CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

January 29, 1999 / Vol. 48 / No. 3

MMWR™
MORBIDITY AND MORTALITY WEEKLY REPORT

Increases in Unsafe Sex and Rectal Gonorrhea Among Men Who Have Sex With Men — San Francisco, California, 1994–1997

Reductions in AIDS cases among men who have sex with men (MSM) have been attributed in part to widespread declines in unprotected anal sex since the mid-1980s (*1*) and use of increasingly effective antiretroviral therapy (ART) since the mid-1990s (*2*). Because data about HIV infection incidence are limited, other indicators of transmission risk have been used. In San Francisco, data from annual behavioral surveys among MSM (1994–1997) and from the sexually transmitted disease (STD) surveillance program (1990–1997) were analyzed to characterize changes in HIV risk behaviors of MSM and changes in incidence of male rectal gonorrhea. This report describes the findings of these analyses, which indicate increases in unsafe sexual behavior and increases in rates of rectal gonorrhea among MSM.

From 1994 through 1997, volunteers in The Stop AIDS Project, a San Francisco community-based organization, conducted standardized annual surveys in which MSM were approached in various settings (e.g., neighborhoods, clubs, bars, and outdoor events) and asked to respond to a peer-administered, one-page questionnaire. Persons were excluded if they had participated previously during the same year. Methods were identical across years. First-time interviews were completed among 21,857 MSM; 6223, 5989, 5472, and 4173 interviews were completed each respective year. Demographic and sexual behavior information was collected annually; in 1997, subjects were asked whether they knew the HIV serostatus of their sex partners. In the survey, unprotected anal intercourse (UAI) was defined as insertive or receptive anal sex during the previous 6 months without always using condoms. Multiple partners was defined as more than one sex partner during the previous 6 months. Male rectal gonorrhea data reported to the San Francisco Department of Public Health, Sexually Transmitted Disease Control Section, were reviewed. The annual incidence from 1994 through 1997 was calculated as cases per 100,000 adult men aged ≥15 years (1990 U.S. census data were used for the denominator). Changes in sexual behaviors and rectal gonorrhea incidence over time were assessed using the chi-square test for trend.

The proportion of surveyed MSM who reported having had anal sex increased from 57.6% (95% confidence interval [CI]=56.4%–58.9%) in 1994 to 61.2% (95% CI=60.1%–63.1%) in 1997 ($p<0.01$). Among MSM who had had anal sex, the proportion

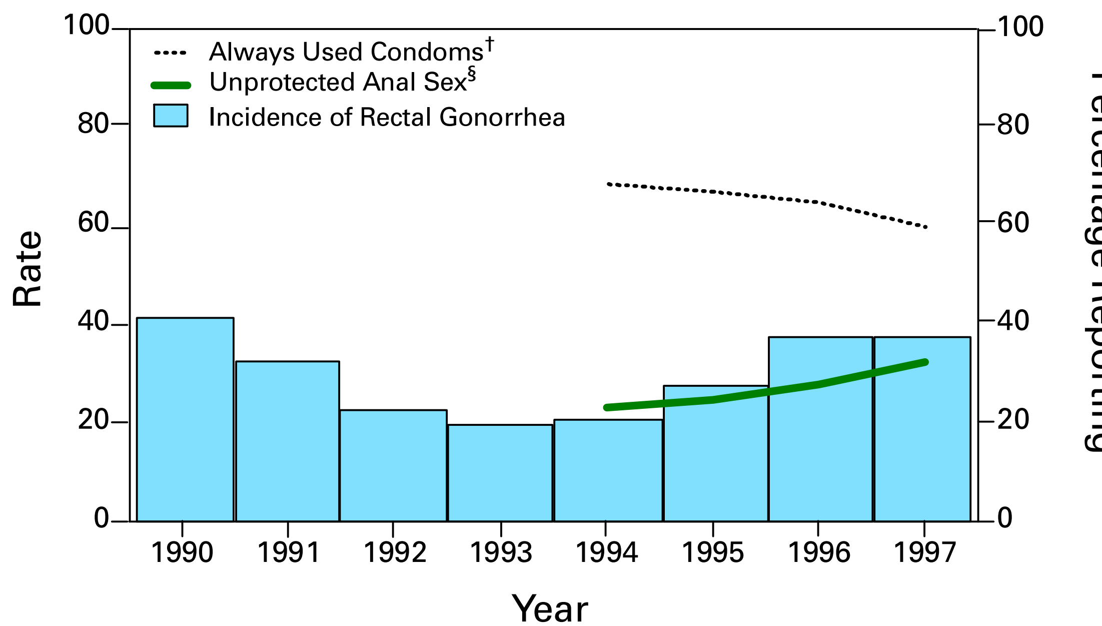
Unsafe Sex and Rectal Gonorrhea — Continued

reporting "always" using condoms declined from 69.6% (95% CI=68.1%–71.1%) in 1994 to 60.8% (95% CI=58.9%–62.7%) in 1997 (p<0.01) (Figure 1). The most pronounced decline in consistent condom use occurred among men aged 26–29 years (from 68.2% [95% CI=64.8%–71.5%] in 1994 to 58.0% [95% CI=53.7%–62.1%] in 1997). The proportion of men who reported having had multiple sex partners and UAI increased from 23.6% (95% CI=21.9%–25.4%) in 1994 to 33.3% (95% CI=31.1%–35.6%) in 1997 (p<0.01). The largest increase in this risk behavior was among respondents aged ≤25 years (from 22.0% [95% CI=18.4%–25.9%] in 1994 to 32.1% [95% CI=27.7%–36.7%] in 1997; p<0.01). Decreasing consistent condom use and increasing proportions of MSM reporting UAI with multiple partners occurred in all racial/ethnic groups. In 1997, 45% (95% CI=41.4%–48.8%) of 865 MSM who had had UAI during the previous 6 months also reported not knowing the HIV serostatus of all their sex partners. Among 525 MSM who had had UAI and multiple partners during the previous 6 months, 68.0% (95% CI=63.9%–72.7%) reported not knowing the HIV serostatus of all their sex partners.

Male rectal gonorrhea incidence declined from 1990 through 1993 (42, 33, 23, and 20 per 100,000 adult men, respectively). From 1994 through 1997, the incidence increased from 21 to 38 per 100,000 adult men (p<0.01) (Figure 1). This increase in incidence was observed in all racial/ethnic and age groups but was highest among men aged 25–34 years (from 41 to 83 cases per 100,000 men aged 25–34 years, p<0.01).

Reported by: KA Page-Shafer, PhD, W McFarland, MD, R Kohn, J Klausner, MD, MH Katz, MD, San Francisco Dept of Public Health, San Francisco; D Wohlfeiler, MPH, S Gibson, MSW, The Stop AIDS Project, San Francisco, California. Prevention Svcs Research Br, Program Evaluation Research Br, International Activities Br, Div of HIV/AIDS Prevention, and Epidemiology and Surveillance Br, Div of Sexually Transmitted Diseases Prevention, National Center for HIV, STD, and TB Prevention, CDC.

FIGURE 1. Percentage of men who have sex with men reporting selected sexual behaviors, and rate* of male rectal gonorrhea — San Francisco, 1990–1997



*Per 100,000 men aged ≥15 years.
†Condoms always used during anal sex during the previous 6 months.
§Unprotected anal sex with two or more partners during the previous 6 months.

Unsafe Sex and Rectal Gonorrhea — Continued

Editorial Note: The data described in this report suggest that increases in unsafe sexual behavior have occurred among MSM in San Francisco, resulting in increased risk for HIV infection and transmission. These data provide additional insight to a previous report of increasing gonorrhea among MSM in selected STD clinics (*3*) and document significant increases during 1994–1997 in rectal gonorrhea (a direct measure of UAI) and self-reported UAI among MSM.

The increases in reported risk behaviors and the increases in STDs in San Francisco coincide with the expanded availability of effective ART in San Francisco and the United States. Although ART can result in decreased viral load and decreased risk for HIV transmission, advances in HIV treatment and the resulting declines in AIDS deaths in San Francisco and nationally might lead to increased risk behavior by MSM who perceive that HIV infection can be managed effectively (*4*). Because the prevalence of HIV infection among MSM in San Francisco is high, small increases in unsafe behaviors in this population may result in increases in HIV infection incidence. Recent data do not show changes in HIV infection incidence among young MSM (aged 18–29 years) in San Francisco (*5*). However, HIV transmission may lag behind the transmission of other STDs, including gonorrhea, for several reasons (e.g., differences in infectivity and treatment) (*6*).

That increases in UAI may represent sex between mutually monogamous persons with concordant HIV serostatus (i.e., "negotiated safety") seems unlikely. One third of MSM reported UAI with multiple partners during the previous 6 months. Substantial numbers of men interviewed in 1997 reported not knowing the HIV infection status of all their partners. In addition, increases in rectal gonorrhea are inconsistent with increases in negotiated safe sex behaviors between MSM.

The findings in this study are subject to at least four limitations. First, the sample of MSM in The Stop AIDS Project surveys may not be representative of the general MSM community in San Francisco. Second, the questionnaire did not distinguish insertive versus receptive anal sex, and it did not inquire specifically about condom use with persons whose HIV serostatus was unknown. Third, survey respondents who reported UAI may not be similar to persons who acquired rectal gonorrhea. Fourth, the survey was not designed to assess the association between decreases in AIDS prevalence, AIDS deaths, or other factors and the described risk behaviors. However, the population surveyed was large, and increases in reported risk behaviors were consistent across all age and racial/ethnic groups. Other studies have described high and increasing rates of sexual risk behavior among MSM in San Francisco (*7*), elsewhere in the United States (*8*), and in Canada (*9*).

Male rectal gonorrhea is increasing among MSM amidst an overall decline in nationwide gonorrhea rates (*10*). During 1993–1997, national gonorrhea surveillance demonstrated an annual increase in the proportion of cases in males compared with cases in females in western states (CDC, unpublished data) consistent with an increase in gonorrhea infection among MSM.

The data presented in this report suggest that the substantial reduction in sexual risk behaviors among MSM and the decreases in rectal gonorrhea during the 1980s and early 1990s cannot be assumed to be maintained indefinitely. The availability of ART and the possible perception of lower risk for infection from persons receiving ART may lead to misunderstandings and complacency toward safe-sex messages. MSM of all ages and races/ethnicities in San Francisco continue to engage in behaviors that

Unsafe Sex and Rectal Gonorrhea — Continued

put them at high risk for HIV infection, and HIV prevalence is highest among the MSM populations compared with heterosexual populations. As the epidemic continues, it remains important to maintain resources for prevention activities targeted toward MSM across all racial/ethnic and age groups. Public health prevention and community-based outreach efforts to reduce risk behaviors and STDs remain crucial to reach these populations.

References

1. Winkelstein W Jr, Wiley JA, Padian NS, et al. The San Francisco Men's Health Study: continued decline in HIV seroconversion rates among homosexual/bisexual men. Am J Public Health 1988;78:1472–4.
2. Hsu L, Schwarcz S. Use of protease inhibitors and survival among persons with AIDS. Presented at the 31st annual meeting of the Society for Epidemiologic Research, Chicago, Illinois, June 24–26, 1998.
3. CDC. Gonorrhea among men who have sex with men—selected sexually transmitted diseases clinics, 1993–1996. MMWR 1997;46:889–92.
4. Dilley JW, Woods WJ, McFarland W. Are advances in treatment changing views about high-risk sex? [Letter]. N Engl J Med 1997;337:501–2.
5. Osmond D, Charlebois E, Page-Shafer K, et al. Increasing risk behavior has not led to higher HIV incidence rates in the San Francisco Young Men's Health Study. Presented at the XII World AIDS Conference, Geneva, Switzerland, June 28–July 3, 1998 [Abstract 23115].
6. Wasserheit JN, Aral SO. The dynamic topology of sexually transmitted disease epidemics: implications for prevention strategies. J Infect Dis 1996;174(suppl 2):S201–S213.
7. Ekstrand M, Paul J, Stall R, Osmond DH. Increasing rates of unprotected anal intercourse among San Francisco gay men include high UAI rates with a partner of unknown or different serostatus. Presented at the XII World AIDS Conference, Geneva, Switzerland, June 28–July 3, 1998 [Abstract 23116].
8. Valleroy L, MacKellar DA, Rosen D, Secura G. Prevalence and predictors of unprotected receptive anal intercourse for 15- to 22-year old men who have sex with men in seven urban areas, USA. Presented at the XII World AIDS Conference, Geneva, Switzerland, June 28–July 3, 1998 [Abstract 23139].
9. Schechter M, Strathdee SA, Martindale SL, et al. Evidence of elevated HIV incidence and relapse to unsafe sex among young men having sex with men (MSM) in Vancouver, Canada. Presented at the XII World AIDS Conference, Geneva, Switzerland, June 28–July 3, 1998 [Abstract 23118].
10. Fox KK, Whittington WL, Levine WC, Moran JS, Zaidi AA, Nakashima AK. Gonorrhea in the United States, 1981–1996: demographic and geographic trends. Sex Transm Dis 1998;25:386–93.

Outbreak of *Vibrio parahaemolyticus* Infection Associated with Eating Raw Oysters and Clams Harvested from Long Island Sound — Connecticut, New Jersey, and New York, 1998

During July–September 1998, an outbreak of *Vibrio parahaemolyticus* infections associated with consumption of oysters and clams harvested from Long Island Sound occurred among residents of Connecticut, New Jersey, and New York. This is the first reported outbreak of *V. parahaemolyticus* linked to consumption of shellfish harvested from New York waters. This report summarizes the investigation of this outbreak.

On August 10, 1998, a New York City resident with toxigenic *V. cholerae* O1 infection who had not traveled recently was reported to the New York City Department of

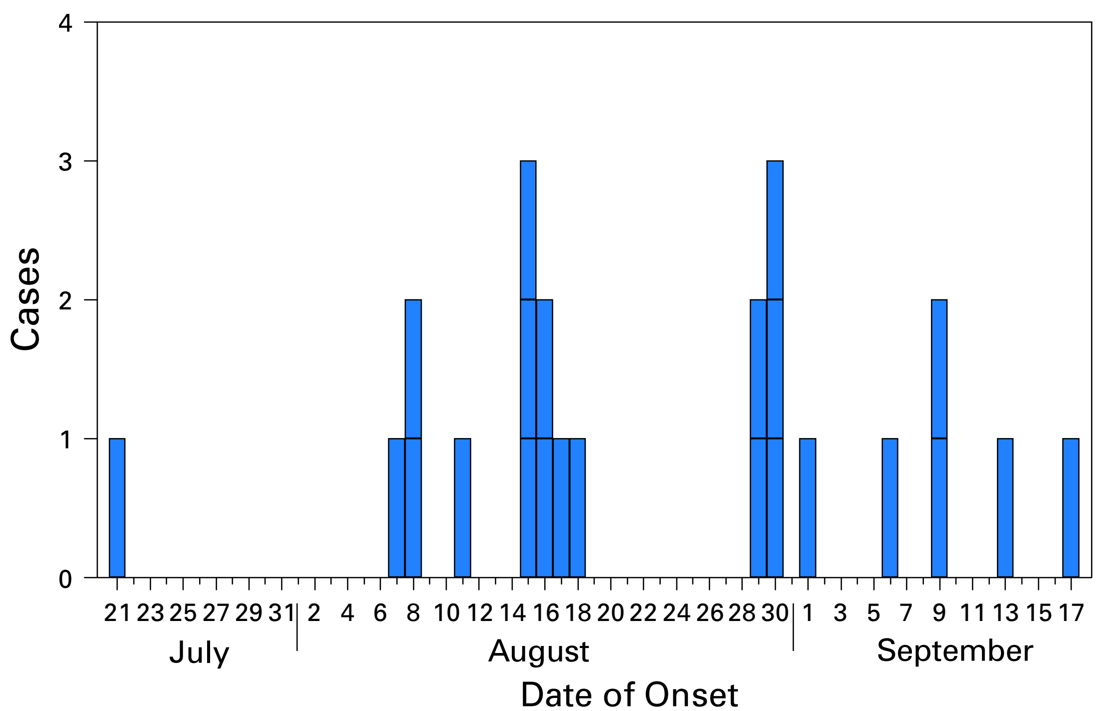
Vibrio parahaemolyticus — *Continued*

Health (NYCDOH). NYCDOH initiated an investigation to determine the most likely source of the infection. Using a broadcast facsimile, NYCDOH contacted all Queens County laboratories on August 12 and, on August 26, asked selected infectious diseases physicians and all New York City hospitals and laboratories to consider *V. cholerae* as a potential cause of diarrhea and to report any confirmed or suspected *Vibrio* infections to the NYCDOH. Although no additional *V. cholerae* infections were reported, 23 culture-confirmed cases of *V. parahaemolyticus* were reported among residents of Connecticut, New Jersey, and New York. Dates of illness onset ranged from July 21 through September 17 (Figure 1).

An investigation coordinated by the New York State Department of Health determined that 22 of 23 ill persons had eaten or handled oysters, clams, or crustaceans: 16 ate raw oysters or clams, two ate steamed crabs, one ate crab cakes, one ate boiled crabs and lobsters, one ate lobster roll, and one handled live crabs. The median onset of illness following consumption of shellfish was 19 hours (range: 12–52 hours). Clinical histories were available for 19 of the 23 ill persons; 17 (89%) had gastroenteritis and two (11%) had bloodstream infections with lower extremity edema and bullae. Among patients with gastroenteritis, reported clinical symptoms included diarrhea (100%), abdominal cramps (94%), nausea (94%), vomiting (82%), fever (47%), bloody stools (29%), headache (24%), and myalgia (24%). Median duration of gastrointestinal illness was 5 days.

Traceback investigations by local and state health departments identified the site of harvest for oysters or clams eaten by 11 of the 16 patients. Oysters or clams eaten by eight patients were harvested from Oyster Bay, off New York's Long Island Sound,

FIGURE 1. Cases of *Vibrio parahaemolyticus*, by date of symptom onset — Connecticut, New Jersey, and New York, July–September, 1998



during August 4–27. Shellfish tags from oysters and clams eaten by the other three persons indicated harvest areas elsewhere off Long Island or, in one case, Washington state (*1*)*.

During the outbreak period, mean surface water temperature measurements from 15 Oyster Bay stations was 77.2 F (25.1 C), compared with cooler 1997 and 1996 measurements (74.1 F [23.4 C] and 69.4 F [20.7 C], respectively). On September 10, the New York State Department of Environmental Conservation (NYSDEC) closed Oyster Bay to harvesting of shellfish and recalled shellfish harvested from that area after August 10.

Laboratory testing of 12 *V. parahaemolyticus* clinical isolates, including the eight traced to Oyster Bay, identified O3:K6 serotype. Pulsed-field gel electrophoresis (PFGE) performed on four clinical isolates at the New York City Bureau of Labs indicated that three isolates epidemiologically linked to Oyster Bay had indistinguishable PFGE patterns, and the other isolate not linked to Oyster Bay had a distinctly different pattern. Oysters harvested on five occasions from Oyster Bay during September 11–October 14 contained *V. parahaemolyticus* at ≤120 colony forming units [cfu] per gram of oyster meat. None of these environmental isolates matched the outbreak strain or other clinical isolates by PFGE. On the basis of these results and a decline in water temperature to 63.5 F (17.5 C), NYSDEC reopened Oyster Bay to commercial shellfish harvesting on October 22. No additional culture-confirmed cases of *V. parahaemolyticus* infection have been reported.

Reported by: E Wechsler, C D'Aleo, VA Hill, J Hopper, D Myers-Wiley, E O'Keeffe, J Jacobs, F Guido, A Huang, MD, Westchester County Health Dept, New Rochelle; SN Dodt, B Rowan, M Sherman, A Greenberg, MD, Div of Disease Control, Nassau County Dept of Health, Mineola; D Schneider, B Noone, L Fanella, BR Williamson, E Dinda, M Mayer, MD, Suffolk County Dept of Health Svcs, Hauppauge; M Backer, A Agasan, MD, Enteric Pathogens Laboratory, L Kornstein, PhD, Environmental Microbiology Laboratory, New York City Bur of Laboratories; F Stavinsky, Bur of Environmental Investigations; B Neal, D Edwards, M Haroon, D Hurley, L Colbert, J Miller, MD, B Mojica, MD, New York City Dept of Health; E Carloni, B Devine, M Cambridge, Bur of Community Sanitation and Food Protection; T Root, D Schoonmaker, M Shayegani, Wadsworth Laboratories, Albany; W Hastback, New York State Dept of Environmental Conservation; B Wallace, MD, S Kondracki, Bur of Communicable Disease Control; P Smith, MD, State Epidemiologist, New York State Dept of Health. S Matiuck, K Pilot, M Acharya, Bur of Labs; G Wolf, W Manley, C Genese, J Brooks, MD, Acting State Epidemiologist, New Jersey Dept of Health. Z Dembek, PhD, J Hadler, MD, State Epidemiologist, Connecticut Dept of Public Health. Center for Food Safety and Applied Nutrition, Food and Drug Administration. Fish and Wildlife Svc, US Dept of Agriculture. Foodborne and Diarrheal Diseases Br, Div of Bacterial and Mycotic Diseases, National Center for Infectious Diseases; State Br, Div of Applied Public Health Training, Epidemiology Program Office; and EIS officers, CDC.

Editorial Note: This is the fourth multistate outbreak of *V. parahaemolyticus* infections in the United States since 1997, and the first associated with shellfish harvested from the northeast Atlantic Ocean. Before 1997, foodborne outbreaks caused by *V. parahaemolyticus* had been infrequently reported in the United States (*1*). During 1997–1998, multistate outbreaks of *V. parahaemolyticus* were associated with consumption of raw or undercooked oysters harvested from the Pacific Northwest and Texas (*2*; CDC, unpublished data, 1998).

V. parahaemolyticus is a halophilic, gram-negative bacterium that naturally inhabits marine and estuarine waters. *V. parahaemolyticus* infections are usually acquired by persons who eat raw or undercooked shellfish, particularly oysters, or whose skin

*The shipper that provided the oysters harvested elsewhere in Long Island also had received oysters from Oyster Bay at approximately the same time. Although comingling of shellfish is against state regulations, it is known to occur.

wounds are exposed to warm seawater. The most common clinical manifestation of infection is self-limited gastroenteritis, but infections may result in septicemia that can be life threatening (*3,4*). The concentration of *V. parahaemolyticus* in seawater increases with increasing water temperature and corresponds with a seasonal increase in sporadically occurring cases in warmer months (*4*). This outbreak and the recent outbreaks of *V. parahaemolyticus* infections in the Pacific Northwest and Texas occurred during summer months.

To reduce the risk for *V. parahaemolyticus* and other shellfish-associated infections, persons should avoid eating raw or undercooked shellfish, particularly during warmer months. Monitoring of environmental conditions, such as water temperature and salinity, may help determine when shellfish harvesting areas should be closed and re-opened to harvesting.

Guidelines regulating the harvesting of oysters and clams rely on quantitative measurement of *V. parahaemolyticus* levels in oyster or clam meat. However, data from recent outbreaks may require revision of these guidelines. The recommended action level of *V. parahaemolyticus* per gram of oyster meat that must be detected in the absence of human illness before closing oyster beds is >10,000 cfu/g. Oyster samples that were harvested from implicated beds in the Pacific Northwest in 1997 and Oyster Bay in 1998 yielded <200 *V. parahaemolyticus* cfu/g of oyster meat, indicating that human illness can occur at levels much lower than the current action level.

Infection with *V. parahaemolyticus* is not a notifiable condition in most states, including New York. This outbreak was detected only coincidentally because of enhanced surveillance during an investigation of a case of *V. cholerae* O1. Health-care providers treating patients with gastroenteritis who have a history of recent ingestion of raw or undercooked shellfish should consider *Vibrio* infection and request a stool culture specifically for *Vibrio*. Clinical laboratories should use thiosulfate-citrate-bile salts-sucrose agar (TCBS), a selective medium for culturing for *Vibrio* spp., when culturing stool specimens for *Vibrio* and should consider using TCBS for routine screening of all stools specimens, at least during summer months.

CDC coordinates a passive Gulf Coast *Vibrio* surveillance system and the Foodborne Diseases Active Surveillance Network (FoodNet) to monitor the incidence of *Vibrio* infections. Because of these multistate outbreaks, all states should consider making infections with *V. parahaemolyticus* and other vibrioses reportable, with referral of clinical isolates to public health laboratories for confirmation and strain subtyping.

References

1. Bean NH, Goulding JS, Lao C, Angulo FJ. Surveillance for foodborne-disease outbreaks—United States, 1988–1992. MMWR 1996;45(no. SS-5).
2. CDC. Outbreak of *Vibrio parahaemolyticus* infections associated with eating raw oysters—Pacific Northwest, 1997. MMWR 1998;47;457–62.
3. Levine WC, Griffin PM, and the Gulf Coast Vibrio Working Group. *Vibrio* infections on the Gulf Coast: results of first year of regional surveillance. J Infect Dis 1993;167:479–83.
4. Hlady WG, Klontz KC. The epidemiology of *Vibrio* infections in Florida, 1981–1993. J Infect Dis 1996;173:1176–83.

HIV Testing — United States, 1996

Human immunodeficiency virus (HIV) infection is one of the leading causes of morbidity and mortality in the United States. HIV testing, in conjunction with counseling and other preventive services, can reduce the risk for HIV infection and appropriately link infected persons to treatment. To characterize HIV testing by region, state, and sex, CDC analyzed data from the 1996 Behavioral Risk Factor Surveillance System (BRFSS). This report summarizes the results of that analysis, which indicate a high degree of variability in HIV testing throughout the United States.

BRFSS is a state-specific, random-digit–dialed telephone survey of the U.S. population aged ≥18 years. In 1996, all 50 states and the District of Columbia (DC) participated in BRFSS. The 1996 survey included 14 questions about HIV/acquired immunodeficiency syndrome (AIDS)-related knowledge and attitudes and HIV-antibody testing history. The questions were restricted to persons aged <65 years, except in California, where the questions were asked of persons aged <45 years. In 1996, 97,006 persons responded to these questions (state-specific range: 899–3653). Data were weighted by demographic characteristics and by selection probabilities. Confidence intervals were calculated using SUDAAN to account for the complex survey design.

A mean of 42% of persons (range: 26% [South Dakota] to 60% [DC]) answered yes to the question "Have you ever had your blood tested for HIV?" Persons who answered "yes" were asked "What was the main reason you had your last blood test for HIV?" Responses were divided into two categories: those who chose to be tested for personal or health reasons (i.e., voluntarily tested) (responses included: "just to find out if infected," "for routine checkup," "doctor referral," "sex partner referral," "because of pregnancy," or "other"), and those who were tested for other reasons (e.g., military induction, insurance, and employment). A mean of 22% of persons (range: 10% [South Dakota] to 45% [DC]) reported obtaining HIV-antibody tests for voluntary reasons.

The rate of AIDS cases in 1996 was compared with HIV testing percentages in 1996. In general, in states where the AIDS rate was high, HIV testing also tended to be high (Figure 1). For example, DC had the highest AIDS rate and the highest testing percentage; Florida ranked third in both categories. In comparison, rates of overall testing and voluntary testing were lower in the Midwest, where the AIDS rate is low.

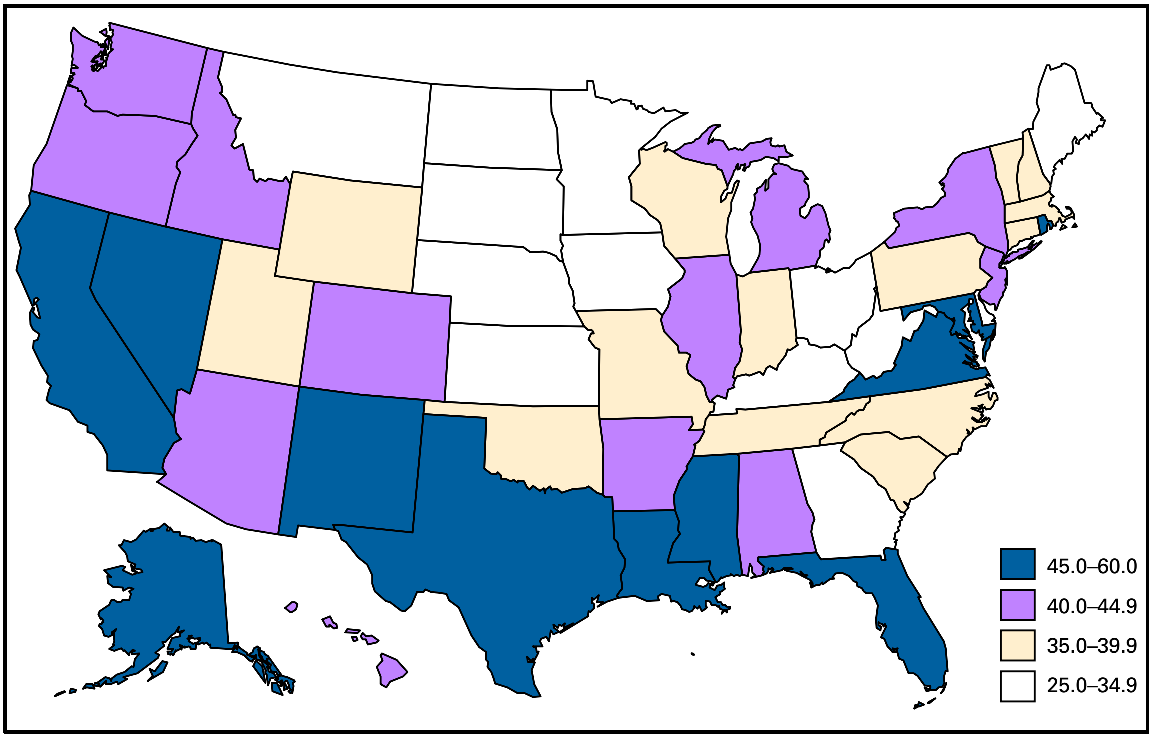
A mean of 44% of men reported having ever been tested for HIV (range: 28% [South Dakota] to 62% [DC]) (Table 1). A mean of 40% of women reported having ever been tested for HIV (range: 23% [North Dakota] to 57% [DC]). In 45 states and DC, a greater percentage of men reported ever being tested for HIV than women. The states with the greatest difference by sex of ever being tested for HIV were North Dakota (11%), Hawaii (10%), and New York (9%). The states with the smallest differences were Alaska, Delaware (both 0.5%), and Texas (0.6%).

A mean of 20% of men reported that their most recent HIV test was voluntary (range: 8% [South Dakota] to 46% [DC]) (Table 1). A mean of 25% of women reported that their most recent HIV test was voluntary (range: 12% [North Dakota] to 45% [DC]). In 49 states, a greater percentage of women reported being voluntarily tested than men. The sex-specific difference in reports of being voluntarily tested ranged from 0.1% in New York and Indiana to 13% in California.

Reported by the following BRFSS coordinators: J Cook, MBA, Alabama; P Owen, Alaska; B Bender, MBA, Arizona; J Senner, PhD, Arkansas; B Davis, PhD, California; M Leff, MSPH,

HIV Testing — Continued

FIGURE 1. Percentage of adults aged 18–64 years* reporting having ever been tested for HIV infection — United States, Behavioral Risk Factor Surveillance System, 1996



*In California, respondents were aged <45 years.

Colorado; M Adams, MPH, Connecticut; F Breukelman, Delaware; C Mitchell, District of Columbia; S Hoecherl, Florida; L Martin, MPH, Georgia; AT Onaka, PhD, Hawaii; J Aydelotte, Idaho; B Steiner, MS, Illinois; K Horvath, Indiana; A Wineski, Iowa; M Perry, Kansas; K Asher, Kentucky; R Jiles, PhD, Louisiana; D Maines, Maine; A Weinstein, MA, Maryland; D Brooks, MPH, Massachusetts; H McGee, MPH, Michigan; N Salem, PhD, Minnesota; D Johnson, Mississippi; T Murayi, PhD, Missouri; P Feigley, PhD, Montana; M Metroka, Nebraska; E DeJan, MPH, Nevada; L Powers, MA, New Hampshire; G Boeselager, MS, New Jersey; W Honey, MPH, New Mexico; TA Melnik, DrPH, New York; K Passaro, PhD, North Carolina; J Kaske, MPH, North Dakota; P Pullen, Ohio; N Hann, MPH, Oklahoma; J Grant-Worley, MS, Oregon; L Mann, Pennsylvania; J Hesser, PhD, Rhode Island; D Shepard, South Carolina; M Gildemaster, South Dakota; D Ridings, Tennessee; K Condon, Texas; R Giles, Utah; C Roe, MS, Vermont; L Redman, MPH, Virginia; K Wynkoop-Simmons, PhD, Washington; F King, West Virginia; P Imm, MS, Wisconsin; M Futa, MA, Wyoming. Behavioral Risk Factor Surveillance System, Behavioral Surveillance Br, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The findings in this report document a high degree of state-specific variability in self-reported HIV-antibody tests in the United States. Previous reports suggest this variability probably represents state-specific differences in such factors as prevalence of HIV infection and the activities of HIV-prevention and education programs (*1*).

The success of a health-promotion program depends on the level of participation of clients. Although HIV testing and counseling does not affect behavior change similarly across all population groups, in general, persons who voluntarily receive HIV testing are more likely to undergo counseling and modify their behaviors than those who

HIV Testing — Continued

TABLE 1. Percentage of persons aged 18–64 years who reported ever having had an HIV test and who reported that their last HIV test was voluntary*, by sex — United States, Behavioral Risk Factor Surveillance System, 1996

State	Sample size	Ever tested		Tested voluntarily		Ever tested			Tested voluntarily		
		%	(95% CI†)	%	(95% CI)	% Men	% Women	(95% CI§)	% Men	% Women	(95% CI§)
Alabama	1737	44.0	(±2.8)	23.3	(±2.4)	48.0	40.2	(1.1–1.8)	22.8	23.8	(0.7–1.3)
Alaska	1403	46.5	(±3.9)	29.0	(±3.6)	46.8	46.3	(0.7–1.5)	23.3	35.5	(0.4–0.8)
Arizona	1503	42.5	(±3.5)	20.6	(±3.0)	43.7	41.4	(0.8–1.5)	19.5	21.8	(0.6–1.4)
Arkansas	1391	42.7	(±3.2)	21.6	(±2.7)	44.0	41.4	(0.8–1.5)	17.9	25.1	(0.4–1.0)
California¶	2161	52.0	(±2.4)	31.6	(±2.2)	49.9	54.2	(0.7–1.1)	25.3	38.4	(0.4–0.7)
Colorado	1527	43.0	(±2.8)	25.3	(±2.4)	44.8	41.1	(0.9–1.5)	23.9	26.7	(0.6–1.2)
Connecticut	1507	38.7	(±2.8)	20.1	(±2.3)	42.2	35.3	(1.0–1.8)	19.8	20.4	(0.7–1.4)
Delaware	1707	45.2	(±2.7)	23.6	(±2.3)	45.4	44.9	(0.8–1.3)	19.6	27.4	(0.5–0.9)
District of Columbia	991	59.5	(±3.6)	45.2	(±3.6)	61.9	57.3	(0.8–1.7)	45.5	44.9	(0.7–1.5)
Florida	2634	52.2	(±2.1)	27.7	(±1.9)	54.6	49.8	(1.0–1.5)	24.4	30.8	(0.6–0.9)
Georgia	1908	33.1	(±2.4)	17.7	(±1.9)	33.8	32.4	(0.8–1.4)	14.7	20.6	(0.5–0.9)
Hawaii	1796	42.1	(±2.7)	21.8	(±2.2)	46.8	37.1	(1.1–2.0)	19.8	23.8	(0.6–1.1)
Idaho	2233	41.4	(±2.3)	21.1	(±1.8)	45.5	37.3	(1.1–1.8)	18.0	24.1	(0.5–0.9)
Illinois	2394	40.5	(±2.2)	20.3	(±1.8)	43.3	37.8	(1.0–1.6)	18.7	21.9	(0.6–1.1)
Indiana	1767	37.6	(±2.5)	19.5	(±2.1)	42.0	33.4	(1.1–1.9)	19.5	19.4	(0.7–1.4)
Iowa	2736	31.6	(±2.0)	12.8	(±1.4)	36.1	27.1	(1.2–1.9)	12.6	13.0	(0.7–1.3)
Kansas	1554	28.1	(±2.5)	15.3	(±2.0)	30.0	26.2	(0.9–1.6)	14.0	16.6	(0.6–1.2)
Kentucky	2705	32.3	(±2.0)	15.7	(±1.6)	35.5	29.1	(1.1–1.7)	13.3	18.1	(0.5–0.9)
Louisiana	1328	47.9	(±3.1)	24.5	(±2.7)	50.5	45.5	(0.9–1.6)	20.4	28.5	(0.5–0.9)
Maine	1332	33.6	(±2.8)	15.9	(±2.1)	38.1	29.1	(1.1–2.0)	15.4	16.4	(0.6–1.4)
Maryland	3653	48.1	(±2.1)	30.0	(±1.9)	49.8	46.4	(0.9–1.4)	28.4	31.4	(0.7–1.1)
Massachusetts	1479	36.8	(±2.8)	19.8	(±2.3)	40.5	33.3	(1.0–1.8)	18.7	20.9	(0.6–1.3)
Michigan	2115	41.8	(±2.3)	23.4	(±2.0)	44.4	39.2	(1.0–1.6)	20.6	26.2	(0.6–1.0)
Minnesota	3630	30.4	(±1.7)	15.2	(±1.3)	28.4	32.4	(0.7–1.0)	12.6	17.7	(0.5–0.9)
Mississippi	1260	46.0	(±3.2)	25.3	(±2.9)	45.8	46.2	(0.7–1.3)	20.7	29.6	(0.4–0.9)
Missouri	1208	38.0	(±3.2)	20.9	(±2.6)	40.7	35.5	(0.9–1.7)	19.6	22.2	(0.6–1.2)
Montana	1412	33.5	(±2.8)	15.0	(±2.1)	37.2	29.9	(1.1–1.8)	12.7	17.4	(0.5–1.0)
Nebraska	1596	33.2	(±3.0)	13.6	(±2.3)	37.0	29.5	(1.0–2.0)	11.9	15.3	(0.5–1.2)
Nevada	1506	53.8	(±3.6)	27.1	(±3.2)	53.7	53.9	(0.7–1.4)	23.7	30.8	(0.5–1.0)
New Hampshire	1237	35.0	(±3.1)	17.3	(±2.4)	36.1	33.9	(0.8–1.5)	14.6	20.1	(0.5–1.0)
New Jersey	2593	42.9	(±2.3)	22.2	(±2.0)	45.9	40.1	(1.0–1.6)	20.8	23.6	(0.6–1.1)
New Mexico	899	48.7	(±4.2)	21.9	(±3.3)	50.6	46.8	(0.8–1.7)	16.1	27.6	(0.3–0.8)
New York	3594	40.0	(±1.9)	23.0	(±1.6)	44.8	35.4	(1.2–1.8)	23.0	23.1	(0.8–1.2)
North Carolina	2115	37.8	(±2.4)	21.1	(±2.0)	38.3	37.3	(0.8–1.3)	19.1	23.0	(0.6–1.1)
North Dakota	1383	28.6	(±2.7)	10.2	(±1.7)	33.9	23.0	(1.3–2.3)	8.7	11.8	(0.4–1.2)
Ohio	1156	27.2	(±2.7)	14.3	(±2.2)	29.7	24.8	(0.9–1.8)	14.1	14.5	(0.6–1.5)
Oklahoma	1297	37.7	(±3.1)	17.1	(±2.4)	36.8	38.5	(0.7–1.3)	12.8	21.1	(0.4–0.8)
Oregon	2375	40.9	(±2.2)	21.3	(±1.8)	44.6	37.2	(1.1–1.7)	19.5	23.2	(0.6–1.1)
Pennsylvania	2824	39.1	(±2.1)	18.3	(±1.6)	42.3	36.0	(1.1–1.6)	17.0	19.6	(0.6–1.1)
Rhode Island	1470	45.9	(±2.9)	22.4	(±2.4)	49.6	42.4	(1.0–1.8)	19.9	24.8	(0.5–1.1)
South Carolina	1562	39.8	(±3.1)	20.9	(±2.5)	40.6	39.1	(0.8–1.5)	15.8	25.7	(0.4–0.8)
South Dakota	1575	26.1	(±2.4)	10.1	(±1.6)	28.0	24.3	(0.9–1.6)	7.5	12.7	(0.4–0.9)
Tennessee	2455	37.8	(±2.2)	19.5	(±1.8)	38.4	37.2	(0.9–1.3)	17.5	21.4	(0.6–1.0)
Texas	1441	49.4	(±2.9)	25.7	(±2.4)	49.7	49.1	(0.8–1.4)	21.5	29.8	(0.5–0.9)
Utah	2380	37.3	(±2.5)	17.9	(±2.1)	40.3	34.4	(1.0–1.7)	16.2	19.5	(0.6–1.1)
Vermont	2058	38.2	(±2.5)	19.2	(±2.0)	42.5	33.9	(1.1–1.9)	18.2	20.2	(0.6–1.2)
Virginia	1603	51.2	(±2.9)	27.5	(±2.5)	53.1	49.2	(0.9–1.6)	25.5	29.5	(0.6–1.1)
Washington	3011	41.5	(±2.0)	22.4	(±1.7)	41.9	41.0	(0.9–1.3)	18.1	26.8	(0.5–0.8)
West Virginia	1848	29.9	(±2.3)	13.1	(±1.7)	31.2	28.6	(0.9–1.5)	10.1	16.0	(0.4–0.9)
Wisconsin	1838	39.9	(±3.0)	16.7	(±2.1)	40.5	39.2	(0.8–1.4)	14.3	19.1	(0.5–1.0)
Wyoming	2119	38.3	(±2.3)	18.7	(±1.8)	39.4	37.2	(0.9–1.4)	15.3	22.2	(0.5–0.8)
Mean		*41.8*	*(±0.5)*	*22.3*	*(±0.4)*	*43.7*	*40.0*	*(0.7–0.8)*	*19.9*	*24.7*	*(1.1-1.2)*

* Reasons given for testing include "just to find out," for routine checkup, doctor referral, sex partner referral, because of pregnancy, or other.
† Confidence interval.
§ Confidence interval for the difference between men and women.
¶ Persons aged 18–44 years were surveyed.

HIV Testing — Continued

receive testing for other reasons (*2*). As a result, tracking overall testing rates and voluntary testing rates can help target health-promotion efforts.

The findings in this report are subject to at least two limitations. First, because BRFSS excluded persons without telephones, some persons at high risk for HIV infection probably were excluded. Second, because the BRFSS relies on self-reported data, some bias is expected.

HIV testing can help reach at-risk persons with counseling and other prevention services and link infected persons with needed health-care services. General population surveys, such as BRFSS, provide data to assess the use of HIV testing services across geographical areas. However, not all persons need to be tested for HIV. CDC recommends HIV counseling and testing services for persons with specific risk factors for HIV infection and in specific screening settings (e.g., tissue donation and pregnancy). Prevention programs should be structured to increase the proportion of at-risk persons who receive HIV-testing services.

References

1. CDC. HIV counseling and testing—United States, 1993. MMWR 1995;44:169–75.
2. Higgins D, Galavotti C, O'Reilly K, et al. Evidence for the effects of HIV antibody counseling and testing on risk behaviors. JAMA 1991;266:2419–29.

Evaluation of Varicella Reporting to the National Notifiable Disease Surveillance System — United States, 1972–1997

Varicella (chickenpox) is a common, highly infectious, vaccine-preventable disease. Before 1995, an estimated 4 million cases of varicella occurred each year in the United States, approximately 100 patients died (*1*), and approximately 10,000 persons were hospitalized because of varicella and related complications. Approximately 95% of cases (*2*), 66% of hospitalizations, and 45% of the varicella-related deaths occurred among persons aged <20 years (CDC, unpublished data, 1998). In 1972, varicella became nationally notifiable in the United States; subsequently, 46 states* and the District of Columbia (DC) provided weekly reports to CDC's National Notifiable Disease Surveillance System (NNDSS). In 1981, varicella was deleted from the weekly morbidity report, and in 1982, states were encouraged to report varicella to NNDSS annually. In 1995, a live, attenuated varicella vaccine was licensed in the United States for routine use in children. This report describes changes in the annual reported incidence of varicella from 1972 to 1997 and discusses the need for increased surveillance with the availability of a vaccine.

Varicella cases reported to NNDSS during 1972–1997 were reviewed. The annual population estimates for the states, DC, and the nation from the Bureau of the Census were used to calculate annual incidence. Because, without a vaccination program, the average annual number of cases of varicella is approximately equal to the size of the birth cohort each year (*2*), the annual birth cohort was used to estimate the completeness of reporting.

In 1972, the reported national incidence of varicella was 78.4 cases per 100,000 population. During 1972–1987, the reported incidence of varicella ranged from 66.3 in

*Varicella was not reportable in Louisiana, New Jersey, North Carolina, and Tennessee.

Varicella Reporting — Continued

1974 to 94.1 in 1984, peaking every 3–5 years. From 1987 to 1997, the reported national incidence decreased 58%, from 88.0 to 36.9 (Figure 1).

The decrease from 1987 to 1997 corresponded with decreases in the number of states reporting to NNDSS and the completeness of reporting. The number of areas reporting varicella weekly to NNDSS declined from 46 states and DC in 1972 to 20 states[†] and DC in 1997. In 1972, cases constituting ≥3% of the birth cohort were reported in 27 states and DC (range: 0.1%–34.3%); the number of states reporting cases constituting ≥3% declined to 21 in 1982 and 17 in 1994. By 1997, of 20 states and DC reporting varicella, 10 states reported cases constituting ≥3% of their birth cohorts; three reported ≥10% (range: <0.1%–20.4%) (Figure 2).

During 1972–1997, 14 states maintained continuous reporting to CDC of varicella. In these states, the incidence of reported varicella increased from 107.0 in 1972 to 212.1 in 1987, then decreased to 95.9 in 1996 and 107.1 in 1997. These rates corresponded with levels of reporting, which were 6.2%–9.7% of the birth cohort in the 1970s, 9.1%–14.4% in the 1980s, and 6.6%–11.8% in the 1990s.

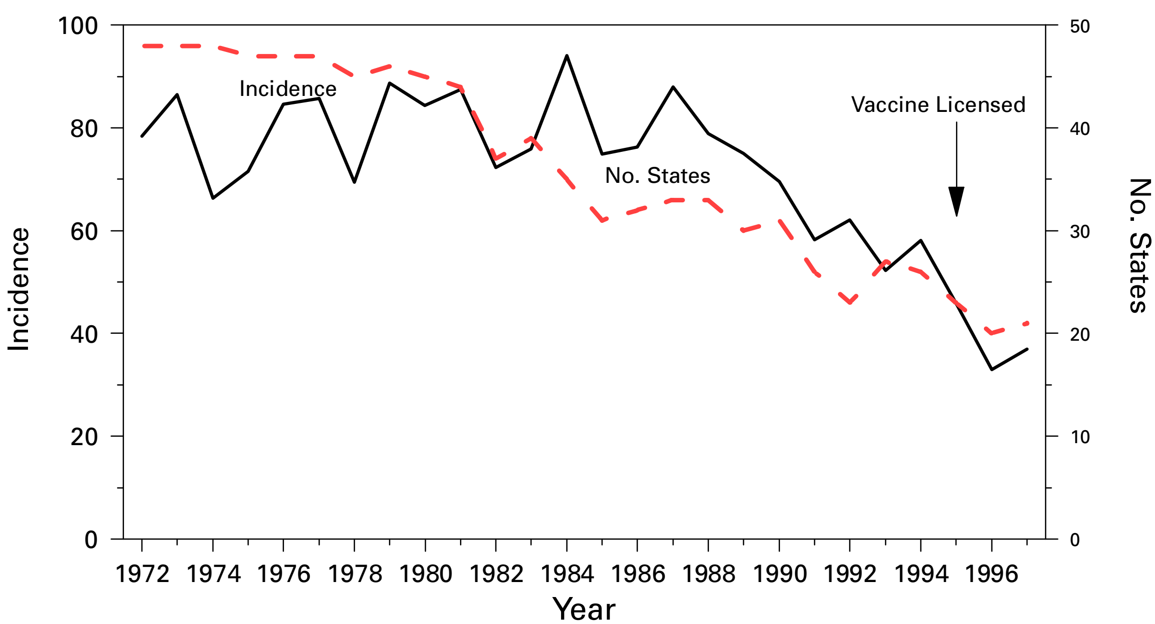
Reported by: Varicella Activity, Child Vaccine Preventable Diseases Br, and Vaccine Safety and Development Activity, Epidemiology and Surveillance Div, National Immunization Program, CDC.

Editorial Note: The data presented in this report suggest that the decline in the reported national incidence of varicella since 1987 resulted from the changes in state reporting requirements and practices. The low number of reporting states in 1997 and the incomplete reporting from participating states limits the use of NNDSS data to

---

[†] Arizona, Delaware, Hawaii, Illinois, Kansas, Louisiana, Maine, Massachusetts, Michigan, Missouri, North Dakota, Ohio, Rhode Island, South Carolina, Tennessee, Texas, Virginia, Utah, West Virginia, and Wisconsin.

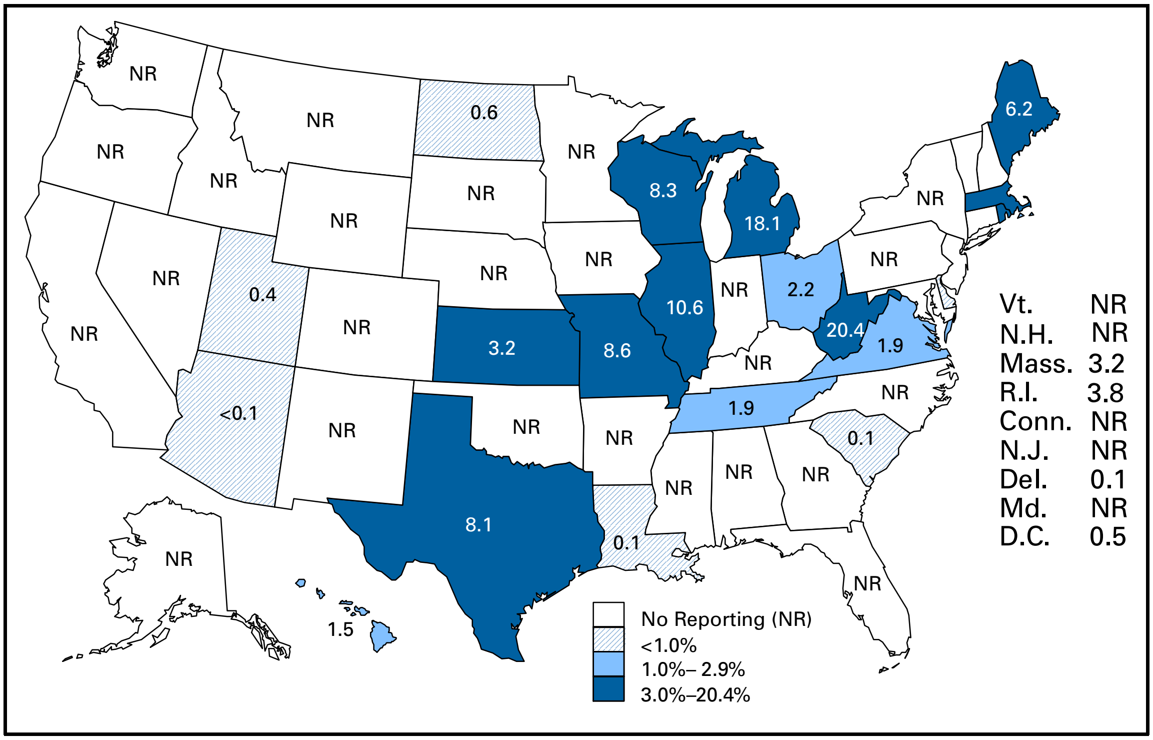
FIGURE 1. Incidence* of reported varicella and number of states reporting cases — United States, 1972–1997



*Per 100,000 population.

Varicella Reporting — Continued

FIGURE 2. Varicella reporting* — United States, 1997



*Expressed as percentage of annual birth cohort.

monitor the impact of vaccination against varicella at the national level. Three states have stopped reporting varicella since vaccine licensure. Among the 14 states that have reported continuously, the decline in incidence is due to a decrease in their level of reporting, which will make it difficult to interpret the expected decline in those states resulting from the varicella vaccination program. In these states, annual decreases in incidence that are higher than decreases for previous years might reflect the impact of the vaccination program. Improvements in the quality of varicella reporting are needed to properly monitor vaccine use and its impact on disease trends.

Surveillance requirements change depending on the stage of a vaccination program. Aggregate case reporting, preferably by age group, is adequate in the early phase together with outbreak notifications and limited outbreak response. As vaccine uptake increases and disease declines, individual case reporting will be needed with more intensive outbreak control. For measles, reporting of 10% of cases was adequate to monitor disease trends during the introductory phase of the measles vaccination program (*3*); presumably this level of reporting for varicella would be adequate to monitor the impact of the varicella vaccination program.

The varicella vaccine is recommended for susceptible persons aged ≥12 months (*4,5*). In 1997, national varicella vaccine coverage among children aged 19–35 months was 26%, with state estimates ranging from 4% to 40% (*6*). With low levels of reporting, such coverage levels are too low to have a detectable impact on disease reporting to NNDSS.

To better assess the health burden of disease and the impact of national and state varicella vaccination programs, CDC encourages states and local areas to make

Varicella Reporting — Continued

varicella a reportable disease, to investigate and report varicella deaths to CDC (*7*), and to establish aggregate case reporting either by enhancing existing surveillance systems or by establishing school, day care, and/or health-care-provider–based reporting of varicella (*8*). For national varicella surveillance, until all states are reporting varicella cases to CDC with consistent levels of reporting from year to year, complementary surveillance strategies are needed.

National surveillance for varicella deaths began in 1998, and deaths became reportable to CDC on January 1, 1999. CDC supports active surveillance for varicella in three geographic areas in the United States and, together with the Council of State and Territorial Epidemiologists, has encouraged and/or supported states in the development of alternative interim methods for surveillance, including monitoring hospitalizations, sentinel surveillance by physicians, schools, and/or child-care centers for varicella, and statewide incidence surveys. Assessing the impact of vaccination at the national level will involve analyzing information from multiple data sources.

References

1. CDC. Varicella-related deaths among adults—United States, 1997. MMWR 1997;46:409–12.
2. Wharton M. The epidemiology of varicella-zoster virus infections. Infect Dis Clin N Am 1996;10: 571–81.
3. CDC. Reported cases of specified notifiable diseases per 100,000 population, United States, 1964–1973. MMWR 1973;22(no. 53):3.
4. CDC. Prevention of varicella: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1996;45(no. RR-11).
5. Committee on Infectious Diseases, American Academy of Pediatrics. Recommendations for the use of live attenuated varicella vaccine. Pediatrics 1995;95:791–6.
6. CDC. National, state, and urban area vaccination coverage levels among children aged 19–35 months—United States, 1997. MMWR 1998;47:547–54.
7. Council of State and Territorial Epidemiologists. Inclusion of varicella-related deaths in the National Public Health Surveillance System. Atlanta, Georgia: Council of State and Territorial Epidemiologists, 1998; position statement no. ID-10.
8. CDC. Manual for the surveillance of vaccine-preventable diseases. Atlanta, Georgia: US Department of Health and Human Services, CDC, National Immunization Program, and Council of State and Territorial Epidemiologists, 1997.

Notice to Readers

Epidemiology in Action Course

CDC and Emory University's Rollins School of Public Health will co-sponsor a course, "Epidemiology in Action," during April 26–May 7, 1999. The course is designed for state and local public health professionals.

The course emphasizes the practical application of epidemiology to public health problems and comprises lectures, workshops, classroom exercises (including actual epidemiologic problems), and roundtable discussions. Topics covered include descriptive epidemiology and biostatistics, analytic epidemiology, epidemic investigations, public health surveillance, surveys, and sampling, EpiInfo software training, and discussions of selected prevalent diseases. There is a tuition charge.

Deadline for application is March 15. Additional information and applications are available from Emory University, International Health Dept (PSB), 1518 Clifton Rd., N.E., Room 742, Atlanta, GA 30322; telephone (404) 727-3485; fax (404) 727-4590; e-mail pvaleri@sph.emory.edu, or World-Wide Web site, http://www.sph.emory.edu/EPICOURSES/.

Notice to Readers

Satellite Broadcast on Accessing HIV/AIDS Information Resources

CDC and the Public Health Training Network will co-sponsor *Accessing HIV/AIDS Information Resources*, a live interactive satellite videoconference, on Thursday, February 11, 1999, from 1 p.m. to 3 p.m. eastern standard time. This course is designed for nurses, physicians, epidemiologists, public health educators, counselors, administrators, and others who provide HIV/AIDS-related services.

This broadcast will provide an overview of electronically available HIV/AIDS-related resources. The program will include evaluation and selection of HIV/AIDS-related resources, case scenarios, demonstrations of online searching, and web-based tutorials. Tutorials will supplement the satellite broadcast. Continuing education credit will be awarded for a variety of professions, based on 2 hours of instruction.

Registration information is available though the CDC fax information system, (888) 232-3299; request document number 130019. Additional information about the videoconference is available from the World-Wide Web site, http://www.cdc.gov/phtn/aidsinfo/aidsinfo.htm.

Notice to Readers

Satellite Broadcast on Perinatal HIV Prevention

CDC and the Public Health Training Network will co-sponsor "Update on Preventing Perinatal Transmission of HIV," a satellite broadcast, on Thursday, April 29, 1999, from 1 p.m. to 3 p.m. eastern daylight time. This forum, the fifth in the Human Immunodeficiency Virus (HIV) Prevention Update series, will focus on preventing perinatal transmission of HIV. This broadcast is designed for health-care providers, staff, and volunteers in HIV/sexually transmitted diseases prevention in health departments, community-based organizations, community-planning groups, education, and administration.

The videoconference will include recommendations from a study by the Institute of Medicine. Additional topics will include the effect of efforts to prevent HIV transmission, key research findings about barriers to prevention, provider strategies for overcoming barriers, clinical management (including treatment and confidentiality) for pregnant HIV-positive women, and prevention resources or guidelines (including dealing with HIV test results). Viewers can submit questions before, during, and after the broadcast.

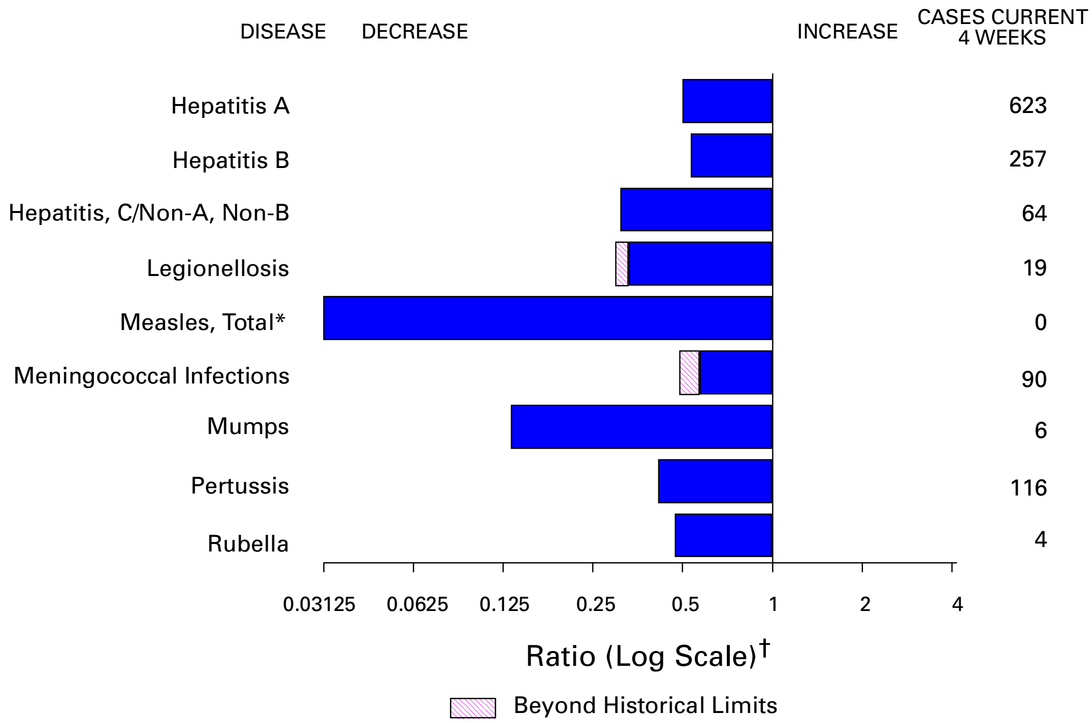
Notices to Readers — Continued

Additional information is available through the World-Wide Web, http://www.cdcnpin.org/broadcast/, and from CDC's fax information system, (888) 232-3299 (request document number 130026 and a provide return fax number).

Erratum: Vol. 47, No. 48

In the article, "Hypothermia-Related Deaths—Georgia, January 1996–December 1997, and United States, 1979–1995," the time frame provided for data were published incorrectly in several sentences. On page 1037, the last clause of the last sentence of the first paragraph should read ". . . and summarizes hypothermia-related deaths in Georgia during January *1997*–December 1997 and in the United States during 1979–1995." On page 1038, the first line of the paragraph under "**Georgia**" should begin, "From January *1997* through December 1997, 14 deaths attributable to hypothermia . . . " The last sentence of that same paragraph should begin, "*From January 1996 through December 1997*, five hypothermia-related deaths . . . "

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending January 23, 1999, with historical data — United States



*The large apparent decrease in the number of reported cases of measles (total) reflects dramatic fluctuations in the historical baseline. (Ratio [log scale] for week 3 measles [total] is 0.00000.)

† 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.

TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending January 23, 1999 (3rd Week)

	Cum. 1999		Cum. 1999
Anthrax	-	Plague	-
Brucellosis	1	Poliomyelitis, paralytic	-
Cholera	-	Psittacosis	1
Congenital rubella syndrome	-	Rabies, human	-
Cryptosporidiosis*	24	Rocky Mountain spotted fever (RMSF)	9
Diphtheria	-	Streptococcal disease, invasive Group A	34
Encephalitis: California*	-	Streptococcal toxic-shock syndrome*	-
eastern equine*	-	Syphilis, congenital¶	-
St. Louis*	-	Tetanus	-
western equine*	-	Toxic-shock syndrome	1
Hansen Disease	-	Trichinosis	1
Hantavirus pulmonary syndrome*†	-	Typhoid fever	2
Hemolytic uremic syndrome, post-diarrheal*	2	Yellow fever	-
HIV infection, pediatric*§	-		

-:no reported cases
*Not notifiable in all states.
† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§ Updated monthly from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update December 27, 1998.
¶ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending January 23, 1999, and January 24, 1998 (3rd Week)

Reporting Area	AIDS		Chlamydia		*Escherichia coli* O157:H7		Gonorrhea		Hepatitis C/NA,NB	
					NETSS†	PHLIS§				
	Cum. 1999*	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1999	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	-	1,630	19,089	30,613	45	10	11,924	19,651	63	132
NEW ENGLAND	-	62	653	1,174	6	2	203	393	11	6
Maine	-	-	-	11	1	-	-	2	-	-
N.H.	-	-	46	50	-	-	-	7	-	-
Vt.	-	5	6	17	-	-	3	-	-	1
Mass.	-	6	481	521	4	2	168	151	11	5
R.I.	-	13	119	156	-	-	31	23	-	-
Conn.	-	38	1	419	1	-	1	210	-	-
MID. ATLANTIC	-	735	2,987	4,330	2	-	1,599	2,715	-	6
Upstate N.Y.	-	6	N	N	2	-	31	236	-	6
N.Y. City	-	476	1,715	1,920	-	-	877	1,036	-	-
N.J.	-	94	132	601	-	-	85	463	-	-
Pa.	-	159	1,140	1,809	N	-	606	980	-	-
E.N. CENTRAL	-	22	2,152	5,420	15	1	1,719	3,951	11	31
Ohio	-	1	835	1,623	13	1	609	914	-	2
Ind.	-	1	-	301	2	-	391	320	-	1
Ill.	-	2	1,104	U	-	-	599	U	-	4
Mich.	-	14	175	1,571	-	-	81	1,256	11	24
Wis.	-	4	38	751	N	-	39	308	-	-
W.N. CENTRAL	-	23	371	1,891	5	2	135	740	-	23
Minn.	-	-	44	389	2	2	28	166	-	-
Iowa	-	-	6	95	3	-	6	25	-	1
Mo.	-	19	-	739	-	-	-	268	-	22
N. Dak.	-	-	-	55	-	-	-	3	-	-
S. Dak.	-	-	55	85	-	-	8	17	-	-
Nebr.	-	-	-	123	-	-	-	60	-	-
Kans.	-	4	266	405	-	-	93	201	-	-
S. ATLANTIC	-	372	6,030	5,169	6	2	4,774	4,739	4	5
Del.	-	-	144	75	-	-	90	80	-	-
Md.	-	43	435	382	1	-	318	245	2	2
D.C.	-	-	N	N	-	-	184	237	-	-
Va.	-	36	847	335	N	-	805	332	-	1
W. Va.	-	2	105	168	-	1	45	47	-	-
N.C.	-	44	1,227	914	2	1	1,150	849	-	2
S.C.	-	40	2,042	1,013	1	-	1,161	835	-	-
Ga.	-	2	-	1,379	-	-	-	1,283	-	-
Fla.	-	205	1,230	903	2	-	1,021	831	2	-
E.S. CENTRAL	-	45	1,331	2,098	4	-	1,202	2,279	4	4
Ky.	-	18	-	282	-	-	-	217	-	1
Tenn.	-	27	678	696	3	-	527	719	3	3
Ala.	-	-	653	543	1	-	675	770	1	-
Miss.	-	-	-	577	-	-	-	573	-	-
W.S. CENTRAL	-	311	1,810	4,026	-	-	1,313	2,979	-	-
Ark.	-	15	223	128	-	-	46	202	-	-
La.	-	-	1,094	754	-	-	1,001	832	-	-
Okla.	-	14	493	450	-	-	266	276	-	-
Tex.	-	282	-	2,694	-	-	-	1,669	-	-
MOUNTAIN	-	55	1,159	1,287	4	1	377	460	5	13
Mont.	-	5	-	6	-	-	-	-	-	3
Idaho	-	3	-	70	-	-	-	7	2	3
Wyo.	-	-	-	39	-	-	-	2	-	1
Colo.	-	20	364	280	2	1	77	175	1	2
N. Mex.	-	9	224	266	1	-	52	56	2	1
Ariz.	-	15	522	425	-	-	243	192	-	-
Utah	-	-	49	113	1	-	5	13	-	2
Nev.	-	3	-	88	-	-	-	15	-	1
PACIFIC	-	5	2,596	5,218	3	2	602	1,395	28	44
Wash.	-	-	-	509	-	1	-	88	-	-
Oreg.	-	-	-	380	-	1	-	57	-	-
Calif.	-	-	2,512	4,110	3	-	592	1,207	28	44
Alaska	-	-	28	93	-	-	3	16	-	-
Hawaii	-	5	56	126	-	-	7	27	-	-
Guam	-	-	-	9	N	-	-	1	-	-
P.R.	-	-	U	U	-	U	13	35	-	-
V.I.	-	-	N	N	N	U	U	U	U	U
Amer. Samoa	-	-	U	U	N	U	U	U	U	U
C.N.M.I.	-	-	N	N	N	U	-	5	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update December 27, 1998.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending January 23, 1999, and January 24, 1998 (3rd Week)

	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
Reporting Area	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999*	Cum. 1998	Cum. 1999
UNITED STATES	18	55	83	153	29	60	200	407	357	460	135
NEW ENGLAND	-	-	2	6	-	2	4	5	13	8	36
Maine	-	-	-	-	-	-	-	-	-	-	2
N.H.	-	-	-	-	-	-	-	1	-	-	-
Vt.	-	-	-	-	-	-	-	-	-	-	7
Mass.	-	-	2	6	-	2	4	4	4	2	13
R.I.	-	-	-	-	-	-	-	-	5	-	4
Conn.	-	-	-	-	-	-	-	-	4	6	10
MID. ATLANTIC	4	4	49	106	3	23	4	20	9	4	33
Upstate N.Y.	-	-	5	29	2	3	-	-	-	-	15
N.Y. City	-	1	-	4	-	16	3	3	9	4	U
N.J.	2	-	41	17	1	1	-	7	-	-	14
Pa.	2	3	3	56	-	3	1	10	-	-	4
E.N. CENTRAL	8	28	4	6	-	10	32	62	17	36	-
Ohio	3	12	4	3	-	1	4	15	5	5	-
Ind.	2	5	-	2	-	1	12	21	-	13	-
Ill.	-	5	-	-	-	5	16	U	12	17	-
Mich.	3	4	-	1	-	2	-	-	-	-	-
Wis.	-	2	U	U	-	1	-	8	-	1	-
W.N. CENTRAL	-	3	1	1	-	3	-	5	6	4	14
Minn.	-	-	-	-	-	-	-	-	5	3	5
Iowa	-	-	-	1	-	-	-	-	-	-	2
Mo.	-	1	-	-	-	3	-	2	1	1	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	3
S. Dak.	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	2	-	-	-	-	-	1	-	-	-
Kans.	-	-	1	-	-	-	-	2	-	-	4
S. ATLANTIC	2	6	22	22	8	6	84	138	16	43	44
Del.	1	1	-	-	-	-	-	-	-	-	-
Md.	-	3	18	21	3	6	7	35	-	-	9
D.C.	-	1	-	1	4	-	1	1	2	5	-
Va.	-	1	-	-	-	-	11	14	-	-	7
W. Va.	N	N	-	-	-	-	1	-	-	5	-
N.C.	1	-	4	-	-	-	37	32	-	12	16
S.C.	-	-	-	-	-	-	11	18	14	21	-
Ga.	-	-	-	-	-	-	-	21	-	-	-
Fla.	-	-	-	-	1	-	16	17	-	-	12
E.S. CENTRAL	-	4	3	4	-	1	53	71	9	40	2
Ky.	-	3	-	-	-	-	-	8	-	5	-
Tenn.	-	-	-	4	-	-	29	33	-	14	2
Ala.	-	-	3	-	-	-	24	23	9	17	-
Miss.	-	1	-	-	-	1	-	7	-	4	-
W.S. CENTRAL	-	-	-	-	1	-	22	63	4	76	-
Ark.	-	-	-	-	-	-	1	8	-	-	-
La.	-	-	-	-	1	-	9	27	-	-	-
Okla.	-	-	-	-	-	-	12	4	4	3	-
Tex.	-	-	-	-	-	-	-	24	-	73	-
MOUNTAIN	-	5	-	-	3	2	-	12	3	19	5
Mont.	-	-	-	-	1	-	-	-	-	-	1
Idaho	-	-	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	2	-	-	-	1	-	1	-	3	1
N. Mex.	-	1	-	-	1	1	-	-	1	2	-
Ariz.	-	-	-	-	1	-	-	8	-	3	3
Utah	-	2	-	-	-	-	-	2	2	-	-
Nev.	-	-	-	-	-	-	-	1	-	11	-
PACIFIC	4	5	2	8	14	13	1	31	280	230	1
Wash.	-	-	-	-	1	-	-	-	14	7	-
Oreg.	-	-	-	-	-	2	-	1	-	7	-
Calif.	4	5	2	8	13	11	1	30	256	214	1
Alaska	-	-	-	-	-	-	-	-	1	1	-
Hawaii	-	-	-	-	-	-	-	-	9	1	-
Guam	-	-	-	-	-	-	-	-	-	4	-
P.R.	-	-	-	-	-	-	14	14	-	-	3
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	-	-	-	-	1	-	3	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending January 23, 1999, and January 24, 1998 (3rd Week)

	H. influenzae, invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported†		Total	
Reporting Area	Cum. 1999*	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	1999	Cum. 1999	1999	Cum. 1999	Cum. 1999	Cum. 1998
UNITED STATES	28	63	424	884	154	420	-	1	-	-	1	1
NEW ENGLAND	-	6	8	25	-	4	-	-	-	-	-	1
Maine	-	-	1	5	-	-	-	-	-	-	-	-
N.H.	-	1	1	1	-	1	-	-	-	-	-	-
Vt.	-	-	-	1	-	-	-	-	-	-	-	-
Mass.	-	5	3	6	-	-	-	-	-	-	-	1
R.I.	-	-	-	-	-	-	-	-	-	-	-	-
Conn.	-	-	3	12	-	3	-	-	-	-	-	-
MID. ATLANTIC	4	9	11	60	11	66	-	-	-	-	-	-
Upstate N.Y.	3	3	2	12	1	8	-	-	-	-	-	-
N.Y. City	-	3	-	26	-	15	-	-	-	-	-	-
N.J.	1	3	8	10	5	18	-	-	-	-	-	-
Pa.	-	-	1	12	5	25	-	-	-	-	-	-
E.N. CENTRAL	7	8	85	200	7	135	-	-	-	-	-	-
Ohio	6	2	35	30	6	6	-	-	-	-	-	-
Ind.	-	1	3	21	-	66	-	-	-	-	-	-
Ill.	1	5	-	55	-	13	-	-	-	-	-	-
Mich.	-	-	47	84	1	38	U	-	U	-	-	-
Wis.	-	-	-	10	-	12	-	-	-	-	-	-
W.N. CENTRAL	1	-	1	70	1	22	-	-	-	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	21	-	3	-	-	-	-	-	-
Mo.	-	-	-	45	-	16	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	-	-	-	-	-	-
Nebr.	-	-	-	1	1	-	-	-	-	-	-	-
Kans.	1	-	1	3	-	2	-	-	-	-	-	-
S. ATLANTIC	10	10	55	33	30	32	-	-	-	-	-	-
Del.	-	-	-	-	-	-	-	-	-	-	-	-
Md.	9	6	21	9	7	13	-	-	-	-	-	-
D.C.	1	-	4	2	-	1	-	-	-	-	-	-
Va.	-	-	1	6	1	2	-	-	-	-	-	-
W. Va.	-	1	-	-	-	-	-	-	-	-	-	-
N.C.	-	-	10	6	16	15	-	-	-	-	-	-
S.C.	-	-	-	3	2	-	-	-	-	-	-	-
Ga.	-	3	11	7	1	1	-	-	-	-	-	-
Fla.	-	-	8	-	3	-	-	-	-	-	-	-
E.S. CENTRAL	2	5	22	27	9	14	-	-	-	-	-	-
Ky.	-	-	-	1	-	1	U	-	U	-	-	-
Tenn.	2	1	7	9	3	7	-	-	-	-	-	-
Ala.	-	4	14	6	6	6	-	-	-	-	-	-
Miss.	-	-	1	11	-	-	-	-	-	-	-	-
W.S. CENTRAL	2	1	14	44	4	14	-	-	-	-	-	-
Ark.	-	-	3	1	4	4	-	-	-	-	-	-
La.	-	-	1	-	-	-	-	-	-	-	-	-
Okla.	1	-	2	19	-	-	-	-	-	-	-	-
Tex.	1	1	8	24	-	10	-	-	-	-	-	-
MOUNTAIN	2	15	46	189	20	41	-	1	-	-	1	-
Mont.	-	-	-	3	-	1	-	-	-	-	-	-
Idaho	-	-	1	5	3	3	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	U	-	U	-	-	-
Colo.	-	1	19	16	9	5	-	1	-	-	1	-
N. Mex.	2	-	3	12	7	15	-	-	-	-	-	-
Ariz.	-	7	20	120	1	8	-	-	-	-	-	-
Utah	-	-	3	11	-	3	-	-	-	-	-	-
Nev.	-	7	-	22	-	6	U	-	U	-	-	-
PACIFIC	-	9	182	236	72	92	-	-	-	-	-	-
Wash.	-	-	2	1	-	-	-	-	-	-	-	-
Oreg.	-	6	-	13	-	7	U	-	U	-	-	-
Calif.	-	3	180	220	71	84	-	-	-	-	-	-
Alaska	-	-	-	-	1	1	-	-	-	-	-	-
Hawaii	-	-	-	2	-	-	-	-	-	-	-	-
Guam	-	-	-	-	-	-	U	-	U	-	-	-
P.R.	-	1	-	1	1	8	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	-	-	3	U	-	U	-	-	-

N: Not notifiable U: Unavailable -: no reported cases

*Of 2 cases among children aged <5 years, serotype was reported for 0.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending January 23, 1999, and January 24, 1998 (3rd Week)

	Meningococcal Disease		Mumps			Pertussis			Rubella		
Reporting Area	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998
UNITED STATES	73	194	2	6	19	17	95	205	3	4	4
NEW ENGLAND	7	11	-	-	-	3	45	45	-	-	-
Maine	2	1	-	-	-	-	-	1	-	-	-
N.H.	-	1	-	-	-	-	-	5	-	-	-
Vt.	1	-	-	-	-	1	6	11	-	-	-
Mass.	4	5	-	-	-	2	39	28	-	-	-
R.I.	-	-	-	-	-	-	-	-	-	-	-
Conn.	-	4	-	-	-	-	-	-	-	-	-
MID. ATLANTIC	7	18	-	-	1	1	3	6	-	-	2
Upstate N.Y.	1	2	-	-	1	1	3	4	-	-	1
N.Y. City	-	4	-	-	-	-	-	-	-	-	-
N.J.	5	8	-	-	-	-	-	2	-	-	1
Pa.	1	4	-	-	-	-	-	-	-	-	-
E.N. CENTRAL	11	26	-	-	1	4	4	28	-	-	-
Ohio	9	13	-	-	1	4	4	12	-	-	-
Ind.	-	3	-	-	-	-	-	-	-	-	-
Ill.	2	8	-	-	-	-	-	-	-	-	-
Mich.	-	1	U	-	-	U	-	5	U	-	-
Wis.	-	1	-	-	-	-	-	11	-	-	-
W.N. CENTRAL	1	13	-	1	-	-	-	7	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	1	-	1	-	-	-	3	-	-	-
Mo.	-	6	-	-	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	1	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	2	-	-	-
Kans.	1	5	-	-	-	-	-	2	-	-	-
S. ATLANTIC	16	30	1	2	5	3	11	26	3	3	1
Del.	-	-	-	-	-	-	-	-	-	-	-
Md.	6	7	-	-	-	-	4	5	-	-	-
D.C.	-	-	-	-	-	-	-	-	-	-	-
Va.	-	3	-	-	-	-	-	-	-	-	-
W. Va.	-	2	-	-	-	-	-	-	-	-	-
N.C.	2	3	1	1	3	3	7	21	3	3	1
S.C.	1	4	-	-	2	-	-	-	-	-	-
Ga.	-	11	-	-	-	-	-	-	-	-	-
Fla.	7	-	-	1	-	-	-	-	-	-	-
E.S. CENTRAL	5	21	-	-	-	1	4	4	-	1	-
Ky.	-	6	U	-	-	U	-	-	U	-	-
Tenn.	1	5	-	-	-	1	1	-	-	-	-
Ala.	4	9	-	-	-	-	3	4	-	-	-
Miss.	-	1	-	-	-	-	-	-	-	1	-
W.S. CENTRAL	-	8	-	-	3	-	-	-	-	-	1
Ark.	-	2	-	-	-	-	-	-	-	-	-
La.	-	-	-	-	-	-	-	-	-	-	-
Okla.	-	6	-	-	-	-	-	-	-	-	-
Tex.	-	-	-	-	3	-	-	-	-	-	1
MOUNTAIN	9	17	-	-	2	3	26	63	-	-	-
Mont.	-	1	-	-	-	-	-	-	-	-	-
Idaho	1	-	-	-	-	1	14	25	-	-	-
Wyo.	-	1	U	-	-	U	-	-	U	-	-
Colo.	2	7	-	-	-	1	1	10	-	-	-
N. Mex.	1	2	N	N	N	1	3	25	-	-	-
Ariz.	3	4	-	-	1	-	1	-	-	-	-
Utah	2	1	-	-	-	-	7	2	-	-	-
Nev.	-	1	U	-	1	U	-	1	U	-	-
PACIFIC	17	50	1	3	7	2	2	26	-	-	-
Wash.	2	4	-	-	-	2	2	-	-	-	-
Oreg.	-	16	N	N	N	U	-	5	U	-	-
Calif.	13	30	1	2	2	-	-	21	-	-	-
Alaska	2	-	-	-	2	-	-	-	-	-	-
Hawaii	-	-	-	1	3	-	-	-	-	-	-
Guam	-	-	U	-	-	U	-	-	U	-	-
P.R.	-	-	-	-	-	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	-	-	U	-	-	U	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE IV. Deaths in 122 U.S. cities,* week ending January 23, 1999 (3rd Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	669	504	108	33	14	10	81
Boston, Mass.	141	97	29	8	2	5	19
Bridgeport, Conn.	40	31	7	2	-	-	2
Cambridge, Mass.	20	18	2	-	-	-	3
Fall River, Mass.	35	29	5	1	-	-	1
Hartford, Conn.	67	53	9	4	-	1	8
Lowell, Mass.	40	30	6	4	-	-	3
Lynn, Mass.	15	12	2	-	1	-	-
New Bedford, Mass.	48	43	3	2	-	-	3
New Haven, Conn.	46	29	9	5	2	1	1
Providence, R.I.	46	36	8	1	1	-	17
Somerville, Mass.	7	6	1	-	-	-	2
Springfield, Mass.	42	27	9	-	5	1	11
Waterbury, Conn.	39	30	8	1	-	-	2
Worcester, Mass.	83	63	10	5	3	2	9
MID. ATLANTIC	2,739	2,013	477	161	47	41	88
Albany, N.Y.	71	58	10	1	2	-	8
Allentown, Pa.	25	20	3	1	1	-	2
Buffalo, N.Y.	U	U	U	U	U	U	U
Camden, N.J.	21	9	6	5	-	1	1
Elizabeth, N.J.	12	11	-	1	-	-	-
Erie, Pa.	68	56	8	3	1	-	2
Jersey City, N.J.	77	56	14	4	-	3	-
New York City, N.Y.	1,539	1,129	273	90	25	22	6
Newark, N.J.	80	35	22	15	4	4	4
Paterson, N.J.	39	29	9	-	1	-	3
Philadelphia, Pa.	299	220	50	20	6	3	11
Pittsburgh, Pa.§	82	64	11	5	-	2	7
Reading, Pa.	42	38	2	1	1	-	4
Rochester, N.Y.	154	120	26	3	-	5	18
Schenectady, N.Y.	39	30	7	1	1	-	4
Scranton, Pa.	42	34	6	2	-	-	3
Syracuse, N.Y.	95	68	15	7	4	1	8
Trenton, N.J.	30	19	9	2	-	-	4
Utica, N.Y.	24	17	6	-	1	-	3
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,256	1,620	413	153	23	46	144
Akron, Ohio	55	41	8	4	-	2	3
Canton, Ohio	37	34	2	1	-	-	9
Chicago, Ill.	393	233	89	47	9	14	25
Cincinnati, Ohio	123	81	20	8	3	11	17
Cleveland, Ohio	177	132	31	12	1	1	5
Columbus, Ohio	230	166	48	9	3	4	15
Dayton, Ohio	160	127	27	6	-	-	16
Detroit, Mich.	247	167	54	22	2	2	5
Evansville, Ind.	51	45	6	-	-	-	3
Fort Wayne, Ind.	95	73	16	5	-	1	4
Gary, Ind.	9	5	4	-	-	-	1
Grand Rapids, Mich.	68	55	9	2	-	2	10
Indianapolis, Ind.	113	89	19	2	2	1	3
Lansing, Mich.	68	49	12	5	-	2	3
Milwaukee, Wis.	173	129	30	9	2	3	10
Peoria, Ill.	66	45	9	10	1	1	8
Rockford, Ill.	46	32	10	3	-	1	2
South Bend, Ind.	56	48	5	3	-	-	3
Toledo, Ohio	U	U	U	U	U	U	U
Youngstown, Ohio	89	69	14	5	-	1	2
W.N. CENTRAL	587	441	104	25	9	7	35
Des Moines, Iowa	U	U	U	U	U	U	U
Duluth, Minn.	29	25	3	-	-	1	3
Kansas City, Kans.	U	U	U	U	U	U	U
Kansas City, Mo.	85	61	15	5	2	1	-
Lincoln, Nebr.	32	25	6	1	-	-	2
Minneapolis, Minn.	161	121	32	5	1	2	12
Omaha, Nebr.	113	84	16	8	4	1	9
St. Louis, Mo.	92	67	19	2	2	2	6
St. Paul, Minn.	75	58	13	4	-	-	3
Wichita, Kans.	U	U	U	U	U	U	U

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,050	705	224	81	24	16	69
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	126	82	30	13	1	-	15
Charlotte, N.C.	104	69	21	8	3	3	11
Jacksonville, Fla.	138	98	24	8	5	3	8
Miami, Fla.	100	64	20	11	4	1	2
Norfolk, Va.	66	44	19	1	1	1	7
Richmond, Va.	76	54	13	5	2	2	3
Savannah, Ga.	69	51	14	4	-	-	3
St. Petersburg, Fla.	92	72	15	4	-	1	7
Tampa, Fla.	182	115	33	22	7	5	10
Washington, D.C.	84	54	24	5	1	-	3
Wilmington, Del.	13	2	11	-	-	-	-
E.S. CENTRAL	1,054	732	211	70	30	10	81
Birmingham, Ala.	162	119	29	8	4	1	25
Chattanooga, Tenn.	69	49	13	6	-	1	9
Knoxville, Tenn.	111	75	24	9	3	-	9
Lexington, Ky.	76	52	17	5	1	1	5
Memphis, Tenn.	295	198	65	23	5	4	25
Mobile, Ala.	86	63	16	3	3	1	2
Montgomery, Ala.	80	53	15	7	5	-	6
Nashville, Tenn.	175	123	32	9	9	2	-
W.S. CENTRAL	1,637	1,120	297	110	50	52	108
Austin, Tex.	98	64	19	12	1	2	5
Baton Rouge, La.	32	16	4	2	2	-	1
Corpus Christi, Tex.	65	46	8	3	4	4	3
Dallas, Tex.	238	145	48	13	6	26	8
El Paso, Tex.	84	68	13	2	1	-	2
Ft. Worth, Tex.	134	101	25	5	3	-	16
Houston, Tex.	354	235	71	31	11	6	29
Little Rock, Ark.	91	63	17	7	1	3	5
New Orleans, La.	88	59	16	8	5	-	-
San Antonio, Tex.	242	177	41	14	5	5	20
Shreveport, La.	73	46	17	6	2	2	4
Tulsa, Okla.	138	100	18	7	9	4	15
MOUNTAIN	1,021	732	165	79	29	15	89
Albuquerque, N.M.	131	94	18	9	8	2	9
Boise, Idaho	28	21	4	1	2	-	3
Colo. Springs, Colo.	60	47	7	4	1	1	5
Denver, Colo.	112	73	17	14	3	4	11
Las Vegas, Nev.	296	220	50	20	3	3	17
Ogden, Utah	34	21	5	7	1	-	3
Phoenix, Ariz.	84	62	15	4	-	3	12
Pueblo, Colo.	30	23	3	2	2	-	2
Salt Lake City, Utah	117	73	24	11	8	1	11
Tucson, Ariz.	129	98	22	7	1	1	16
PACIFIC	1,751	1,300	294	105	30	21	204
Berkeley, Calif.	13	9	3	1	-	-	1
Fresno, Calif.	129	102	14	7	5	1	16
Glendale, Calif.	19	18	1	-	-	-	1
Honolulu, Hawaii	81	58	15	4	-	4	4
Long Beach, Calif.	70	48	16	4	1	1	11
Los Angeles, Calif.	359	256	65	28	4	6	22
Pasadena, Calif.	32	25	5	-	2	-	2
Portland, Oreg.	109	87	14	6	1	1	9
Sacramento, Calif.	305	218	61	15	7	4	59
San Diego, Calif.	144	107	21	12	2	2	20
San Francisco, Calif.	144	112	22	7	2	1	27
San Jose, Calif.	U	U	U	U	U	U	U
Santa Cruz, Calif.	32	25	4	2	1	-	6
Seattle, Wash.	118	83	23	9	2	1	3
Spokane, Wash.	58	47	7	3	1	-	7
Tacoma, Wash.	138	105	23	7	2	-	16
TOTAL	12,764¶	9,167	2,293	817	256	218	899

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 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

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

¶Total includes unknown ages.

Contributors to the Production of the *MMWR* (Weekly)
Weekly Notifiable Disease Morbidity Data and 122 Cities Mortality Data

Samuel L. Groseclose, D.V.M., M.P.H.

State Support Team
Robert Fagan
Scott Connolly
Gerald Jones
David Nitschke
Carol A. Worsham

CDC Operations Team
Carol M. Knowles
Deborah A. Adams
Willie J. Anderson
Patsy A. Hall
Amy K. Henion

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format and on a paid subscription basis for paper copy. To receive an electronic copy on Friday of each week, send an e-mail message to *listserv@listserv.cdc.gov*. The body content should read *SUBscribe mmwr-toc*. Electronic copy also is available from CDC's World-Wide Web server at *http://www.cdc.gov/* or from CDC's file transfer protocol server at *ftp.cdc.gov*. To subscribe for paper copy, contact Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to: Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone (888) 232-3228.

☆**U.S. Government Printing Office: 1999-733-228/87055 Region IV**