-exposed infants born during 2001–2004, by infection status, period of maternal HIV diagnosis, and maternal receipt of prenatal care — 28 states†

Maternal characteristic	Infants with HIV infection		Infants with no HIV infection or with HIV infection undetermined		Total HIV-exposed infants	
	No.	(%)	No.	(%)	No.	(%)
Period of maternal HIV diagnosis						
Before delivery or at delivery	220	(68.1)	6,636	(94.1)	**6,856**	**(93.0)**
After delivery	84	(26.0)	164	(2.3)	**248**	**(3.4)**
Period unknown	19	(5.9)	253	(3.6)	**272**	**(3.7)**
Total	**323**	**(100.0)**	**7,053**	**(100.0)**	**7,376**	**(100.0)**
Maternal receipt of prenatal care§						
No visit for prenatal care	33	(16.4)	303	(6.0)	**336**	**(6.4)**
At least one visit for prenatal care	168	(83.6)	4,780	(94.0)	**4,948**	**(93.6)**
Total	**201**	**(100.0)**	**5,083**	**(100.0)**	**5,284**	**(100.0)**

* Human immunodeficiency virus.
† The 28 states with confidential, name-based reporting of perinatal HIV exposure since at least 2001: Alabama, Arizona, Arkansas, Colorado, Connecticut, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.
§ Includes only cases with birth history information.

ing labor as infected with HIV (*22*). Some evidence from in vitro and in vivo models has suggested the potential for teratogenic or carcinogenic effects from some ARV agents in pregnancy (*24*). However, analysis of all prospective cases reported to the Antiretroviral Pregnancy Registry during January 1989–July 2005 identified no detectable increase in overall risk of birth defects or of specific birth defects in humans (*25*). Toxicity related to mitochondrial dysfunction has been reported in patients receiving long-term treatment with nucleoside analogs; infants exposed to these agents should be regularly monitored for the development of such toxicity *(22)*. Data are conflicting regarding whether receipt of combination ARV therapy in pregnancy is associated with other adverse pregnancy outcomes, such as preterm birth; all pregnant women receiving such therapy and their infants should receive monitoring for pregnancy complications and potential toxicity (*22*).

The use of ARV drugs for prevention of perinatal HIV transmission increased dramatically after 1994. A four-state (Louisiana, Michigan, New Jersey, and South Carolina) study determined that, during 1993–1996, the proportion of HIV-infected pregnant women offered prenatal ZDV increased from 27% to 85%, the proportion offered intrapartum ZDV increased from 5% to 75%, and the proportion offered neonatal ZDV increased from 5% to 76% (*18*). In 24 areas conducting enhanced perinatal HIV surveillance during 1999–2001, nearly 79% of HIV-infected pregnant women received some ARV therapy during pregnancy; 77% received ARV therapy during the intrapartum period, and 92% of HIV-exposed infants received some form of ARV therapy (*26*). In the Women and Infant Transmission Study, the rate of perinatal transmission decreased from 22.6% in 1990, when most women received no ARV therapy or only ZDV for treatment of HIV infection, to 1.2% in 2003, when 87% received combination therapy (*2*; L Mofenson, MD, National Institutes of Health, personal communication, 2006).

Avoidance of breastfeeding. In 1985, breastfeeding was reported as potentially associated with mother-to-child transmission of HIV (*27*), and HIV was isolated from breast milk (*28*). That year, CDC recommended that women with HIV infection avoid breastfeeding (*8*). Subsequent international studies estimated that one third to one half of perinatal HIV transmission among breastfeeding populations occurred during breastfeeding (*29*). Avoidance of breastfeeding is now recommended in areas, including the United States, where safe alternatives are reliably accessible and affordable (*30*).

Scheduled cesarean delivery. Several studies have confirmed that cesarean delivery performed before onset of labor and membrane rupture can reduce HIV transmission to infants whose mothers do not receive ARV therapy during pregnancy or who receive only ZDV (*31,32*). Rates of cesarean delivery among HIV-infected pregnant women in one large cohort study increased from 20% to 44% after presentation of the results of these studies in 1998 (*33*). However, the efficacy of cesarean delivery in women who have received potent combination therapy and have low HIV RNA levels (<1,000 copies/mL) remains unclear (*22,31,32*). The uncertain benefit for prevention of perinatal HIV transmission is likely outweighed by the potential risks of operative delivery in such women, given that the risk for HIV transmission is less than 2%. USPHSTF recommends that scheduled cesarean delivery be offered to women with HIV RNA levels >1,000 copies/mL near the time of delivery (*22*).

Current Challenges

The decreases in perinatal HIV infections and perinatally acquired AIDS cases in the United States represent an important achievement in public health. However, perinatal transmission of HIV continues to occur. Infant infections can be associated with interruptions of care at any stage for HIV-infected women and their infants.

Females aged >13 years accounted for only 7% of reported new AIDS cases in 1985 (CDC, unpublished data, 2006) but 27% of reported cases in 2004 (*5*). Enhanced primary HIV-prevention strategies are needed to prevent new infections in women, which will, in turn, prevent perinatal HIV infections.

Lack of prenatal care for HIV-infected women also contributes to ongoing perinatal transmission. Data from HARS for births during 2001–2004 indicate that 16% of mothers of HIV-infected infants had no documented prenatal care visits (Table 1), excluding cases where no infant birth history information was available. For many HIV-infected women, mental health or substance use concerns and HIV-related stigma present barriers to prenatal care (*34*). Increasing accessibility to prenatal care services is crucial to sustain and maximize the decline in perinatal HIV infections.

Pregnant women also might have increased susceptibility to HIV infection (*35*), and infection of women during pregnancy might lead to a substantial number of perinatal transmissions (*17*). In addition to universal HIV screening as early as possible in pregnancy, CDC now recommends a second HIV test during the third trimester for populations of women with elevated HIV incidence and rapid HIV testing for women in labor with undocumented HIV status (*13*).

Requirements for lengthy HIV-prevention counseling and written documentation of informed consent for HIV testing might present additional barriers to routine prenatal testing (*7*). Among the 28 states with perinatal HIV-exposure and HIV/AIDS reporting through HARS, during 2001–2004, approximately 26% of mothers of HIV-infected infants were

not recognized as infected with HIV before delivery (Table 1). Testing rates often are higher in areas employing opt-out testing for pregnant women, compared with opt-in strategies that require specific written documentation of informed consent for HIV testing (*36*).

Many HIV-infected women and their infants still do not receive appropriate ARV treatment and prophylaxis. Of all HIV-infected infants reported to HARS during 2001–2004 from 28 states with confidential, name-based infant HIV-exposure reporting, 46% had not received prenatal ZDV (Table 2), 41% had not received ZDV during labor and delivery, and 25% had not received postnatal ZDV. Many of these infant infections could have been prevented if the HIV infections of their mothers had been identified through adequate preconception and prenatal care and if appropriate prophylactic interventions had been administered.

Maximal reduction of perinatal HIV infection is one of the four primary goals of CDC's Advancing HIV Prevention initiative, announced in 2003 (*37*). CDC perinatal HIV-prevention programs currently focus on five key areas: 1) implementation of rapid HIV testing in labor and delivery for women with undocumented HIV status; 2) social marketing efforts to increase awareness of the need for HIV testing among pregnant women; 3) outreach efforts to promote receipt of prenatal care by pregnant women; 4) case management services to promote receipt of prenatal care and receipt of appropriate medication and interventions among HIV-infected pregnant women; and 5) provider training to increase availability of rapid testing services. Programs are also underway to increase collaboration between perinatal HIV programs and programs addressing other important perinatal infections. In addition, CDC continues to monitor infections among children and adults and produces periodic surveillance reports to provide data for public health decision makers. To monitor perinatal HIV-prevention measures and address missed opportunities for prevention, CDC and the Council of State and Territorial Epidemiologists recommend that all states require public health reporting of all cases of perinatal HIV exposure in infants.

Implementation of recommendations for universal prenatal HIV testing, ARV prophylaxis, elective cesarean delivery, and avoidance of breastfeeding has resulted in a 95% decrease in the number of perinatal AIDS cases in the United States since 1992 and a decline in the risk for perinatal HIV transmission from an HIV-infected mother to less than 2%. However, barriers to the elimination of perinatal HIV infection remain, as the number of HIV infections continues to rise among women, and health-care services are not universally accessed by women in need of these services. Finally, the success in reducing perinatal HIV transmission observed in the United States contrasts with the situations in poorer countries, particularly in sub-Saharan Africa, where perinatal HIV transmission remains largely unabated. Continued success in the United States and reduction of perinatal HIV transmission in areas where such transmission remains common will require sustained commitment to prevention of HIV infection among women and to treatment for women affected by HIV/AIDS.

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TABLE 2. Number and percentage of infants born during 2001–2004 reported with perinatal HIV* infection who received prenatal, intrapartum, or postnatal zidovudine (ZDV) — 28 states†

	Prenatal ZDV		Intrapartum ZDV		Postnatal ZDV	
ZDV status	No.	(%)	No.	(%)	No.	(%)
Received ZDV	107	(33.1)	126	(39.0)	190	(58.8)
Did not receive ZDV	149	(46.1)	133	(41.2)	80	(24.8)
Declined ZDV	5	(1.6)	1	(0.3)	0	(0.0)
ZDV status unknown	62	(19.2)	63	(19.5)	53	(16.4)
Total	**323**	**(100.0)**	**323**	**(100.0)**	**323**	**(100.0)**

* Human immunodeficiency virus.
† The 28 states with confidential, name-based reporting of perinatal HIV exposure since at least 2001: Alabama, Arizona, Arkansas, Colorado, Connecticut, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

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Evolution of HIV/AIDS Prevention Programs — United States, 1981–2006

When the first cases of what would become known as acquired immunodeficiency syndrome (AIDS) were reported in 1981, the magnitude of the epidemic and the numbers of deaths were unimaginable. During the next 25 years, an unprecedented mobilization of individual, community, and government resources was directed at stopping the epidemic. CDC currently supports a wide range of human immunodeficiency virus (HIV) prevention activities in the United States,

including 1) collection of behavioral and HIV/AIDS case surveillance data that document trends in the epidemic and risk behaviors; 2) programs conducted by state, territorial, and local health departments, community-based and national organizations, and education agencies; 3) capacity building to improve HIV-prevention programs; 4) program evaluation to monitor the delivery and outcomes of prevention services; and 5) research leading to new strategies for preventing transmission of HIV/AIDS. Since 1994, local and state health departments have allocated resources to specific programs and populations through local community planning processes that involve health department staff, prevention providers, and members of affected communities (*1*). A three-pronged approach has been developed, consisting of 1) prevention activities directed at persons at high risk for contracting HIV; 2) HIV counseling, testing, and referral services; and 3) prevention activities directed at improving the health of persons living with HIV and preventing further transmission.

Persons at High Risk for Contracting HIV

The first HIV-prevention programs in the United States were grassroots measures initiated in 1982 predominantly by homosexual men in San Francisco, California, and New York City (*2*). These and other early HIV-prevention activities primarily were designed to increase AIDS awareness, reduce unfounded fears about transmission, and provide basic information regarding symptoms, likely transmission routes, and risk-reduction strategies.

Early CDC activities included establishment of the National AIDS Information Line (1983) and National AIDS Clearinghouse (1987), institution of the nationwide America Responds to AIDS public information campaign (1987), and distribution of *Understanding AIDS* (1988), a brochure prepared in consultation with U.S. Surgeon General C. Everett Koop; this was the first mailing regarding a major public health problem that was delivered to every residential mailing address in the United States (*3*). CDC programs during the mid- to late 1980s addressed high-school and college-aged populations, persons at increased risk for HIV, racial and ethnic minority populations, perinatal transmission, and health-care workers (*3*). These programs increased basic knowledge about HIV transmission and prevention, reduced risk behavior within populations at high risk for infection, and decreased negative attitudes toward persons living with HIV/AIDS (*4*).

However, as important as these gains were, they were not sufficient to motivate behavior change among some persons at high risk for HIV infection. More intensive, targeted interventions were developed, including the five-city CDC AIDS Community Demonstration Projects (1989), which produced effective, community-level interventions for difficult-to-reach populations that led to increased condom use with main and nonmain sex partners (*5*). A wide range of behavioral intervention strategies, operated at individual, small-group, and community levels, and complemented by structural interventions and medical/technological advances, has been implemented for persons at high risk for HIV infection (Table 1) (*4*).

Behavioral interventions were observed to substantially reduce HIV risk while remaining cost effective or cost saving for a wide range of populations at high risk (*4*). The CDC HIV Prevention Research Synthesis Project has conducted meta-analyses of data from scientifically rigorous intervention trials since 1996. These analyses have determined that behavioral interventions substantially reduce sexual risk among young adults, men who have sex with men (MSM), heterosexual men and women, and drug users (*6–9*). More than 50 interventions for populations at high risk have been identified that meet stringent criteria for efficacy and scientific rigor (*10–12*). A growing number of these evidence-based interventions have been packaged for use in local HIV-prevention programs (*13,14*). These packages, or kits, and training on how to use them are available through the CDC Diffusion of Effective Behavioral Interventions (DEBI) project (Table 2) (*15*). In addition, CDC supports a wide range of other activities designed to build the capacity of local HIV-prevention providers and their organizational infrastructures (Table 3).

HIV Counseling, Testing, and Referral Services

In 1983, identification of HIV as the cause of AIDS (*16,17*) made possible the development of tests to detect the virus. In January 1985, the U.S. Public Health Service (PHS) issued provisional recommendations for screening donated blood and plasma in anticipation of a commercial HIV-antibody test (*18*). The first test for HIV antibody was licensed by the Food and Drug Administration in March 1985 and was widely implemented in blood banks, plasma collection centers, health departments, and clinical-care settings. Concurrent with licensing of the new test, PHS announced availability of funding for health departments to establish test sites that would provide an HIV-test alternative to blood donation for persons at high risk to enable them to learn their HIV-antibody status. By the end of 1985, a total of 874 alternate test sites had been established, and 79,100 persons had been tested (*19*).

In 1986, new recommendations published by CDC substantially expanded use of HIV-antibody testing (*20*). These recommendations encouraged confidential and anonymous HIV-antibody testing of persons at high risk in combination with risk-reduction counseling and, for HIV-seropositive per-

TABLE 1. Characteristics and examples of intervention for selected HIV* prevention programs, by level of intervention

Level of intervention	Characteristic	Example of intervention
Individual	• Directly influences knowledge, attitudes, and behavior of persons participating in intervention activities • Information delivered in one-on-one setting by professionals, peers, and/or media targeted to individual • Limited number of persons reached • Often provides the most flexibility to meet client needs	• HIV counseling, testing, and referral • Risk-reduction messages delivered by health-care providers • Comprehensive risk counseling and services (formerly known as prevention case management)
Small group	• Directly influences knowledge, attitudes, and behavior of persons participating in intervention activities of newly formed or existing groups • Activities conducted with couples, small groups, or families that use professionals, peers, and/or media targeted to group • Moderate numbers of people reached • Some flexibility to meet needs of individuals	• Interventions for HIV-serodiscordant couples • Single-session and multisession group interventions • Programs that train groups of parents to talk with their children about HIV
Community	• Directly and indirectly influences knowledge, attitudes, and behavior of entire community • Often focus on changing social norms • Might have multiple intervention components that use peers or professionals and/or targeted mass media • Large numbers of persons reached • Little flexibility to meet needs of individuals	• Mass media and social marketing campaigns • Dissemination of prevention messages by peers • Community mobilization
Structural	• Indirectly affects risk behavior by changing structures, laws, or policies that might influence transmission risk or the availability of prevention information or tools • Changing policy/law might require few resources but implementing structural changes might be expensive • Affects large numbers of persons at the city, state, or national level • Not tailored to individual needs	• State laws permitting rapid testing in nonclinical settings • Workplace policies that support providing HIV-prevention information • Reducing cost/increasing availability of condoms
Medical/ Technological	• Directly and indirectly affects risk through scientific advances in medical care and other fields that reduce infectivity or provide new/improved prevention technologies • Can affect HIV transmission but depends on other intervention strategies to motivate dissemination and adoption by community members and providers • Can affect large numbers of persons but cost and other factors might limit access	• Rapid HIV testing • Screening of blood supply • Use of antiretrovirals to prevent perinatal transmission • Microbicides • Postexposure prophylaxis • Preexposure prophylaxis • Preventive vaccine • Male circumcision

* Human immunodeficiency virus.

sons, referral of sex and needle-sharing partners for medical evaluation and testing. Since then, the number of CDC-supported test sites has increased to approximately 11,000, providing approximately 2.2 million HIV-antibody tests in 2004 (CDC, unpublished data, 2006).

For most of the epidemic, HIV-antibody testing has required two visits. The first visit consisted of a pretest counseling session and a blood draw, but test results and posttest counseling were not provided until the second visit (usually 2 weeks after the blood draw), after completion of the laboratory test. The need for a second visit posed a major barrier; depending on the setting and population, 10% to >50% of persons tested failed to return for their results (*21,22*).

Counseling was initially based on standard messages about the test, the meaning of positive and negative test results, and risk reduction. Early studies of HIV counseling and testing observed considerable reductions in risk among persons who learned that they were HIV seropositive but found little change among those who were HIV seronegative (*23*). On the basis of these findings, CDC recommended a shift to client-centered counseling that emphasized increasing the client's perception of risk and developing a personalized risk-reduction plan (*24*). This approach substantially increased condom use and decreased new sexually transmitted diseases (STDs) among HIV-seronegative patients at STD clinics (*25*).

In recent years, CDC has issued new guidelines and supported new initiatives to make HIV-antibody testing more accessible, incorporate advances in testing technologies, better integrate testing into routine medical care, recognize resource and provider constraints, and accommodate the diverse needs and preferences of persons seeking testing (*26,27*). The availability of oral fluid, urine, and finger-prick testing, along with rapid tests, has made it easier to provide HIV testing in a wide range of clinical and nontraditional settings and has led to new strategies for reaching more persons with undiagnosed HIV infection (*26*). Rapid tests pro-

TABLE 2. Selected HIV preventive interventions from the CDC Diffusion of Effective Behavioral Interventions (DEBI) Project

Intervention	Study population	Description	Main outcomes
Community Promise CDC AIDS Community Demonstration Project Research Group. Am J Public Health 1999;89:336–45	• Youths at risk • Injection-drug users (IDUs) and female sex partners • Female commercial sex workers • Men who have sex with men (MSM) • Residents of areas with high prevalence of sexually transmitted diseases (STDs) • 55% female • 54% black	Community-level intervention focused on risk reduction through distribution of role model stories and prevention materials. Activities included collecting information about HIV risk behavior in community, creating role model stories based on personal accounts of community members, and recruiting and training peer advocates to distribute role model stories and prevention materials.	• Increased mean stage-of-change scores on condom use with main partner (differential change between arms, mean = 0.19, 95% confidence interval [CI] = 0.01–0.38, p<0.05). • Increased mean stage-of-change scores on condom use with nonmain partner (differential change between arms, mean = 0.34, CI = 0.04–0.63, p<0.05).
MPowerment Project Kegeles, et al. Am J Public Health 1996;86:1129–36	• Young MSM at risk, aged 18–29 years • 100% male • 81% white	Community-level intervention focused on preventing HIV risk behavior. Activities included formal outreach programs (i.e., HIV literature and condom distribution), informal outreach measures (i.e., safe sex discussion with friends), peer-led skills-building exercises to practice safer sex negotiation and correct condom use, and publicity campaigns.	• Decreased frequency of unprotected anal intercourse at 4 months postintervention (McNemar's test z = 1.75, p<0.03).
Popular Opinion Leader Kelly, et al. Am J Public Health 1991;81:168–71	• MSM at risk • 100% male • 86% white	Community-level intervention focused on training opinion leaders to encourage safer sex behaviors among social network. Training activities included teaching skills for initiating risk-reduction discussions and endorsing risk reduction during everyday conversations. Training methods included direct instruction, facilitator modeling, and extensive role-play exercises. Each opinion leader agreed to have at least 14 conversations with peers.	• Decreased unprotected anal intercourse at 3–6 months postintervention (odds ratio [OR] = 0.63, CI = 0.44–0.88).*
RAPP (Real AIDS Prevention Project) Lauby, et al. Am J Public Health 2000;90:216–22	• Women at risk • 100% female • 73% black	Community-level intervention focused on HIV risk reduction. Activities included assessing community knowledge of HIV, using peer networkers for community outreach, engaging in individual-level safer sex discussions, and engaging in small-group gatherings to promote HIV risk reduction.	• Increased condom use during vaginal sex with main partner (OR = 1.98, CI = 1.54–2.55).*
Safety Counts Hershberger, et al. AIDS and Behavior 2003: 229–43	• IDUs and crack cocaine users • 67% male • IDUs, 48% white; crack users, 78% black	Individual and small-group intervention focused on preventing high-risk drug use and sexual behavior. Activities included assessing individual-level HIV risk and setting personal goals, participating in group activities to reinforce personal risk reduction, and participating in HIV counseling and testing.	• Decreased use of injection-drugs (p<0.05). • Decreased use of shared injection equipment (p<0.05).
SISTA (Sisters Informing Sisters on Topics about AIDS) DiClemente, Wingood. J Am Med Assoc 1995;274:1271–6	• Black women at risk • 100% female • 100% black	Small-group intervention focused on preventing HIV sexual risk behavior via sex and culturally relevant activities. Activities included behavioral skills practice, group discussions, lectures, role-playing, prevention video viewing, and take-home exercises.	• Increased consistent condom use at 3 months (adjusted OR = 2.1, CI = 1.03–4.15).
Street Smart Rotheram-Borus, et al. Prev Sci 1993;4:173–87	• Street youths aged 11–18 years • 51% male • 59% black	Small-group intervention focused on building individual skills to prevent HIV risk behavior. Activities included scripted and nonscripted role-plays, problem-solving activities, and video production.	• Decreased unprotected sex among women (rate ratio = 0.35, CI = 0.17–0.71).
Voices/Voces O'Donnell, et al. Sex Transm Dis 1998;25:161–8	• Adult men and women STD clinic clients • 60% male • 62% black	Small-group intervention focused on building individual skills to prevent HIV risk behavior. Activities included viewing culturally specific videos and facilitated group discussion.	• Decreased STD incidence among men (OR = 0.79, p = 0.04).*
Healthy Relationships Kalichman, et al. Am J Prev Med 2001;21:84–92	• HIV-positive men and women • 70% male • 74% black	Small-group intervention focused on building skill and self-efficacy to make informed and safe decisions about risk disclosure and behavior. Activities included using feedback reports, discussion sessions, role-play, and movie-quality clips to teach and practice decision-making and problem-solving skills.	• Decreased unprotected anal/vaginal intercourse with all partners at 6 months postintervention (OR = 0.48, CI = 0.31–0.76).* • Decreased unprotected anal/vaginal intercourse with non–HIV-seropositive partners at 6 months postintervention (OR = 0.60, CI = 0.38–0.94).*
Holistic Health Recovery Program Margolin, et al. Health Psychol 2003;22:223–8	• HIV-positive IDUs • 70% male • 49% black	Individual and small-group intervention focused on preventing unsafe drug and sex-related behavior. Activities included receiving individual and group therapy to promote risk-reduction skills, relapse prevention, medical adherence, and healthy lifestyle choices.	• Decreased risk (unprotected sex or needle sharing) at 3 months postintervention (OR = 0.38, CI = 0.12–0.95).*
Together Learning Choices Rotheram-Borus, et al. Am J Public Health 2001;91:400–5	• HIV-infected persons aged 13–24 years • 72% male • 37% Hispanic, 27% black	Small-group intervention focused on preventing risk behavior, decreasing drug and alcohol use, and improving quality of life. Activities included implementing healthy daily routine, identifying risk-behavior triggers, promoting self-efficacy of condom use and self-control, and managing self-destructive motivations.	• Decreased unprotected sex at 3 months postintervention (OR = 0.13, CI = 0.02–0.70).*

* Calculated by CDC Prevention Research Synthesis Project on the basis of data published in the original research report.

TABLE 3. Selected CDC activities for building HIV* prevention program capacity

Activity	Description	Website
National Prevention Information Network	Provides a national database of HIV-prevention resources and programs that can be accessed by telephone or the Internet	http://www.cdcnpin.org
Prevention Research Synthesis Project (PRS)	Analyzes and summarizes research on HIV-prevention interventions; identifies effective interventions	http://www.cdc.gov/hiv/topics/research/prs
Replicating Effective Programs Project (REP)	Packages effective interventions for dissemination	http://www.cdc.gov/hiv/projects/rep
Diffusion of Effective Behavioral Interventions (DEBI) Project	Disseminates effective interventions to health departments and community-based organizations	http://www.effectiveinterventions.org
National Community Planning Technical Assistance Providers' Network	Provides technical assistance (TA) to community planning groups (CPGs), and Health Departments in a variety of content and issue areas.	http://www.cdc.gov/hiv/cba/publications/techassistance.pdf
Institute for HIV Prevention Leadership	Provides comprehensive, capacity building education designed specifically for HIV-prevention program managers who work in community-based organizations (CBOs)	http://www.ihpl.org
Capacity Building Assistance Provider Directory	Strengthens the HIV-prevention programs of organizations serving racial and ethnic minority populations	http://www.cdc.gov/hiv/cba/tools/cbadirectory.pdf
STD/HIV Prevention Training Centers	Provides regional training of behavioral interventions and formative research	http://depts.washington.edu/nnptc/
American Psychological Association Behavioral and Social Science Volunteers Program	Provides local consultation and hands-on assistance by participating behavioral and social scientists	http://www.apa.org/pi/aids/bssv.html

* Human immunodeficiency virus.

duce results in 20 minutes and make it possible to give HIV-seronegative and provisional HIV-seropositive test results in a single visit, increasing the percentage of persons who receive their test results in a single visit to more than 95% in many testing programs (*28,29*). CDC also is developing recommendations to make HIV screening a routine part of medical care, remove barriers that hamper early HIV diagnosis and treatment, and demonstrate and disseminate effective models for testing in clinical and nontraditional settings.

Persons Living with HIV

The availability of highly active antiretroviral therapy (HAART) in the mid-1990s led to a dramatic decline in AIDS-related deaths and a new era in which many persons newly diagnosed with HIV can expect to lead active and productive lives that extend for decades. This treatment breakthrough underscored the need for additional prevention services for the estimated 1.0–1.2 million persons living with HIV in the United States (*30*). Although most persons who have HIV infection diagnosed reduce or eliminate behaviors that place themselves at risk for STDs and transmitting HIV to others, some do not eliminate risk behaviors, and others resume risk behaviors later in life (*23,31*).

Historically, most prevention programs were designed to address the needs of persons who were at risk for contracting HIV. During the first decade of the epidemic, fewer prevention programs focused on persons living with HIV with the following notable exceptions: 1) measures to prevent perinatal transmission; 2) HIV counseling, testing, and referral programs to identify undiagnosed HIV infections and to provide HIV-seropositive persons with risk-reduction counseling, partner-referral services, and referrals to medical care and other supportive services around the time of diagnosis; 3) prevention case management for HIV-seropositive and other persons with multiple needs; and 4) pioneering community and health department-based programs that integrate prevention with medical or social services for persons living with HIV (*22*).

In 2001, CDC introduced the Serostatus Approach to Fighting the HIV Epidemic (SAFE), which defined a framework for improving the health of persons living with HIV and preventing transmission to others (*32*). In 2003, CDC implemented the Advancing HIV Prevention (AHP) initiative (*26*), which formally adopted prevention with persons living with HIV as a core element of a comprehensive approach to HIV prevention. AHP funded large-scale demonstration projects to evaluate public health strategies for identifying undiagnosed HIV infections and preventing transmission by persons living with HIV (*26*).

Recommendations were made to incorporate HIV prevention into the medical care of HIV-seropositive patients (*33*).

A meta-analytic study of 12 HIV trials published during 1988–2004 determined that behavioral interventions for persons living with HIV led to a 43% relative reduction in unprotected sex and also reduced acquisition of STDs (*34*); CDC is disseminating effective behavioral interventions for persons living with HIV to state and local programs through capacity-building activities (Tables 2 and 3).

Successes and Current Challenges

Considerable success in the prevention of HIV infection in the United States has been achieved. HIV testing and donor deferral have markedly increased the safety of the nation's blood supply. Perinatal transmission of HIV has been greatly reduced (*35*). Reductions in needle sharing have resulted in a substantial decrease in HIV transmissions associated with injection-drug use (*36,37*). These and other prevention successes have reduced incidence of HIV infection from more than 150,000 cases per year in the mid-1980s to approximately 40,000 cases per year since the late 1990s.

Despite this success, considerable prevention challenges remain. Racial/ethnic disparities have increased during the past 25 years, especially among black men and black women (*38*). HIV prevalence remains high among MSM overall, new cases of HIV increased substantially among MSM from 2003 to 2004 (*37*), and prevalence among black MSM was reported as high as 46% in a study in five U.S. cities during 2004–2005 (*39*). The growing number of persons living with HIV means that more persons are potentially capable of transmitting the virus to others, and existing resources might not be adequate to ensure that all HIV-seropositive persons have access to appropriate care, treatment, and prevention services. Despite the substantial progress, an estimated one quarter of persons living with HIV do not know they are infected and are at considerable risk for developing AIDS and unknowingly transmitting HIV (*30*).

Changes in beliefs regarding the severity of HIV infection, prevention fatigue, and increases in methamphetamine abuse and STDs also present new challenges to HIV prevention. These challenges are compounded by deep-rooted social problems and inequities. Poverty, homelessness, racism, homophobia, and gender inequality all affect HIV risk and can limit the effective delivery of prevention programs and medical services (*40*). Other social factors might also be associated with increased risk behaviors. HIV stigma and discrimination remain pervasive, causing some persons to avoid HIV testing and others living with HIV to delay medical care, be less adherent to care, and fear disclosing their HIV status to others (*41*).

HIV-prevention programs must continue to evolve to address these challenges, incorporating biomedical advances and findings (e.g., preexposure and postexposure prophylaxis, microbicides, male circumcision [*42*], vaccine development, and effects of antiretroviral treatment on infectivity) and innovations in HIV-testing technologies, and other breakthroughs. New interventions are needed for underserved populations at high risk, to improve effectiveness of existing interventions, and to further develop the capacity of health departments and community-based organizations to implement effective behavioral and public health interventions. In addition, the need continues for CDC and its local, state, and national prevention partners and affected communities to work together to improve the quality and efficiency of HIV-prevention programs to best serve the prevention needs of persons who are at risk for or living with HIV infection.

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Notice to Readers

Annual Conference on Assessment Initiative — August 15–17, 2006

The Annual Conference on Assessment Initiative will be held August 15–17, 2006, in Atlanta, Georgia. The purpose of this meeting is to share information on innovative systems and methods that improve the manner in which data are used to inform public health programs, services, and policies at the state and local level. Sessions will cover data dissemination, applied data analysis, presentation techniques, and community health assessment processes and outcomes. The confer-

ence is cosponsored by CDC and the National Association for Public Health Statistics and Information Systems.

Participants include staff from state and local health departments, federal agencies, and community organizations involved or interested in the collection, analysis, and dissemination of data for community health assessment. Deadline for online registration (http://www.assessment2006.com) is August 1; no registration fee is charged. Reservations can be made at Sheraton Atlanta Hotel at the conference website or by telephone, 800-833-8624 or 404-659-6500; deadline is July 14.

Abstracts for the poster session are due by July 14 and should be e-mailed to Nelson Adekoya at nba7@cdc.gov. Abstracts should be a maximum of 250 words and clearly state the purpose of the poster. Topics of interest include approaches to assessment, impact and outcome of community health assessment, systems and approaches used for data dissemination, community partnerships, and statistical methods utilized in assessment. No more than 40 abstracts will be accepted. Applicants will be notified of acceptance by July 28. Additional information regarding the Assessment Initiative is available at http://www.cdc.gov/epo/dphsi/ai/conference_training.htm.

Errata: Vol. 55, No. 20

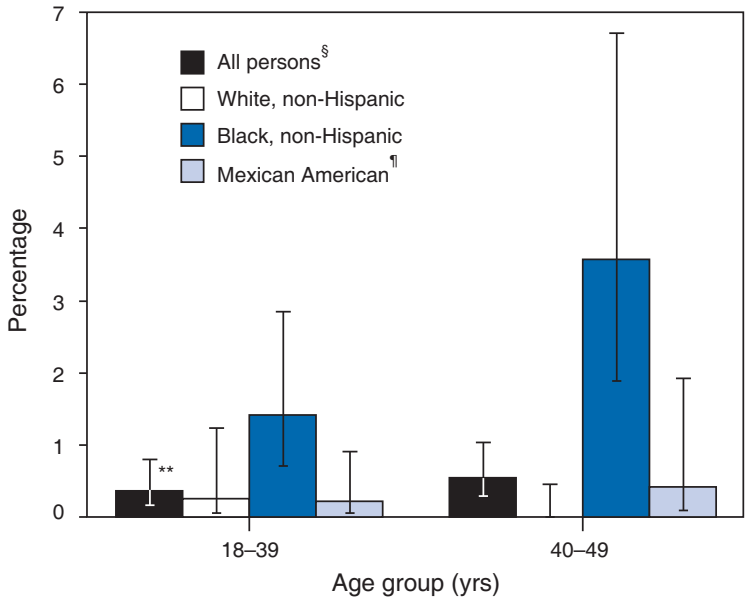
On page 570, in Table I, "Provisional cases of infrequently reported notifiable diseases (<1,000 cases during the preceding year) — United States, week ending May 20, 2006 (20th Week)," in the row, "Influenza-associated pediatric mortality," in the column "Current week," the number should be **0**; in the column "Cum 2006," the total should be **30**, and in the column "States reporting cases during current week (No.)," no entry should be made. The ¶ footnote should read: "Of the **35** cases reported since October 2, 2005 (week 40), only **33** occurred during the current 2005–06 season."

On page 578, in Table II, "Provisional cases of selected notifiable diseases, United States, weeks ending May 20, 2006, and May 21, 2005 (20th Week)," in the column, "Cum 2005," the number of varicella cases for Connecticut should be **709**.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Persons Aged 18–49 Years with HIV* Infection,† by Age Group and Race/Ethnicity — United States, 1999–2002



* Human immunodeficiency virus.
† A total of 32 persons tested positive for HIV antibody out of 5,926 persons tested, including zero non-Hispanic whites in the group aged 40–49 years. Data are weighted to represent the total civilian, noninstitutionalized U.S. household population.
§ Includes persons of all races/ethnicities, not only those shown separately.
¶ Persons in this subpopulation might be of any race.
** 95% confidence interval.

During 1999–2002, the seroprevalence of HIV was 0.37% among persons aged 18–39 years and 0.54% among persons aged 40–49 years. Among persons aged 18–49 years, the highest percentage of HIV infection (3.58%) was among non-Hispanic blacks aged 40–49 years. These prevalences likely are underestimates of HIV infection because the survey sample is the U.S. household population and excluded homeless persons and those in institutions, who might be at higher risk for infection.

SOURCE: McQuillan GM, Kruszon-Moran D, Kottiri BJ, et al. Prevalence of HIV in the US household population: the National Health and Nutrition Examination Surveys, 1988–2002. J Acquir Immune Defic Syndr 2006;41:651–6.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending May 27, 2006 (21st Week)*

Disease	Current week	Cum 2006	5-year weekly average†	Total cases reported for previous years 2005	2004	2003	2002	2001	States reporting cases during current week (No.)
Anthrax	—	1	—	—	—	—	2	23	
Botulism:									
foodborne	—	1	0	18	16	20	28	39	
infant	—	27	2	90	87	76	69	97	
other (wound & unspecified)	2	22	0	33	30	33	21	19	CA (2)
Brucellosis	3	39	2	122	114	104	125	136	TX (1), CA (2)
Chancroid	—	14	1	17	30	54	67	38	
Cholera	—	1	0	6	5	2	2	3	
Cyclosporiasis§	—	19	17	734	171	75	156	147	
Diphtheria	—	—	0	1	—	1	1	2	
Domestic arboviral diseases§¶:									
California serogroup	—	—	0	78	112	108	164	128	
eastern equine	—	—	0	21	6	14	10	9	
Powassan	—	—	—	1	1	—	1	N	
St. Louis	—	—	0	10	12	41	28	79	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis§:									
human granulocytic	4	25	6	771	537	362	511	261	NY (3), MN (1)
human monocytic	—	50	4	503	338	321	216	142	
human (other & unspecified)	1	7	1	121	59	44	23	6	NY (1)
Haemophilus influenzae,**									
invasive disease (age <5 yrs):									
serotype b	—	3	1	9	19	32	34	—	
nonserotype b	—	37	3	135	135	117	144	—	
unknown serotype	—	74	4	212	177	227	153	—	
Hansen disease§	2	17	2	88	105	95	96	79	FL (1), CA (1)
Hantavirus pulmonary syndrome§	—	8	1	22	24	26	19	8	
Hemolytic uremic syndrome, postdiarrheal§	3	42	3	216	200	178	216	202	NY (1), CA (2)
Hepatitis C viral, acute	10	313	30	778	713	1,102	1,835	3,976	NY (3), OH (1), FL (2), AL (1), CA (3)
HIV infection, pediatric (age <13 yrs)§††	—	52	4	380	436	504	420	543	
Influenza-associated pediatric mortality§,§§,¶¶	3	33	0	51	—	N	N	N	PA (1), NYC (2)
Listeriosis	5	182	12	887	753	696	665	613	NY (1), PA (1), GA (1), FL (1), TN (1)
Measles	4	15***	1	65	37	56	44	116	MA (2), NY (2)
Meningococcal disease,††† invasive:									
A, C, Y, & W-135	4	111	5	294	—	—	—	—	CT (1), WV (1), WA (2)
serogroup B	4	63	3	153	—	—	—	—	MN (1), NC (1), OK (1), WA (1)
other serogroup	1	12	1	27	—	—	—	—	OK (1)
Mumps	79	3,478	6	310	258	231	270	266	NY (4), PA (1), OH (4), IA (11), MO (3), NE (9), KS (35), VA (3), AL (4), ID (1), WA (2), CA (2)
Plague	—	1	0	7	3	1	2	2	
Poliomyelitis, paralytic	—	—	—	1	—	—	—	—	
Psittacosis§	1	8	0	19	12	12	18	25	NY (1)
Q fever§	4	46	3	137	70	71	61	26	NE (1), TX (1), CA (2)
Rabies, human	—	—	—	2	7	2	3	1	
Rubella	—	3	0	11	10	7	18	23	
Rubella, congenital syndrome	—	1	—	1	—	1	1	3	
SARS-CoV§,§§	—	—	0	—	—	8	N	N	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	51	3	129	132	161	118	77	OH (1)
Streptococcus pneumoniae,§									
invasive disease (age <5 yrs)	10	485	17	1,218	1,162	845	513	498	MA (1), OH (3), IN (2), MN (1), OK (1), TX (1), AZ (1)
Syphilis, congenital (age <1 yr)	—	85	9	361	353	413	412	441	
Tetanus	—	7	1	26	34	20	25	37	
Toxic-shock syndrome (other than streptococcal)§	—	40	2	94	95	133	109	127	
Trichinellosis	—	3	0	20	5	6	14	22	
Tularemia§	2	14	3	154	134	129	90	129	MO (1), ND (1)
Typhoid fever	—	92	6	319	322	356	321	368	
Vancomycin-intermediate *Staphylococcus aureus*§	—	1	—	2	—	N	N	N	
Vancomycin-resistant *Staphylococcus aureus*§	—	—	0	—	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/AIDS, 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 38 cases reported since October 2, 2005 (week 40), only 34 occurred during the current 2005–06 season.

*** Of the four measles cases reported for the current week, three were indigenous and one was imported from another country.

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

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending May 27, 2006, and May 28, 2005 (21st Week)*

Reporting area	Chlamydia†					Coccidioidomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2006	Cum 2005	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2006	Cum 2005	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2006	Cum 2005
United States	8,614	18,816	35,170	366,399	388,331	110	112	1,643	3,426	1,578	26	70	860	912	815
New England	371	640	1,550	12,347	12,310	—	0	0	—	—	—	4	35	50	44
Connecticut	87	171	1,214	2,934	3,154	N	0	0	N	N	—	0	14	8	5
Maine	—	41	74	806	862	N	0	0	N	N	—	0	3	10	8
Massachusetts	254	295	432	6,139	5,759	—	0	0	—	—	—	2	15	19	15
New Hampshire	30	35	64	736	746	—	0	0	—	—	—	1	3	10	6
Rhode Island	—	65	99	1,277	1,378	—	0	0	—	—	—	0	6	1	1
Vermont§	—	19	43	455	411	N	0	0	N	N	—	0	5	2	9
Mid. Atlantic	869	2,257	3,696	45,317	47,289	—	0	0	—	—	5	10	597	136	111
New Jersey	—	369	526	6,608	7,479	N	0	0	N	N	—	0	8	3	7
New York (Upstate)	524	498	1,727	9,207	9,327	N	0	0	N	N	3	4	561	39	29
New York City	—	692	1,615	14,396	15,336	N	0	0	N	N	—	2	15	19	29
Pennsylvania	345	699	1,071	15,106	15,147	N	0	0	N	N	2	4	21	75	46
E.N. Central	722	3,202	12,578	65,400	65,892	—	0	3	15	4	6	14	162	192	174
Illinois	—	919	1,536	16,472	20,272	—	0	0	—	—	—	2	16	21	21
Indiana	—	393	553	7,202	8,190	N	0	0	N	N	2	1	13	19	11
Michigan	534	630	9,888	19,459	10,472	—	0	3	10	4	—	2	7	31	26
Ohio	102	815	1,445	14,645	18,588	—	0	1	5	—	4	5	109	80	50
Wisconsin	86	400	531	7,622	8,370	N	0	0	N	N	—	4	38	41	66
W.N. Central	274	1,121	1,458	21,980	23,853	—	0	12	—	3	3	9	52	141	120
Iowa	—	146	225	3,192	2,868	N	0	0	N	N	—	1	11	12	21
Kansas	155	153	269	3,391	3,015	N	0	0	N	N	1	1	5	19	10
Minnesota	—	231	298	3,961	5,077	—	0	12	—	3	2	3	22	62	32
Missouri	—	428	525	7,726	9,088	—	0	1	—	—	—	2	37	30	42
Nebraska§	67	96	176	2,021	2,069	N	0	1	N	N	—	0	3	5	4
North Dakota	—	32	54	611	611	N	0	0	N	N	—	0	4	1	—
South Dakota	52	52	117	1,078	1,125	N	0	0	N	N	—	0	4	12	11
S. Atlantic	2,264	3,286	4,905	67,784	71,821	—	0	1	2	—	9	15	54	251	156
Delaware	77	68	92	1,442	1,339	N	0	0	N	N	—	0	2	—	—
District of Columbia	52	59	101	913	1,581	—	0	0	—	—	—	0	3	7	2
Florida	789	878	1,091	18,661	17,490	N	0	0	N	N	5	6	28	98	59
Georgia	25	600	2,142	8,290	12,191	—	0	0	—	—	3	3	12	81	42
Maryland§	—	356	519	6,859	7,205	—	0	1	2	—	—	0	4	9	7
North Carolina	634	569	1,772	14,574	13,775	N	0	0	N	N	—	1	10	29	21
South Carolina§	233	271	1,306	7,055	7,623	—	0	0	—	—	1	0	4	9	9
Virginia§	435	425	840	8,537	9,670	N	0	0	N	N	—	1	8	16	12
West Virginia	19	57	224	1,453	947	N	0	0	N	N	—	0	3	2	4
E.S. Central	1,069	1,373	2,188	28,312	28,117	—	0	0	—	—	1	3	29	32	20
Alabama§	—	361	1,048	7,874	4,904	N	0	0	N	N	1	0	4	13	8
Kentucky	114	157	336	3,810	4,450	N	0	0	N	N	—	1	25	8	8
Mississippi	521	378	647	6,921	9,343	—	0	0	—	—	—	0	1	1	—
Tennessee§	434	468	614	9,707	9,420	N	0	0	N	N	—	1	4	10	4
W.S. Central	649	2,146	3,605	42,716	46,018	—	0	1	—	—	1	3	30	54	24
Arkansas	99	169	340	3,192	3,604	—	0	0	—	—	1	0	2	6	1
Louisiana	296	295	761	6,714	7,326	—	0	1	—	N	—	0	21	7	3
Oklahoma	—	230	2,159	4,347	4,368	N	0	0	N	N	—	1	10	12	7
Texas§	254	1,361	1,812	28,463	30,720	N	0	0	N	N	—	1	19	29	13
Mountain	567	1,094	1,839	18,561	26,079	97	88	452	2,560	978	—	2	9	30	47
Arizona	430	364	642	7,255	9,458	96	85	448	2,521	930	—	0	1	3	4
Colorado	—	232	482	2,211	6,144	N	0	0	N	N	—	1	3	9	17
Idaho§	136	52	235	1,329	761	N	0	0	N	N	—	0	2	3	4
Montana	1	42	195	790	932	N	0	0	N	N	—	0	2	6	5
Nevada§	—	117	432	1,615	2,997	—	1	4	18	33	—	0	1	3	6
New Mexico§	—	164	338	3,191	3,580	—	0	2	1	10	—	0	3	—	5
Utah	—	88	136	1,601	1,772	1	0	3	18	4	—	0	3	6	4
Wyoming	—	25	55	569	435	—	0	2	2	1	—	0	1	—	2
Pacific	1,829	3,239	5,079	63,982	66,952	13	32	1,179	848	592	1	4	52	26	119
Alaska	61	83	152	1,645	1,636	—	0	0	—	—	—	0	2	1	—
California	1,165	2,524	4,231	48,932	51,811	13	32	1,179	848	592	—	2	14	—	81
Hawaii	—	107	135	2,095	2,188	N	0	0	N	N	—	0	1	—	—
Oregon§	237	178	315	3,921	3,541	N	0	0	N	N	1	1	20	25	19
Washington	366	357	604	7,389	7,776	N	0	0	N	N	—	0	38	—	19
American Samoa	U	0	0	U	U	U	0	0	U	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	—	109	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	77	162	1,877	1,726	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	3	7	—	145	—	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.
† Chlamydia refers to genital infections caused by *Chlamydia trachomatis*.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending May 27, 2006, and May 28, 2005 (21st Week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes				
	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		
United States	258	328	1,026	5,400	6,375	3,203	6,628	14,136	125,314	128,379	33	37	140	812	1,058
New England	2	28	74	380	524	72	108	288	2,100	2,285	—	3	19	57	71
Connecticut	—	0	37	93	121	25	43	241	735	872	—	0	9	18	22
Maine	—	3	11	29	59	—	2	6	49	55	—	0	1	5	4
Massachusetts	2	11	34	166	229	46	47	76	1,015	1,072	—	1	5	25	32
New Hampshire	—	1	8	9	24	1	4	9	94	61	—	0	1	2	3
Rhode Island	—	0	25	32	30	—	8	25	186	205	—	0	7	2	6
Vermont†	—	3	9	51	61	—	1	4	21	20	—	0	2	5	4
Mid. Atlantic	28	63	254	944	1,191	202	647	1,014	12,043	13,119	3	6	29	138	184
New Jersey	—	8	18	97	171	—	110	150	1,953	2,241	—	1	4	12	27
New York (Upstate)	27	23	227	376	372	115	123	455	2,406	2,583	3	2	27	49	56
New York City	—	15	32	228	346	—	180	402	3,368	3,958	—	1	4	13	32
Pennsylvania	1	15	29	243	302	87	215	391	4,316	4,337	—	3	8	64	69
E.N. Central	12	53	112	703	1,071	485	1,335	7,047	27,930	25,455	9	5	13	110	193
Illinois	—	12	32	24	286	—	373	567	6,202	7,738	—	1	5	20	62
Indiana	N	0	0	N	N	—	159	229	3,102	3,219	7	1	6	32	35
Michigan	5	14	29	249	269	416	271	5,880	9,527	3,873	—	0	3	14	11
Ohio	7	16	34	293	234	40	390	681	6,598	8,386	2	1	6	34	66
Wisconsin	—	14	39	137	282	29	121	172	2,501	2,239	—	0	3	10	19
W.N. Central	88	35	259	639	791	56	364	461	6,551	7,365	3	2	15	46	49
Iowa	—	5	14	79	93	—	29	54	613	633	—	0	0	—	1
Kansas	1	4	9	60	76	31	49	124	940	996	—	0	3	8	4
Minnesota	81	6	238	280	380	—	64	88	953	1,363	2	0	9	22	18
Missouri	4	10	32	162	156	—	180	240	3,388	3,716	—	0	7	12	18
Nebraska†	2	2	6	32	48	19	22	56	490	474	—	0	2	3	7
North Dakota	—	0	7	3	1	—	2	7	33	34	1	0	3	1	1
South Dakota	—	2	7	23	37	6	6	15	134	149	—	0	0	—	—
S. Atlantic	36	55	107	983	956	1,227	1,451	2,334	28,248	30,243	12	10	24	231	258
Delaware	—	1	3	10	25	32	22	44	591	318	—	0	1	1	—
District of Columbia	—	1	5	23	20	14	37	66	627	822	—	0	1	1	1
Florida	16	19	39	356	307	373	407	512	8,669	7,643	4	3	9	78	65
Georgia	18	14	67	327	267	14	277	1,014	3,652	5,329	—	2	5	51	61
Maryland†	—	4	10	65	67	—	137	231	2,637	2,673	—	1	5	28	37
North Carolina	N	0	0	N	N	546	270	766	6,284	6,613	—	0	11	15	40
South Carolina†	2	1	9	38	47	103	121	748	3,102	3,311	—	1	3	18	14
Virginia†	—	10	50	156	211	134	146	288	2,311	3,278	7	1	8	29	26
West Virginia	—	0	6	8	12	11	16	42	375	256	1	0	4	10	14
E.S. Central	8	7	18	142	147	364	539	868	10,964	10,547	1	2	7	50	58
Alabama†	7	4	14	76	65	—	186	491	3,537	2,902	—	0	4	11	11
Kentucky	N	0	0	N	N	34	55	116	1,317	1,396	—	0	1	2	8
Mississippi	—	0	0	—	—	189	133	203	2,582	2,830	—	0	1	2	—
Tennessee†	1	4	11	66	82	141	178	279	3,528	3,419	1	1	5	35	39
W.S. Central	6	6	31	85	90	344	874	1,430	17,985	18,060	1	1	15	38	65
Arkansas	4	2	6	30	31	71	87	186	1,762	1,807	—	0	2	2	4
Louisiana	—	1	6	24	13	186	171	461	3,976	4,029	—	0	2	8	28
Oklahoma	2	3	24	31	46	—	86	764	1,558	1,822	1	1	14	27	31
Texas†	N	0	0	N	N	87	522	736	10,689	10,402	—	0	1	1	2
Mountain	23	30	57	473	461	116	232	552	3,984	5,477	3	4	10	94	122
Arizona	1	2	36	44	60	107	93	201	1,794	2,044	2	1	9	43	57
Colorado	—	9	33	159	151	—	55	90	579	1,299	—	1	4	27	28
Idaho†	3	2	11	42	49	9	3	10	82	34	—	0	1	2	3
Montana	1	2	7	26	13	—	2	14	42	53	—	0	0	—	—
Nevada†	—	1	6	20	36	—	47	194	596	1,139	—	0	1	—	13
New Mexico†	—	2	6	15	21	—	30	64	536	615	—	0	4	11	15
Utah	18	7	19	160	120	—	16	22	297	268	1	0	4	10	4
Wyoming	—	0	2	7	11	—	2	6	58	25	—	0	2	1	2
Pacific	55	61	202	1,051	1,144	337	812	946	15,509	15,828	1	2	20	48	58
Alaska	3	1	7	17	36	8	11	23	217	207	1	0	19	4	2
California	48	43	105	763	891	229	665	806	12,648	13,170	—	0	9	8	24
Hawaii	—	1	6	22	25	—	19	36	386	391	—	0	1	7	5
Oregon†	—	8	21	145	116	39	27	58	563	643	—	1	6	28	27
Washington	4	7	90	104	76	61	73	142	1,695	1,417	—	0	4	1	—
American Samoa	U	0	0	U	U	U	0	0	U	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	—	1	—	0	0	—	—
Puerto Rico	3	4	20	13	56	—	6	16	127	161	—	0	1	—	1
U.S. Virgin Islands	—	0	0	—	—	—	0	2	—	41	—	0	0	—	—

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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending May 27, 2006, and May 28, 2005 (21st Week)*

Reporting area	Hepatitis (viral, acute), by type: A — Current week	A — Previous 52 weeks Med	A — Previous 52 weeks Max	A — Cum 2006	A — Cum 2005	B — Current week	B — Previous 52 weeks Med	B — Previous 52 weeks Max	B — Cum 2006	B — Cum 2005	Legionellosis — Current week	Legionellosis — Previous 52 weeks Med	Legionellosis — Previous 52 weeks Max	Legionellosis — Cum 2006	Legionellosis — Cum 2005
United States	49	76	243	1,384	1,528	43	88	593	1,429	2,110	19	41	126	479	437
New England	1	6	22	81	165	1	2	9	25	50	—	2	12	17	23
Connecticut	—	1	3	13	23	—	0	5	—	18	—	0	8	6	6
Maine	—	0	2	3	—	—	0	2	4	4	—	0	1	2	1
Massachusetts	—	4	14	43	109	—	1	5	13	18	—	1	6	7	11
New Hampshire	—	1	12	14	26	—	0	3	4	8	—	0	1	1	4
Rhode Island	—	0	4	2	5	1	0	2	4	—	—	0	10	—	1
Vermont†	1	0	2	6	2	—	0	1	—	2	—	0	3	1	—
Mid. Atlantic	10	9	24	88	257	1	9	55	145	292	2	11	53	120	125
New Jersey	—	2	9	17	47	—	3	10	38	107	—	1	13	6	20
New York (Upstate)	8	1	14	30	36	1	1	43	27	27	2	4	29	49	32
New York City	—	2	10	20	127	—	1	5	18	64	—	1	20	10	19
Pennsylvania	2	1	6	21	47	—	4	9	62	94	—	5	17	55	54
E.N. Central	4	6	15	114	140	8	8	24	119	227	8	7	25	93	99
Illinois	—	2	11	13	45	—	1	7	1	64	—	1	5	7	16
Indiana	1	0	7	16	6	4	0	17	15	10	—	0	6	2	8
Michigan	1	2	8	45	45	1	3	7	54	81	1	2	6	23	24
Ohio	2	1	4	33	25	2	2	8	44	60	7	3	19	47	43
Wisconsin	—	1	5	7	19	1	0	6	5	12	—	1	3	14	8
W.N. Central	3	2	29	57	44	4	5	19	57	99	1	1	12	17	13
Iowa	—	0	2	3	10	—	0	2	1	6	—	0	1	1	2
Kansas	1	0	5	17	7	1	0	2	8	15	—	0	1	1	1
Minnesota	1	0	29	3	3	3	0	13	6	8	—	0	10	—	1
Missouri	1	0	4	21	21	—	3	7	40	56	—	0	3	10	8
Nebraska†	—	0	3	8	3	—	0	2	2	13	1	0	2	3	—
North Dakota	—	0	2	—	—	—	0	0	—	—	—	0	1	—	1
South Dakota	—	0	3	5	—	—	0	1	—	1	—	0	6	2	—
S. Atlantic	3	12	34	202	225	21	23	65	442	631	1	9	19	127	90
Delaware	—	0	2	7	2	—	0	4	16	18	—	0	4	1	2
District of Columbia	—	0	2	2	2	—	0	4	4	—	—	0	2	4	1
Florida	2	4	18	73	81	11	8	19	175	215	1	3	8	61	32
Georgia	1	2	7	22	41	8	3	8	66	103	—	0	4	4	8
Maryland†	—	1	7	27	21	—	2	8	54	72	—	2	9	25	20
North Carolina	—	0	20	40	28	1	0	23	69	67	—	0	3	14	10
South Carolina†	—	1	3	8	11	1	2	7	24	67	—	0	2	2	3
Virginia†	—	1	11	22	37	—	1	18	14	75	—	1	7	15	10
West Virginia	—	0	1	1	2	—	0	18	20	14	—	0	3	1	4
E.S. Central	1	3	15	45	97	1	6	18	117	154	3	2	6	18	17
Alabama†	—	0	9	2	13	1	1	7	35	35	1	0	2	4	7
Kentucky	1	0	5	22	6	—	1	5	32	35	1	0	4	3	5
Mississippi	—	0	2	2	10	—	0	3	5	21	—	0	1	—	—
Tennessee†	—	1	7	19	68	—	2	12	45	63	1	1	4	11	5
W.S. Central	—	8	77	101	164	3	13	315	215	185	—	1	32	11	7
Arkansas	—	0	8	25	6	—	1	4	13	28	—	0	3	—	2
Louisiana	—	0	4	3	28	—	1	3	10	33	—	0	1	4	—
Oklahoma	—	0	2	3	3	—	0	17	1	20	—	0	3	1	1
Texas†	—	6	73	70	127	3	10	295	191	104	—	0	26	6	4
Mountain	5	5	19	117	127	—	7	39	127	215	3	1	8	36	39
Arizona	3	3	18	75	61	—	5	27	85	138	1	0	3	17	11
Colorado	—	1	4	16	14	—	1	5	13	19	—	0	3	2	10
Idaho†	—	0	2	4	16	—	0	2	5	5	1	0	2	3	1
Montana	2	0	1	4	6	—	0	7	—	2	—	0	1	1	2
Nevada†	—	0	2	4	7	—	1	4	12	18	—	0	2	3	7
New Mexico†	—	0	3	5	9	—	0	3	1	11	—	0	1	—	2
Utah	—	0	2	8	13	—	0	5	11	21	1	0	2	9	4
Wyoming	—	0	1	1	1	—	0	1	—	1	—	0	1	1	2
Pacific	22	17	163	579	309	4	10	61	182	257	1	2	9	40	24
Alaska	—	0	1	—	3	—	0	1	1	6	—	0	1	—	—
California	22	15	162	540	260	4	7	41	144	183	1	1	9	40	24
Hawaii	—	0	2	7	9	—	0	1	1	2	—	0	1	—	—
Oregon†	—	0	5	15	18	—	1	6	21	45	N	0	0	N	N
Washington	—	1	13	17	19	—	1	18	15	21	—	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	—	5	—	0	0	—	—
Puerto Rico	1	0	4	7	36	—	1	8	10	11	—	0	1	1	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending May 27, 2006, and May 28, 2005 (21st 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		
United States	87	285	2,151	1,999	2,656	9	26	125	370	456
New England	6	60	780	128	372	—	1	12	15	23
Connecticut	6	9	753	73	36	—	0	10	1	—
Maine	—	2	26	15	20	—	0	1	2	2
Massachusetts	—	16	205	11	285	—	0	3	9	16
New Hampshire	—	5	21	21	26	—	0	1	2	3
Rhode Island	—	0	12	—	3	—	0	8	—	2
Vermont†	—	1	5	8	2	—	0	1	1	—
Mid. Atlantic	65	156	1,177	1,368	1,457	—	5	15	53	127
New Jersey	—	24	311	224	534	—	1	7	—	33
New York (Upstate)	55	73	1,151	682	303	—	1	11	10	20
New York City	—	4	33	—	85	—	3	8	32	61
Pennsylvania	10	39	376	462	535	—	1	2	11	13
E.N. Central	1	9	160	74	179	1	3	8	41	44
Illinois	—	0	13	—	14	—	1	5	10	24
Indiana	—	0	4	2	2	—	0	3	6	3
Michigan	—	1	7	9	1	1	0	2	7	8
Ohio	1	1	5	17	19	—	1	3	13	4
Wisconsin	—	8	145	46	143	—	0	3	5	5
W.N. Central	4	10	98	51	80	—	0	32	21	23
Iowa	—	0	8	2	17	—	0	1	1	3
Kansas	—	0	1	1	1	—	0	1	—	2
Minnesota	3	6	96	45	60	—	0	30	14	8
Missouri	1	0	2	2	2	—	0	2	3	10
Nebraska†	—	0	2	1	—	—	0	2	1	—
North Dakota	—	0	1	—	—	—	0	1	1	—
South Dakota	—	0	1	—	—	—	0	1	1	—
S. Atlantic	1	27	124	287	495	—	6	16	115	91
Delaware	1	9	37	125	203	—	0	1	2	1
District of Columbia	—	0	2	7	3	—	0	2	—	2
Florida	—	1	5	13	10	—	1	6	21	17
Georgia	—	0	1	—	1	—	1	6	34	14
Maryland†	—	15	87	119	219	—	1	9	26	30
North Carolina	—	0	5	9	18	—	0	8	11	13
South Carolina†	—	0	3	2	8	—	0	2	4	3
Virginia†	—	3	22	12	33	—	0	9	16	10
West Virginia	—	0	44	—	—	—	0	2	1	1
E.S. Central	—	0	4	1	9	1	0	3	9	9
Alabama†	—	0	1	—	—	1	0	1	4	3
Kentucky	—	0	2	—	1	—	0	2	1	2
Mississippi	—	0	0	—	—	—	0	1	2	—
Tennessee†	—	0	4	1	8	—	0	2	2	4
W.S. Central	—	0	7	2	34	—	2	31	22	35
Arkansas	—	0	1	—	2	—	0	2	1	2
Louisiana	—	0	0	—	3	—	0	1	—	2
Oklahoma	—	0	0	—	—	—	0	6	2	2
Texas†	—	0	7	2	29	—	1	29	19	29
Mountain	1	0	4	4	2	—	1	9	16	22
Arizona	—	0	4	2	—	—	0	9	4	5
Colorado	—	0	0	—	—	—	0	3	4	11
Idaho†	—	0	1	—	—	—	0	0	—	—
Montana	—	0	0	—	—	—	0	1	1	—
Nevada†	—	0	2	—	—	—	0	2	—	—
New Mexico†	—	0	1	—	—	—	0	1	—	1
Utah	1	0	1	2	1	—	0	2	7	4
Wyoming	—	0	1	—	1	—	0	1	—	1
Pacific	9	3	18	84	28	7	4	12	78	82
Alaska	—	0	1	—	1	2	0	2	8	2
California	9	2	18	84	23	5	2	10	55	67
Hawaii	N	0	0	N	N	—	0	4	—	4
Oregon†	—	0	3	—	4	—	0	2	5	2
Washington	—	0	3	—	—	—	0	5	10	7
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	—	—

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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending May 27, 2006, and May 28, 2005 (21st Week)*

Reporting area	Meningococcal disease, invasive: All serogroups: Current week	Previous 52 weeks: Med	Previous 52 weeks: Max	Cum 2006	Cum 2005	Meningococcal disease, invasive: Serogroup unknown: Current week	Previous 52 weeks: Med	Previous 52 weeks: Max	Cum 2006	Cum 2005	Pertussis: Current week	Previous 52 weeks: Med	Previous 52 weeks: Max	Cum 2006	Cum 2005
United States	15	20	83	547	618	6	13	57	361	376	99	440	2,861	4,152	7,935
New England	1	1	5	20	37	—	0	2	16	13	—	29	83	443	466
Connecticut	1	0	2	6	9	—	0	2	2	1	—	1	5	15	31
Maine	—	0	1	3	2	—	0	1	3	2	—	1	5	17	15
Massachusetts	—	0	3	9	17	—	0	2	9	4	—	23	43	325	350
New Hampshire	—	0	2	2	5	—	0	2	2	5	—	2	36	43	18
Rhode Island	—	0	1	—	2	—	0	0	—	—	—	0	17	—	8
Vermont†	—	0	1	—	2	—	0	1	—	1	—	1	8	43	44
Mid. Atlantic	—	3	13	69	79	—	2	11	50	60	20	26	137	652	595
New Jersey	—	0	2	2	20	—	0	2	2	20	—	4	10	89	81
New York (Upstate)	—	0	7	17	22	—	0	5	2	8	15	11	123	243	205
New York City	—	0	5	20	11	—	0	5	20	11	—	2	6	25	40
Pennsylvania	—	1	5	30	26	—	1	5	26	21	5	10	25	295	269
E.N. Central	1	2	10	59	76	1	1	6	42	63	25	54	132	540	1,702
Illinois	—	0	4	13	19	—	0	4	13	19	—	11	35	12	375
Indiana	—	0	5	9	8	—	0	2	3	3	14	4	75	75	138
Michigan	—	1	3	13	15	—	0	3	7	9	1	5	23	143	107
Ohio	1	1	5	24	25	1	0	4	19	23	10	16	30	268	631
Wisconsin	—	0	1	—	9	—	0	1	—	9	—	12	41	42	451
W.N. Central	1	1	4	32	38	—	1	3	13	18	4	61	542	551	1,015
Iowa	—	0	2	8	11	—	0	2	3	3	—	11	55	111	307
Kansas	—	0	1	1	6	—	0	1	1	6	2	11	28	155	117
Minnesota	1	0	2	7	6	—	0	1	3	1	—	0	485	75	160
Missouri	—	0	3	10	9	—	0	1	2	5	2	11	42	154	174
Nebraska†	—	0	2	5	4	—	0	1	3	3	—	4	15	47	104
North Dakota	—	0	1	1	—	—	0	1	1	—	—	0	26	4	66
South Dakota	—	0	1	—	2	—	0	0	—	—	—	1	8	5	87
S. Atlantic	2	4	14	95	106	—	2	7	41	43	25	23	92	384	508
Delaware	—	0	1	3	2	—	0	1	3	2	—	0	1	2	13
District of Columbia	—	0	1	—	4	—	0	1	—	3	—	0	3	3	3
Florida	—	1	6	37	42	—	0	5	13	13	4	4	14	88	67
Georgia	—	0	3	11	9	—	0	3	11	9	—	0	3	6	18
Maryland†	—	0	2	6	9	—	0	2	3	—	—	4	8	63	100
North Carolina	1	0	11	15	11	—	0	3	3	2	6	0	21	77	27
South Carolina†	—	0	2	11	11	—	0	1	4	8	3	5	22	55	181
Virginia†	—	0	4	10	14	—	0	3	4	5	12	1	73	86	74
West Virginia	1	0	1	2	4	—	0	1	—	1	—	0	5	4	25
E.S. Central	—	1	4	16	30	—	1	4	12	21	9	8	22	92	213
Alabama†	—	0	1	4	2	—	0	1	4	1	1	1	7	25	36
Kentucky	—	0	2	5	10	—	0	2	5	10	—	2	10	6	57
Mississippi	—	0	1	1	4	—	0	1	1	4	—	1	4	13	27
Tennessee†	—	0	2	6	14	—	0	2	2	6	8	2	14	48	93
W.S. Central	2	2	23	51	64	—	1	6	21	14	3	43	355	232	706
Arkansas	—	0	3	5	8	—	0	2	4	1	1	3	21	31	114
Louisiana	—	0	4	23	22	—	0	3	12	3	—	0	3	6	17
Oklahoma	2	0	4	8	10	—	0	1	—	1	—	0	119	2	—
Texas†	—	1	16	15	24	—	0	4	5	9	2	37	215	193	575
Mountain	—	1	7	38	51	—	0	4	24	13	2	62	230	828	1,738
Arizona	—	0	4	18	20	—	0	4	18	6	—	15	177	250	374
Colorado	—	0	2	11	12	—	0	1	2	—	—	23	40	448	631
Idaho†	—	0	2	1	3	—	0	2	1	3	2	2	13	22	84
Montana	—	0	1	2	—	—	0	0	—	—	—	4	29	43	345
Nevada†	—	0	2	—	5	—	0	1	—	1	—	0	9	20	27
New Mexico†	—	0	1	1	3	—	0	1	—	2	—	2	6	14	101
Utah	—	0	2	3	8	—	0	1	1	1	—	8	32	—	163
Wyoming	—	0	2	2	—	—	0	2	2	—	—	1	5	31	13
Pacific	8	4	29	167	137	5	4	25	142	131	11	72	1,334	430	992
Alaska	—	0	1	1	1	—	0	1	1	1	—	2	15	30	17
California	5	2	14	101	85	5	2	14	101	85	1	36	1,136	154	370
Hawaii	—	0	1	4	7	—	0	1	4	2	—	3	10	34	63
Oregon†	—	1	7	39	25	—	1	4	28	25	3	3	26	55	363
Washington	3	0	25	22	19	—	0	11	8	18	7	12	195	157	179
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	4	6	—	0	1	4	6	—	0	1	—	4
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending May 27, 2006, and May 28, 2005 (21st 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		
United States	98	101	148	1,877	2,488	13	37	245	409	264	417	847	2,281	10,345	11,444
New England	13	12	26	222	298	—	0	2	1	1	4	34	135	519	647
Connecticut	2	3	13	51	64	—	0	0	—	—	—	7	127	127	139
Maine	—	1	4	27	22	N	0	0	N	N	—	2	8	20	56
Massachusetts	7	4	17	114	178	—	0	2	1	—	2	19	41	302	351
New Hampshire	—	0	3	5	4	—	0	1	—	—	—	2	12	29	48
Rhode Island	—	0	4	1	7	—	0	2	—	1	2	0	17	30	19
Vermont†	4	1	7	24	23	—	0	0	—	—	—	1	10	11	34
Mid. Atlantic	9	18	40	314	335	—	1	7	9	21	39	84	272	1,087	1,399
New Jersey	N	0	0	N	N	—	0	3	—	7	—	12	41	98	267
New York (Upstate)	9	12	24	180	162	—	0	1	—	—	29	22	233	295	328
New York City	—	0	3	—	11	—	0	2	2	1	1	22	44	289	373
Pennsylvania	—	7	22	134	162	—	1	5	7	13	9	30	61	405	431
E.N. Central	1	2	9	22	93	1	0	7	6	7	58	95	241	1,367	1,680
Illinois	—	0	4	—	12	—	0	4	1	4	—	27	163	256	669
Indiana	—	0	3	3	3	—	0	1	1	—	16	11	69	195	152
Michigan	—	0	4	14	8	—	0	1	—	1	10	16	35	247	288
Ohio	1	0	2	5	70	1	0	3	4	2	31	25	52	426	300
Wisconsin	N	0	2	N	N	—	0	1	—	—	1	15	44	243	271
W.N. Central	5	5	15	87	135	6	2	14	33	24	18	46	90	717	747
Iowa	—	0	4	16	—	—	0	2	—	1	—	7	18	103	136
Kansas	—	1	5	28	42	—	0	1	1	1	2	7	17	106	97
Minnesota	—	1	5	11	29	—	0	1	1	—	10	10	30	184	180
Missouri	1	1	6	9	19	6	1	13	31	21	6	16	40	225	196
Nebraska†	—	0	0	—	—	—	0	2	—	—	—	4	12	64	70
North Dakota	4	0	5	6	8	—	0	1	—	—	—	0	46	4	12
South Dakota	—	1	4	17	37	—	0	2	—	1	—	2	9	31	56
S. Atlantic	57	35	65	726	940	1	17	94	313	150	124	255	514	2,775	3,006
Delaware	—	0	0	—	—	—	0	2	2	1	—	2	9	27	25
District of Columbia	—	0	0	—	—	—	0	1	—	—	—	1	7	23	17
Florida	—	0	22	60	201	—	0	3	10	8	94	99	230	1,228	1,104
Georgia	42	3	27	85	123	—	1	11	17	21	15	38	87	414	387
Maryland†	—	8	16	118	132	—	1	6	16	12	—	13	39	152	220
North Carolina	15	8	20	144	198	1	6	87	254	87	9	30	114	453	423
South Carolina†	—	3	11	47	77	—	1	6	3	14	6	21	129	229	493
Virginia†	—	10	26	232	196	—	2	10	10	6	—	19	66	222	298
West Virginia	—	1	13	40	13	—	0	2	1	1	—	3	19	27	39
E.S. Central	7	3	16	111	55	4	5	24	34	32	34	49	102	615	654
Alabama†	7	1	6	33	30	—	0	9	11	7	25	13	41	239	164
Kentucky	—	0	5	5	6	—	0	1	—	—	2	8	27	106	104
Mississippi	—	0	1	—	—	—	0	3	—	2	—	9	31	94	130
Tennessee†	—	1	9	73	19	4	3	18	23	23	7	14	41	176	256
W.S. Central	1	13	30	281	463	1	1	160	9	10	22	85	922	919	931
Arkansas	1	0	3	15	14	1	0	32	6	2	16	14	67	280	140
Louisiana	—	0	0	—	—	—	0	2	—	3	—	10	43	110	223
Oklahoma	—	1	9	24	48	—	0	153	1	5	6	7	48	87	102
Texas†	—	11	27	242	401	—	0	8	2	—	—	44	839	442	466
Mountain	1	4	16	48	103	—	0	6	3	18	26	49	110	710	715
Arizona	—	2	11	41	84	—	0	6	2	12	8	14	67	215	207
Colorado	—	0	3	—	7	—	0	1	—	1	—	12	45	208	166
Idaho†	—	0	12	—	—	—	0	2	—	1	—	2	15	39	49
Montana	—	0	3	5	—	—	0	0	—	1	4	2	16	41	34
Nevada†	—	0	2	—	—	—	0	0	—	—	—	3	8	34	67
New Mexico†	—	0	1	—	1	—	0	1	—	2	—	4	13	45	75
Utah	—	0	5	1	—	—	0	0	—	—	13	5	30	103	100
Wyoming	1	0	2	1	11	—	0	1	1	1	1	1	12	25	17
Pacific	4	3	15	66	66	—	0	1	1	1	92	102	426	1,636	1,665
Alaska	—	0	4	11	1	—	0	0	—	—	1	1	7	34	17
California	3	3	15	53	64	—	0	1	1	—	83	77	292	1,235	1,282
Hawaii	—	0	0	—	—	—	0	0	—	—	1	5	15	82	104
Oregon†	1	0	1	2	1	—	0	1	—	1	1	7	25	140	147
Washington	U	0	0	U	U	N	0	0	N	N	6	10	124	145	115
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	—	5
Puerto Rico	6	1	6	46	35	N	0	0	N	N	4	12	35	41	175
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 May 27, 2006, and May 28, 2005 (21st Week)*

Reporting area	Shiga toxin-producing *E. coli* (STEC)†					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		
United States	20	54	296	400	616	146	301	1,009	3,274	4,543	46	84	282	2,268	2,289
New England	—	3	15	34	55	1	5	26	98	81	—	5	11	86	137
Connecticut	—	0	14	14	17	—	0	20	20	19	U	1	4	U	57
Maine	—	0	5	—	11	—	0	3	—	5	—	0	2	8	4
Massachusetts	—	1	7	17	20	—	4	11	68	47	—	3	6	54	56
New Hampshire	—	0	2	3	3	—	0	4	4	4	—	0	3	15	7
Rhode Island	—	0	2	—	1	—	0	6	4	2	—	0	3	3	6
Vermont§	—	0	2	2	3	1	0	4	2	4	—	0	2	6	7
Mid. Atlantic	3	5	107	14	61	6	17	72	238	447	7	13	43	382	498
New Jersey	—	1	7	—	17	—	5	18	55	121	—	1	8	10	104
New York (Upstate)	—	2	103	25	22	3	4	60	88	100	3	4	32	156	154
New York City	—	0	3	7	—	—	5	14	59	193	—	3	8	52	93
Pennsylvania	—	2	8	—	22	3	2	48	36	33	4	5	13	164	147
E.N. Central	4	10	38	91	123	8	19	96	299	352	17	15	37	431	523
Illinois	—	1	10	—	35	—	7	26	72	89	—	4	10	61	176
Indiana	—	1	7	13	14	1	1	56	53	37	—	1	11	63	52
Michigan	—	1	8	19	17	2	3	10	75	119	3	3	11	123	126
Ohio	4	2	14	34	35	5	3	11	59	23	14	4	19	156	109
Wisconsin	—	3	15	25	22	—	3	10	40	84	—	1	4	28	60
W.N. Central	2	7	35	62	84	50	45	77	473	300	1	5	57	175	150
Iowa	—	1	10	12	15	—	1	7	13	44	N	0	0	N	N
Kansas	—	0	4	—	14	1	4	20	33	17	—	0	5	35	26
Minnesota	2	3	19	46	14	—	2	6	30	26	—	0	52	78	53
Missouri	2	2	7	30	23	45	23	70	332	171	—	1	5	35	41
Nebraska§	—	1	5	8	15	4	2	11	34	25	1	0	4	17	12
North Dakota	—	0	15	—	1	—	0	2	4	2	—	0	5	5	4
South Dakota	—	0	5	3	2	—	2	17	27	15	—	0	3	5	14
S. Atlantic	1	7	39	74	105	47	51	122	913	659	11	19	40	534	431
Delaware	—	0	2	1	—	—	0	2	—	5	—	0	2	4	—
District of Columbia	—	0	1	—	—	—	0	2	3	7	—	0	2	7	5
Florida	1	1	29	34	52	36	25	66	403	306	5	6	12	126	108
Georgia	—	0	6	—	9	3	13	34	313	177	—	4	13	121	86
Maryland§	—	1	5	6	12	—	2	8	36	24	—	3	12	101	87
North Carolina	—	1	11	28	15	7	1	22	82	63	6	1	21	67	68
South Carolina§	—	0	2	3	1	1	2	9	58	41	—	1	6	35	23
Virginia§	—	1	8	—	16	—	2	9	18	36	—	2	11	64	42
West Virginia	—	0	2	—	—	—	0	1	—	—	—	0	4	9	12
E.S. Central	1	2	11	20	29	8	14	46	248	587	1	3	10	102	92
Alabama§	1	0	3	2	7	6	3	15	66	129	N	0	0	N	N
Kentucky	—	1	8	12	8	—	7	23	121	46	—	0	5	23	22
Mississippi	—	0	2	—	1	—	1	5	26	37	—	0	0	—	—
Tennessee§	—	1	4	27	13	2	3	22	35	375	1	3	9	79	70
W.S. Central	—	1	52	6	23	3	66	596	229	1,230	4	7	58	187	120
Arkansas	—	0	2	2	3	1	1	8	32	21	1	0	5	17	7
Louisiana	—	0	2	—	8	—	2	11	38	54	—	0	2	6	6
Oklahoma	—	0	8	4	3	2	7	286	34	296	—	2	14	56	60
Texas§	—	1	44	22	9	—	50	308	125	859	3	4	43	108	47
Mountain	1	5	15	37	67	10	18	47	247	220	5	10	78	335	292
Arizona	1	0	4	16	9	7	10	29	140	101	2	4	57	189	123
Colorado	—	1	6	15	15	—	3	18	39	36	—	3	8	71	99
Idaho§	1	1	7	10	9	—	0	4	5	2	—	0	2	6	1
Montana	—	0	2	—	3	—	0	1	2	2	—	0	0	—	—
Nevada§	—	0	3	5	10	—	1	6	17	26	—	0	6	—	—
New Mexico§	—	0	3	3	7	—	2	9	24	37	—	1	7	27	36
Utah	1	1	7	9	13	3	1	4	19	16	3	1	6	40	31
Wyoming	—	0	3	1	1	—	0	1	1	—	—	0	1	2	2
Pacific	8	7	55	62	69	13	38	148	529	667	—	2	9	36	46
Alaska	—	0	2	—	4	—	0	2	6	9	—	0	0	—	—
California	5	4	18	45	29	12	32	104	390	595	—	0	0	—	—
Hawaii	—	0	4	4	3	—	0	4	15	12	—	2	9	36	46
Oregon§	1	1	47	18	27	1	2	31	61	28	N	0	0	N	N
Washington	3	2	32	13	6	—	3	43	57	23	N	0	0	N	N
American Samoa	U	0	0	U	U	U	0	2	U	3	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	—	5	—	0	0	—	—
Puerto Rico	—	0	1	—	—	—	0	2	2	—	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2005 and 2006 are provisional.
† Includes *E. coli* O157:H7; Shiga toxin positive, serogroup non-0157; and Shiga toxin positive, not serogrouped.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending May 27, 2006, and May 28, 2005 (21st Week)*

Reporting area	*Streptococcus pneumoniae*, invasive disease Drug resistant, all ages					Syphilis, primary and secondary					Varicella (chickenpox)				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2006	Cum 2005	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2006	Cum 2005	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2006	Cum 2005
United States	41	50	334	1,290	1,403	72	169	334	3,004	3,286	875	761	3,202	21,939	12,698
New England	1	1	24	11	123	5	3	17	76	83	—	48	165	647	2,206
Connecticut	U	0	7	U	51	1	0	11	17	16	U	13	67	U	755
Maine	N	0	0	N	N	—	0	2	4	1	—	4	20	85	177
Massachusetts	—	0	6	—	58	4	2	5	45	57	—	18	86	92	1,184
New Hampshire	—	0	0	—	—	—	0	2	5	4	—	6	42	151	64
Rhode Island	1	0	11	2	7	—	0	6	3	5	—	0	0	—	—
Vermont†	—	0	2	9	7	—	0	1	2	—	—	8	32	319	26
Mid. Atlantic	4	2	15	75	137	2	21	35	421	413	89	102	183	2,504	2,483
New Jersey	N	0	0	N	N	—	2	7	70	57	—	0	0	—	—
New York (Upstate)	3	1	10	23	55	2	2	14	62	30	—	0	0	—	—
New York City	U	0	0	U	U	—	10	21	203	260	—	0	0	—	—
Pennsylvania	1	2	9	52	82	—	5	9	86	66	89	102	183	2,504	2,483
E.N. Central	16	11	40	318	338	9	18	38	314	347	262	205	565	8,474	3,059
Illinois	—	1	3	8	12	—	8	23	128	192	—	1	5	4	46
Indiana	7	2	21	81	106	—	1	4	26	30	N	0	347	N	70
Michigan	—	0	4	12	23	2	2	19	50	32	65	97	231	2,463	1,870
Ohio	9	6	32	217	197	7	4	11	94	82	197	53	421	5,587	818
Wisconsin	N	0	0	N	N	—	1	3	16	11	—	11	41	420	255
W.N. Central	—	1	191	24	26	1	4	9	75	108	43	18	84	840	167
Iowa	N	0	0	N	N	—	0	2	6	4	N	0	0	N	N
Kansas	N	0	0	N	N	1	0	2	10	9	—	0	0	—	—
Minnesota	—	0	191	—	—	—	1	4	11	30	—	0	0	—	—
Missouri	—	1	3	24	22	—	3	8	47	63	43	14	82	792	95
Nebraska†	—	0	0	—	2	—	0	1	1	2	—	0	1	—	—
North Dakota	—	0	1	—	—	—	0	1	—	—	—	0	25	18	10
South Dakota	—	0	1	—	2	—	0	1	—	—	—	1	12	30	62
S. Atlantic	15	24	53	671	559	27	43	186	744	748	93	71	858	2,230	1,081
Delaware	—	0	2	—	1	2	0	2	12	6	—	1	5	34	12
District of Columbia	—	0	3	19	11	3	2	9	47	47	2	0	5	18	15
Florida	10	13	36	366	284	12	14	29	290	302	—	0	0	—	—
Georgia	5	7	21	232	202	1	8	147	76	108	—	0	0	—	—
Maryland†	—	0	0	—	—	—	5	19	114	117	—	0	0	—	—
North Carolina	N	0	0	N	N	3	5	17	118	97	—	0	0	—	—
South Carolina†	—	0	0	—	—	4	1	7	31	25	7	16	50	579	268
Virginia†	N	0	0	N	N	2	3	12	56	44	64	18	812	815	208
West Virginia	—	1	14	54	61	—	0	1	—	2	20	25	70	784	578
E.S. Central	3	3	13	100	98	6	10	19	216	176	—	0	70	18	—
Alabama†	N	0	1	N	N	—	3	12	97	69	—	0	70	18	—
Kentucky	—	0	5	20	16	2	1	8	31	15	N	0	0	N	N
Mississippi	—	0	0	—	1	—	0	5	11	22	—	0	0	—	—
Tennessee†	3	2	13	80	81	4	4	11	77	70	N	0	0	N	N
W.S. Central	1	1	8	46	88	—	24	37	511	514	368	188	1,757	5,721	2,139
Arkansas	1	0	3	7	8	—	1	6	33	22	14	3	110	354	—
Louisiana	—	1	5	39	80	—	4	17	58	108	—	0	17	83	105
Oklahoma	N	0	0	N	N	—	1	6	30	16	—	0	0	—	—
Texas†	N	0	0	N	N	—	17	30	390	368	354	177	1,647	5,284	2,034
Mountain	1	1	27	45	34	6	7	17	142	169	20	49	136	1,505	1,563
Arizona	N	0	0	N	N	6	3	13	79	57	—	0	0	—	—
Colorado	N	0	0	N	N	—	1	3	10	21	—	33	76	777	1,079
Idaho†	N	0	0	N	N	—	0	3	2	13	—	0	0	—	—
Montana	—	0	1	—	—	—	0	1	—	5	—	0	0	—	—
Nevada†	—	0	27	3	2	—	1	6	30	48	—	0	2	4	—
New Mexico†	—	0	0	—	—	—	1	5	19	20	—	3	32	230	130
Utah	—	0	8	19	15	—	0	1	2	5	19	10	55	483	310
Wyoming	1	0	3	23	17	—	0	0	—	—	1	0	3	11	44
Pacific	—	0	0	—	—	16	33	47	505	728	—	0	0	—	—
Alaska	—	0	0	—	—	—	0	4	5	4	—	0	0	—	—
California	N	0	0	N	N	4	28	42	405	651	—	0	0	—	—
Hawaii	—	0	0	—	—	—	0	2	7	1	N	0	0	N	N
Oregon†	N	0	0	N	N	2	0	6	7	12	N	0	0	N	N
Washington	N	0	0	N	N	10	2	11	81	60	N	0	0	N	N
American Samoa	—	0	0	—	—	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	—	0	0	—	—	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	1	—	0	0	—	201
Puerto Rico	N	0	0	N	N	—	4	16	54	64	2	9	47	114	340
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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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.
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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending May 27, 2006, and May 28, 2005 (21st Week)*

Reporting area	West Nile virus disease†									
	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		
United States	—	1	155	3	1	—	0	203	—	11
New England	—	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§	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	0	10	—	—	—	0	4	—	—
New Jersey	—	0	1	—	—	—	0	2	—	—
New York (Upstate)	—	0	7	—	—	—	0	2	—	—
New York City	—	0	2	—	—	—	0	2	—	—
Pennsylvania	—	0	3	—	—	—	0	2	—	—
E.N. Central	—	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	—	—
W.N. Central	—	0	26	—	—	—	0	80	—	1
Iowa	—	0	3	—	—	—	0	5	—	—
Kansas	—	0	3	—	—	N	0	3	N	N
Minnesota	—	0	5	—	—	—	0	5	—	—
Missouri	—	0	4	—	—	—	0	3	—	—
Nebraska§	—	0	9	—	—	—	0	24	—	—
North Dakota	—	0	4	—	—	—	0	15	—	—
South Dakota	—	0	7	—	—	—	0	33	—	1
S. Atlantic	—	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§	—	0	1	—	—	—	0	0	—	—
Virginia§	—	0	0	—	—	—	0	1	—	—
West Virginia	—	0	0	—	—	N	0	0	N	N
E.S. Central	—	0	10	1	—	—	0	5	—	—
Alabama§	—	0	1	—	—	—	0	2	—	—
Kentucky	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	9	1	—	—	0	5	—	—
Tennessee§	—	0	3	—	—	—	0	1	—	—
W.S. Central	—	0	32	2	—	—	0	22	—	2
Arkansas	—	0	3	—	—	—	0	2	—	—
Louisiana	—	0	20	—	—	—	0	9	—	2
Oklahoma	—	0	6	—	—	—	0	3	—	—
Texas§	—	0	16	2	—	—	0	13	—	—
Mountain	—	0	16	—	1	—	0	39	—	3
Arizona	—	0	8	—	1	—	0	8	—	—
Colorado	—	0	5	—	—	—	0	13	—	3
Idaho§	—	0	2	—	—	—	0	3	—	—
Montana	—	0	3	—	—	—	0	9	—	—
Nevada§	—	0	3	—	—	—	0	8	—	—
New Mexico§	—	0	3	—	—	—	0	4	—	—
Utah	—	0	6	—	—	—	0	8	—	—
Wyoming	—	0	2	—	—	—	0	1	—	—
Pacific	—	0	50	—	—	—	0	90	—	5
Alaska	—	0	0	—	—	—	0	0	—	—
California	—	0	50	—	—	—	0	89	—	5
Hawaii	—	0	0	—	—	—	0	0	—	—
Oregon§	—	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).

TABLE III. Deaths in 122 U.S. cities,* week ending May 27, 2006 (21st Week)

Reporting Area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
New England	548	388	108	37	7	8	66
Boston, MA	156	97	39	12	4	4	22
Bridgeport, CT	32	20	7	4	—	1	6
Cambridge, MA	14	11	2	1	—	—	—
Fall River, MA	27	17	5	5	—	—	3
Hartford, CT	63	41	14	5	2	1	11
Lowell, MA	29	23	6	—	—	—	7
Lynn, MA	10	8	1	1	—	—	3
New Bedford, MA	24	21	1	1	1	—	2
New Haven, CT	U	U	U	U	U	U	U
Providence, RI	63	45	14	3	—	1	2
Somerville, MA	1	1	—	—	—	—	—
Springfield, MA	45	33	11	1	—	—	—
Waterbury, CT	30	26	4	—	—	—	4
Worcester, MA	54	45	4	4	—	1	6
Mid. Atlantic	2,073	1,429	464	103	42	34	99
Albany, NY	46	35	5	5	1	—	6
Allentown, PA	23	16	7	—	—	—	—
Buffalo, NY	80	49	20	3	1	7	4
Camden, NJ	23	13	4	4	—	2	—
Elizabeth, NJ	12	8	1	—	2	1	—
Erie, PA	38	32	4	2	—	—	5
Jersey City, NJ	46	27	15	3	1	—	—
New York City, NY	1,041	723	243	45	19	10	38
Newark, NJ	U	U	U	U	U	U	U
Paterson, NJ	10	7	—	2	1	—	—
Philadelphia, PA	344	220	83	25	11	5	19
Pittsburgh, PA§	30	16	10	1	—	3	1
Reading, PA	35	27	6	2	—	—	—
Rochester, NY	122	88	24	5	2	3	10
Schenectady, NY	18	13	3	2	—	—	2
Scranton, PA	27	26	1	—	—	—	2
Syracuse, NY	135	101	28	2	2	2	7
Trenton, NJ	16	9	4	2	—	1	—
Utica, NY	13	8	4	—	1	—	3
Yonkers, NY	14	11	2	—	1	—	2
E.N. Central	1,975	1,298	442	138	34	63	134
Akron, OH	48	33	9	1	3	2	2
Canton, OH	28	22	4	1	—	1	3
Chicago, IL	356	215	85	34	12	10	28
Cincinnati, OH	88	62	19	5	—	2	15
Cleveland, OH	215	155	45	12	1	2	11
Columbus, OH	202	128	52	15	1	6	19
Dayton, OH	121	75	34	8	3	1	7
Detroit, MI	177	91	46	24	5	11	7
Evansville, IN	39	25	9	2	—	3	2
Fort Wayne, IN	68	49	16	3	—	—	7
Gary, IN	11	5	3	1	—	2	—
Grand Rapids, MI	41	28	6	1	1	5	2
Indianapolis, IN	176	115	39	12	2	8	9
Lansing, MI	42	30	7	4	—	1	4
Milwaukee, WI	95	63	19	7	3	3	7
Peoria, IL	44	26	13	2	2	1	1
Rockford, IL	56	43	11	1	—	1	3
South Bend, IN	49	38	5	2	—	4	3
Toledo, OH	83	66	13	3	1	—	2
Youngstown, OH	36	29	7	—	—	—	2
W.N. Central	620	415	126	46	21	11	33
Des Moines, IA	52	40	9	1	2	—	3
Duluth, MN	36	24	6	4	2	—	2
Kansas City, KS	23	17	3	1	—	2	3
Kansas City, MO	85	56	21	6	2	—	2
Lincoln, NE	49	38	5	5	1	—	6
Minneapolis, MN	52	29	16	2	1	4	1
Omaha, NE	90	69	11	5	3	2	6
St. Louis, MO	116	62	31	16	4	2	5
St. Paul, MN	47	31	12	2	1	1	3
Wichita, KS	70	49	12	4	5	—	2
S. Atlantic	1,184	710	290	99	40	45	64
Atlanta, GA	131	80	33	11	4	3	4
Baltimore, MD	185	99	53	19	9	5	21
Charlotte, NC	133	81	37	5	3	7	8
Jacksonville, FL	131	73	39	12	5	2	4
Miami, FL	31	24	3	3	—	1	—
Norfolk, VA	34	22	4	5	1	2	1
Richmond, VA	68	39	17	6	4	2	3
Savannah, GA	65	35	9	7	2	12	1
St. Petersburg, FL	60	45	9	1	2	3	7
Tampa, FL	218	135	54	17	6	6	9
Washington, D.C.	108	62	28	12	4	2	4
Wilmington, DE	20	15	4	1	—	—	2
E.S. Central	896	574	203	68	31	20	52
Birmingham, AL	171	106	40	15	6	4	15
Chattanooga, TN	68	53	12	1	—	2	2
Knoxville, TN	103	65	27	8	3	—	2
Lexington, KY	59	42	11	1	3	2	3
Memphis, TN	157	95	37	15	6	4	11
Mobile, AL	114	72	28	7	4	3	5
Montgomery, AL	67	40	14	10	3	—	3
Nashville, TN	157	101	34	11	6	5	11
W.S. Central	1,351	841	334	100	37	39	59
Austin, TX	97	67	18	8	2	2	8
Baton Rouge, LA	40	30	6	1	1	2	—
Corpus Christi, TX	53	39	9	4	1	—	6
Dallas, TX	180	95	60	12	6	7	8
El Paso, TX	84	66	9	6	1	2	5
Fort Worth, TX	109	67	34	4	1	3	5
Houston, TX	337	188	92	34	13	10	5
Little Rock, AR	69	35	19	4	6	5	—
New Orleans, LA¶	U	U	U	U	U	U	U
San Antonio, TX	143	90	33	11	3	6	7
Shreveport, LA	91	54	26	9	1	1	14
Tulsa, OK	148	110	28	7	2	1	1
Mountain	980	628	231	65	27	29	66
Albuquerque, NM	147	97	33	10	4	3	15
Boise, ID	56	44	8	3	—	1	8
Colorado Springs, CO	70	46	20	3	—	1	1
Denver, CO	100	58	26	6	4	6	1
Las Vegas, NV	256	162	66	18	4	6	15
Ogden, UT	28	22	2	1	2	1	—
Phoenix, AZ	150	90	32	12	10	6	12
Pueblo, CO	48	37	10	1	—	—	—
Salt Lake City, UT	125	72	34	11	3	5	14
Tucson, AZ	U	U	U	U	U	U	U
Pacific	1,611	1,122	329	112	29	18	150
Berkeley, CA	13	13	—	—	—	—	2
Fresno, CA	100	77	15	3	3	2	5
Glendale, CA	10	10	—	—	—	—	—
Honolulu, HI	128	89	25	10	2	2	—
Long Beach, CA	57	30	15	10	1	1	6
Los Angeles, CA	228	154	47	21	5	1	25
Pasadena, CA	18	14	2	2	—	—	1
Portland, OR	133	83	34	13	1	1	10
Sacramento, CA	75	48	21	3	1	2	8
San Diego, CA	149	112	26	8	2	1	14
San Francisco, CA	182	119	37	20	2	4	30
San Jose, CA	204	148	40	11	3	2	23
Santa Cruz, CA	32	28	3	—	1	—	1
Seattle, WA	109	78	24	2	3	2	12
Spokane, WA	66	46	16	3	1	—	6
Tacoma, WA	107	73	24	6	4	—	7
Total	11,238**	7,405	2,527	768	268	267	723

U: Unavailable. —:No reported cases.

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

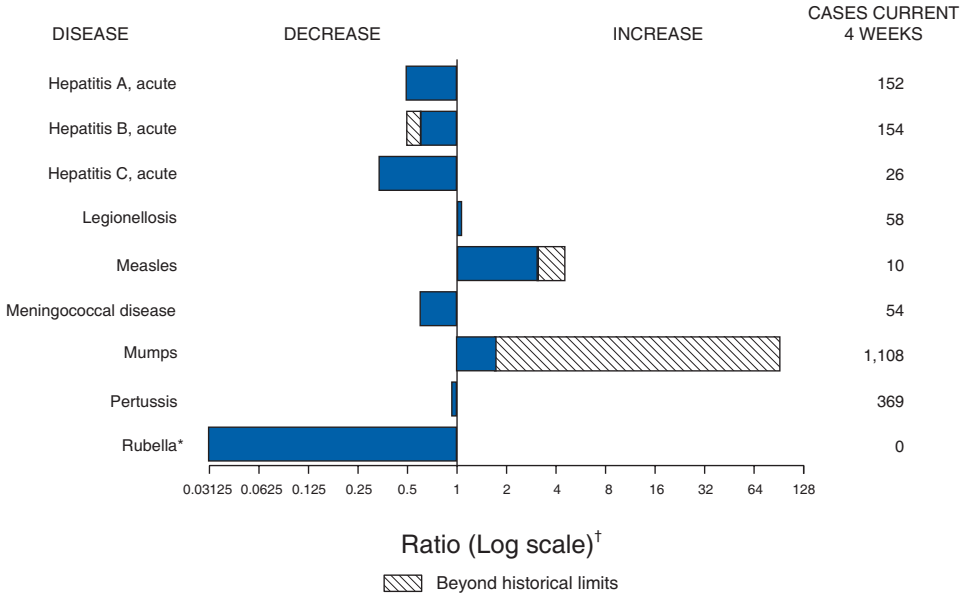
† Pneumonia and influenza.

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

¶ Because of Hurricane Katrina, weekly reporting of deaths has been temporarily disrupted.

** Total includes unknown ages.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals May 27, 2006, with historical data



* No rubella cases were reported for the current 4-week period yielding a ratio for week 21 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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