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National Diabetes Awareness Month — November 1999

November is National Diabetes Awareness Month. In the United States, an estimated 15.7 million persons have diabetes (*1*). During November, CDC, its 59 state and territorial diabetes-control programs, and other partners will highlight activities that emphasize preventing complications in persons with diabetes and assessing their level of care.

CDC's 1999 Diabetes and Flu/Pneumococcal Campaign is part of the ongoing "Diabetes. One Disease. Many Risks." campaign, which encourages persons with diabetes to receive influenza and pneumococcal vaccines because they are more likely than persons without diabetes to die with complications of influenza and pneumonia (*2*). Approximately half of persons with diabetes receive an annual influenza vaccination, and one third have received pneumococcal vaccine (*3*).

Better management by health-care teams and self-care can slow or prevent many complications of diabetes. The Diabetes Quality Improvement Project (DQIP) developed a set of diabetes-specific performance and outcome measures to assess care provided within health-care systems (i.e., health plans, physicians, and clinics) to persons with diabetes. The measures allow comparison of diabetes care between health systems.

Information about DQIP is available on the World-Wide Web at http://www.diabetes.org/dqip.asp.* Information about diabetes is available from CDC by toll-free telephone, (877) 232-3422; e-mail, diabetes@cdc.gov; on the World-Wide Web at http://www.cdc.gov/diabetes; by mail, Division of Diabetes Translation, National Center for Chronic Disease Prevention and Health Promotion, CDC, P.O. Box 8728, Silver Spring, MD 20910; and from CDC's state and territorial diabetes-control programs.

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*References to sites of non-CDC organizations on the Internet are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

Diabetes Preventive-Care Practices in Managed-Care Organizations — Rhode Island, 1995–1996

Diabetes mellitus affects 8% of the U.S. adult population and can lead to debilitating complications, including blindness, renal failure, cardiovascular disease, mobility impairment, and lower extremity amputation (*1*). Preventive care such as glycemic control and regular foot and eye examinations are recommended because of their efficacy in reducing diabetes-related complications (*2–6*). In the United States, managed care is an important provider of medical services for persons with diabetes (*7–9*). Persons with diabetes receiving care from a major health-maintenance organization (HMO) or a major preferred provider organization (PPO) in Rhode Island were surveyed in 1995 and 1996 to assess the level of care for three recommended preventive-care practices (*2*) for diabetes: an annual dilated eye examination, semi-annual foot examination, and annual glycosylated hemoglobin (GHb) assessment. This report summarizes the findings from this survey, which indicated that 87% of persons with diabetes received eye examinations and approximately 55% received semi-annual foot examinations and annual GHb assessments.

A total of 455 persons with diabetes were sampled randomly from lists of persons with diabetes assembled using administrative data from two large Rhode Island managed-care organizations (MCOs)*; 375 persons aged 20–85 years (mean: 57 years) were interviewed (82% response rate), and complete data were present for 351 persons (77%). Respondents were asked how many times in the 12 months before the survey their health-care provider examined their feet, and how many times they received GHb assessments and dilated eye examinations (interviewers defined the term "dilated" for each respondent). Proportions and confidence intervals for each preventive-care practice were computed and stratified by sex, age, type of health-care organization, insulin use, and years since diagnosis of diabetes. Multiple logistic regression was used to evaluate associations among sex, age group, insulin use, diabetes duration, and health service, with preventive-care practices controlling for all other variables. Analyses were conducted using Statistical Package for the Social Sciences.

Of the 351 respondents, 198 (56%) were men, 141 (40%) were insulin users, 95 (27%) were aged ≥65 years (Table 1), 305 (87%) reported receiving annual dilated eye examinations, 204 (58%) reported semi-annual foot examinations, and 190 (54%) received an annual GHb assessment. Among persons aged ≥65 years, 86 (91%) persons reported eye examinations and 57 (60%) reported foot examinations. Among persons aged 20–44 years, 35 (73%) reported eye examinations and 26 (54%) reported foot examinations. Among persons using insulin, 130 (92%) and 102 (72%) received eye examinations and foot examinations, respectively; 174 (83%) and 103 (49%) persons not using insulin reported eye examinations and foot examinations, respectively. Older persons were less likely than younger persons to have reported receiving GHb assessments (48% for persons aged ≥65 years compared with 71% for persons aged 20–44 years). These trends were maintained after multivariate adjustment for sex, age group, insulin use, diabetes duration, and health service.

*Persons with diabetes were identified from sources such as hospital discharge diagnoses, outpatient diagnoses, laboratory test records, pharmacy records, and self-identification.

Diabetes — Continued

TABLE 1. Percentage of person with diabetes who received one or more dilated eye examinations per year, two or more foot examinations per year, or one or more glycosylated hemoglobin (GHb) assessments per year, by sex, age group, insulin use, and type of health service — Rhode Island, 1995–1996

Group	No. respondents	≥1 dilated eye exams per year		≥2 foot exams per year		≥1 GHb assessment per year	
		%	(95% CI*)	%	(95% CI)	%	(95% CI)
Sex							
Men	198	86%	(81%–91%)	59%	(52%–66%)	56%	(49%–63%)
Women	153	87%	(82%–92%)	57%	(49%–65%)	53%	(45%–61%)
Age group (yrs)							
20–44	48	73%	(60%–86%)	54%	(40%–68%)	71%	(58%–84%)
45–64	208	88%	(84%–92%)	58%	(51%–65%)	53%	(46%–60%)
≥65	95	91%	(85%–97%)	60%	(50%–70%)	48%	(38%–58%)
Insulin use							
Yes	141	92%	(88%–96%)	72%	(65%–79%)	68%	(60%–76%)
No	210	83%	(78%–88%)	49%	(42%–56%)	45%	(38%–52%)
Yrs since diagnosis							
<5	124	82%	(75%–89%)	48%	(39%–57%)	48%	(39%–57%)
5–14	153	88%	(83%–93%)	60%	(52%–68%)	57%	(49%–65%)
≥15	74	93%	(87%–99%)	72%	(62%–82%)	60%	(49%–71%)
Health service							
HMO†	123	89%	(83%–95%)	46%	(37%–55%)	59%	(50%–68%)
PPO§	228	85%	(80%–90%)	65%	(59%–71%)	52%	(46%–58%)
Total	**351**	**87%**	**(85%–91%)**	**58%**	**(53%–63%)**	**54%**	**(49%–59%)**

*Confidence interval.
†Health-maintenance organization.
§Preferred provider organization.

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Editorial Note: For persons with diabetes, eye and foot examinations and GHb assessments are important because these measures are efficacious and cost effective in identifying opportunities to prevent vision loss, renal failure, and lower extremity disease (*3–6*). However, for persons with diabetes, the levels of preventive-care practices vary widely across settings, with 23%–83% receiving eye examinations, 25%–65% receiving foot examinations, and 38%–81% receiving GHb assessments (*9*).

The finding that 87% of patients received eye examinations (*5*) is higher than findings reported previously (*10*) and may reflect efforts to enhance retinopathy screening. During the late 1970s, the Rhode Island Diabetes Control Program supported multiple initiatives to promote regular dilated eye examinations for persons with diabetes. These efforts included statewide and locally targeted media campaigns to educate both patients and providers. With various health-care delivery organizations, the Rhode Island program also funded no-cost eye examinations for low income persons,

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and developed and implemented physician reminders to encourage them to refer patients for routine eye care.

Although the rates of eye examinations are high, 42% of persons with diabetes did not receive semi-annual foot examinations and 46% did not receive GHb assessments. The use of these services in the MCO setting in this survey is similar to previous estimates in fee-for-service and other MCO settings (*9*), and indicate a need for MCOs to increase efforts to educate patients and providers and to remove barriers to preventive care.

Findings of higher retinopathy screening but lower GHb assessment rates for persons aged ≥65 years may indicate that providers consider vision loss a greater concern for the elderly and glycemic control a greater concern for younger persons with diabetes. The findings that insulin users were more likely to receive preventive-care practices may be because insulin use is a marker of disease severity, triggering providers to provide more comprehensive preventive care. Although risk for complications is higher among persons who require insulin, the long-term risk for complications also is considerable and may warrant provider and patient awareness about the value of preventive-care practices for persons with diabetes who do not require insulin therapy.

The three recommended preventive-care practices on which the study focused had existed for 7 years before the survey (*1*); however, diabetes treatment in Rhode Island conformed only moderately with those recommendations. An approach to improving the level of care may be to work directly with insurers, health-care systems, providers, and patients to promote the use of these services.

The findings in this report are subject to at least three limitations. First, preventive-care practices were measured by self-reports, which can result in recall bias for foot and dilated eye examinations and for GHb assessments. Second, persons were sampled from two major MCOs proportional to the MCO size, therefore, these findings may not represent all segments of the population or all MCO practices in Rhode Island. Third, the survey was conducted in 1996, and MCO practices may have changed since then.

CDC and the Rhode Island Diabetes Control Program are collaborating with community-based organizations and health-care providers in the state. The Rhode Island Diabetes Control Program is piloting an electronic diabetes-care surveillance system to assist health-care providers and insurers to monitor conformity to standards of diabetes care. These efforts should improve diabetes care and help to reduce the burden of diabetes complications.

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Diabetes — Continued

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Influenza and Pneumococcal Vaccination Rates Among Persons with Diabetes Mellitus — United States, 1997

Vaccination is an important public health intervention for reducing morbidity and mortality from influenza and pneumonia among persons with diabetes (*1,2*). A national health objective for 2000 is to increase influenza and pneumococcal vaccination rates to ≥60% among persons at high risk for complications from influenza and pneumonia, including persons with diabetes (objective 20.11) (*3*). Although the Advisory Committee on Immunization Practices (ACIP) recommends that all persons with diabetes be vaccinated, data from the 1993 Behavioral Risk Factor Surveillance System (BRFSS) showed that 40% of persons with diabetes reported receiving an influenza vaccination within the previous year, and 21% reported ever receiving a pneumococcal vaccination (*4*). To assess the vaccination rates among persons with diabetes in 52 reporting areas (i.e., 50 states, the District of Columbia, and Puerto Rico), CDC and the Council of State and Territorial Epidemiologists (CSTE) analyzed data from the 1997 BRFSS. This report summarizes the findings of this analysis, which indicate that most states did not reach the national health objectives for influenza and pneumococcal vaccination in their populations with diabetes.

BRFSS is an ongoing, state-based, random-digit–dialed telephone survey of noninstitutionalized civilian adults aged ≥18 years. The analysis included only respondents who answered "yes" to the question, "Has a doctor ever told you that you have diabetes?" Women who were told they had diabetes only during pregnancy were not classified as having diabetes. In 1997, influenza and pneumococcal vaccination rates for the 52 reporting areas were examined; 7011 respondents with diabetes from the reporting areas were included in this analysis. Responses for two questions related to vaccination status were analyzed: "During the past 12 months, have you had a flu shot?" and "Have you ever had a pneumonia vaccination?" Of the 7011 respondents, 181 (2.6%) and 384 (5.5%) did not report or did not know their influenza and pneumococcal vaccination status, respectively, and were excluded from the analysis. Data from all of the reporting areas were analyzed to determine sociodemographic characteristics associated with receipt of influenza and pneumococcal vaccinations. Racial/ethnic groups other than non-Hispanic whites, non-Hispanic blacks, and Hispanics were not included because numbers, when presented separately, were too small for meaningful analysis. Data were weighted by age, sex, and racial/ethnic distribution to reflect the adult population of each of the 52 reporting areas. SUDAAN was used to calculate point estimates, 95% confidence intervals (CIs), and significant differences ($p<0.05$).

Influenza and Pneumococcal Vaccination — Continued

Among adults with diabetes, 52.1% reported receiving influenza vaccine during the previous 12 months, and 33.2% reported ever receiving pneumococcal vaccine (Table 1). Non-Hispanic whites were significantly more likely to report receiving influenza and pneumococcal vaccines (56.6% and 38.8%, respectively) than non-Hispanic blacks (48.1% and 24.9%, respectively) and Hispanics (41.0% and 20.9%, respectively). Women were slightly more likely than men to report vaccination, but this difference was significant only for pneumococcal vaccine. As age increased, report of vaccination significantly increased, from 27.7% (ages 18–44 years) to 69.6% (ages ≥75 years) for influenza vaccination and from 11.2% (ages 18–44 years) to 53.4% (ages ≥75 years) for pneumococcal vaccination. No significant association was noted between receipt of vaccination and level of education.

Receipt of influenza and pneumococcal vaccinations varied by reporting area (Figures 1 and 2, Table 2). Rates for influenza vaccination ranged from 29.1% in Puerto Rico to 79.9% in Maine (Table 2). Twelve of the reporting areas met the national health objective of ≥60% for influenza vaccination, and another 23 areas were within 5 per-

TABLE 1. Percentage of persons aged ≥18 years with diabetes in the 50 states, the District of Columbia, and Puerto Rico who reported receiving influenza or pneumococcal vaccine, by selected characteristics — United States, Behavioral Risk Factor Surveillance System, 1997

	Influenza vaccine			Pneumococcal vaccine		
Characteristic	**%**	**(95% CI*)**	**% point difference from 2000 objective**	**%**	**(95% CI)**	**% point difference from 2000 objective**
Race/Ethnicity						
Non-Hispanic white	56.6	(54.6%–58.7%)	– 3.4	38.8	(36.8%–40.9%)	–21.2
Non-Hispanic black	48.1	(43.3%–52.8%)	–11.9	24.9	(20.6%–29.2%)	–35.1
Hispanic	41.0	(33.9%–48.2%)	–19.0	20.9	(15.1%–26.7%)	–39.1
Other†	38.3	(30.3%–46.4%)	–21.7	20.6	(13.8%–27.3%)	–39.4
Sex						
Men	50.5	(47.6%–53.4%)	– 9.5	31.1	(28.5%–33.8%)	–28.9
Women	53.5	(51.0%–55.9%)	– 6.5	35.0	(32.6%–37.3%)	–25.0
Age group (yrs)						
18–44	27.7	(23.7%–31.7%)	–32.3	11.2	(8.6%–13.8%)	–48.8
45–64	45.4	(42.3%–48.4%)	–14.6	24.9	(22.2%–27.6%)	–35.1
65–74	67.6	(64.4%–70.8%)	7.6	47.8	(44.3%–51.3%)	–12.2
≥75	69.6	(65.6%–73.6%)	9.6	53.4	(49.0%–57.8%)	– 6.6
Education level						
Less than high school	50.8	(47.1%–54.6%)	– 9.2	30.6	(27.3%–33.9%)	–29.4
High school	52.0	(48.8%–55.2%)	– 8.0	33.6	(30.5%–36.7%)	–26.4
More than high school	53.1	(50.2%–56.1%)	– 6.9	34.7	(32.0%–37.5%)	–25.3
Total	**52.1**	**(50.2%–54.0%)**	**– 7.9**	**33.2**	**(31.4%–35.0%)**	**–26.8**

*Confidence interval.
†Numbers for other racial/ethnic groups, when presented separately, were too small for meaningful analysis.

Influenza and Pneumococcal Vaccination — Continued

FIGURE 1. Influenza vaccination rates among adults with self-reported diabetes, by reporting area — United States, Behavioral Risk Factor Surveillance System, 1997

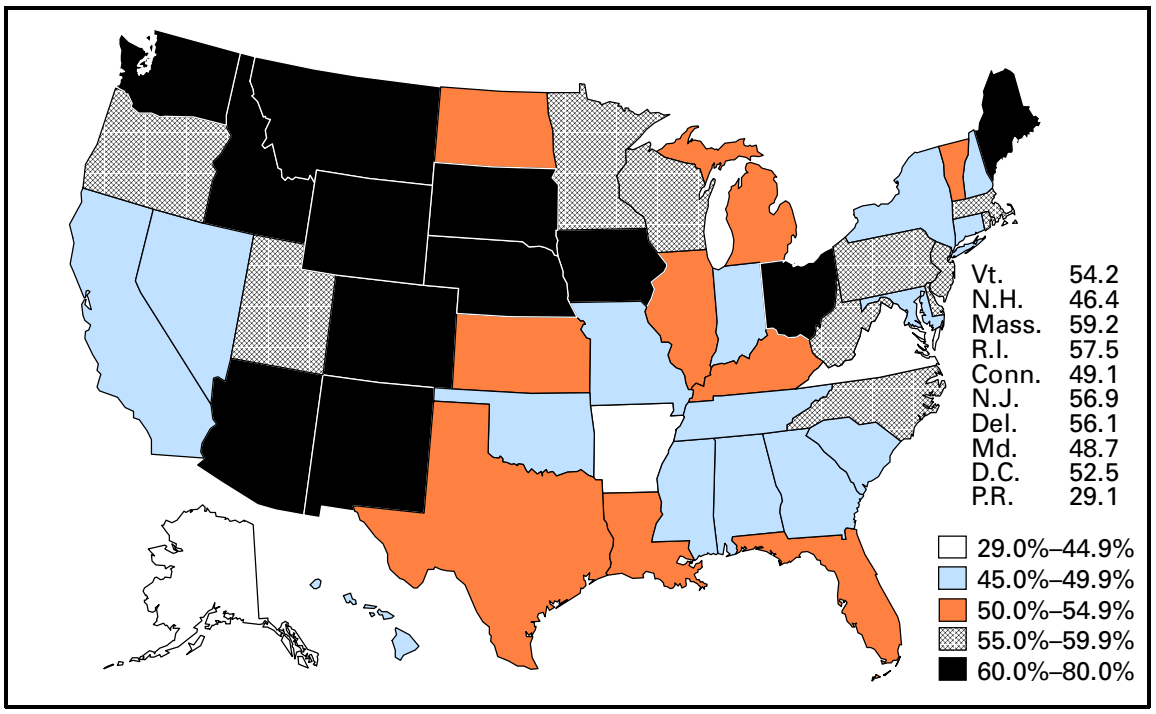
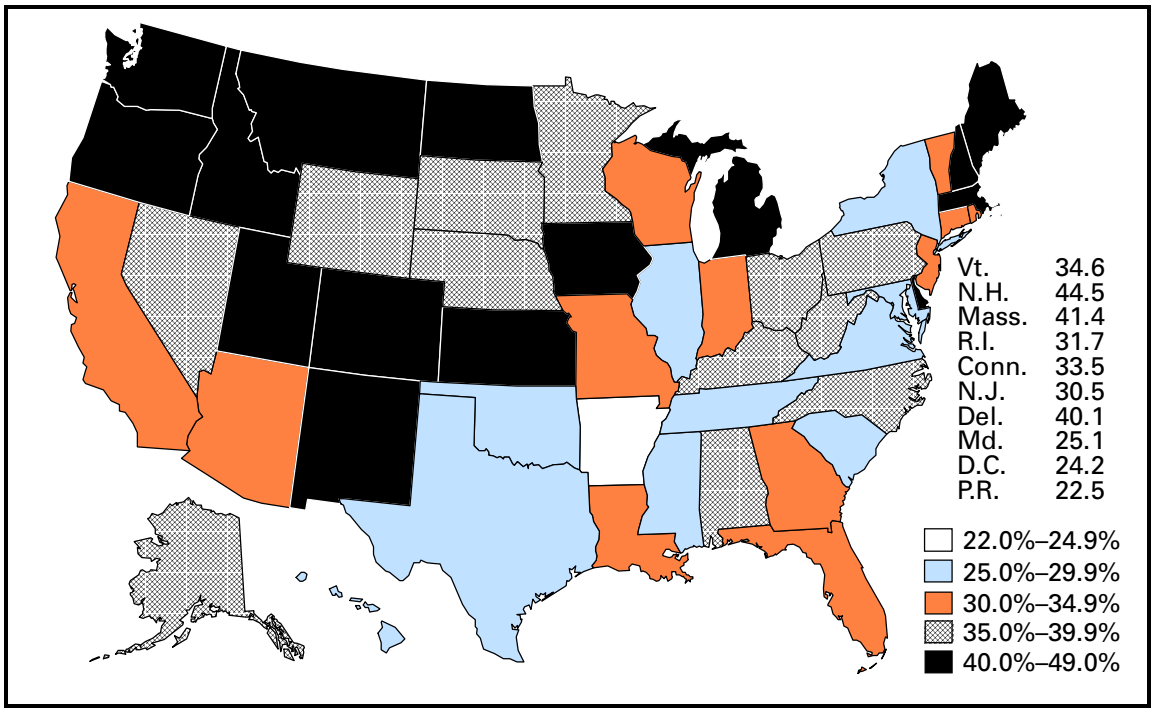


FIGURE 2. Pneumococcal vaccination rates among adults with self-reported diabetes, by reporting area — United States, Behavioral Risk Factor Surveillance System, 1997



Influenza and Pneumococcal Vaccination — Continued

TABLE 2. Percentage of persons aged ≥18 years with diabetes in the 50 states, the District of Columbia, and Puerto Rico who reported receiving influenza or pneumococcal vaccine, by reporting area — United States, Behavioral Risk Factor Surveillance System, 1997

	Influenza vaccine			Pneumococcal vaccine		
Reporting area	%	(95% CI*)	% point difference from 2000 objective	%	(95% CI)	% point difference from 2000 objective
Alabama	47.2	(38.5%–55.9%)	–12.8	38.1	(29.6%–46.6%)	–21.9
Alaska	37.7	(19.0%–56.4%)	–22.3	36.2	(17.6%–54.9%)	–23.8
Arizona	70.6	(55.6%–85.6%)	10.6	34.9	(19.1%–50.6%)	–25.1
Arkansas	44.0	(32.9%–55.1%)	–16.0	22.0	(12.3%–31.8%)	–38.0
California	48.9	(41.2%–56.7%)	–11.1	33.6	(26.1%–41.0%)	–26.4
Colorado	61.4	(47.1%–75.7%)	1.4	41.8	(27.3%–56.3%)	–18.2
Connecticut	49.1	(37.6%–60.6%)	–10.9	33.5	(23.1%–43.9%)	–26.5
Delaware	56.1	(48.1%–64.1%)	– 3.9	40.1	(31.9%–48.2%)	–19.9
District of Columbia	52.5	(38.1%–66.9%)	– 7.5	24.2	(12.7%–35.7%)	–35.8
Florida	53.4	(45.8%–60.9%)	– 6.6	34.5	(27.4%–41.5%)	–25.5
Georgia	48.4	(37.1%–59.7%)	–11.6	31.2	(20.8%–41.7%)	–28.8
Hawaii	47.1	(35.7%–58.5%)	–12.9	26.9	(17.7%–36.2%)	–33.1
Idaho	70.2	(63.5%–77.0%)	10.2	43.0	(35.1%–51.0%)	–17.0
Illinois	51.4	(39.8%–62.9%)	– 8.6	29.6	(19.2%–39.9%)	–30.4
Indiana	48.9	(38.8%–59.1%)	–11.1	32.0	(22.8%–41.1%)	–28.0
Iowa	66.0	(57.6%–74.3%)	6.0	42.4	(34.2%–50.7%)	–17.6
Kansas	54.2	(41.2%–67.2%)	– 5.8	41.2	(27.8%–54.6%)	–18.8
Kentucky	52.4	(45.1%–59.7%)	– 7.6	35.2	(28.0%–42.4%)	–24.8
Louisiana	53.5	(42.5%–64.6%)	– 6.5	31.9	(21.9%–42.0%)	–28.1
Maine	79.9	(70.4%–89.5%)	19.9	41.1	(29.1%–53.1%)	–18.9
Maryland	48.7	(40.7%–56.6%)	–11.3	25.1	(18.7%–31.6%)	–34.9
Massachusetts	59.2	(46.0%–72.3%)	– 0.8	41.4	(28.3%–54.5%)	–18.6
Michigan	51.9	(43.5%–60.3%)	– 8.1	40.1	(31.8%–48.5%)	–19.9
Minnesota	56.7	(49.3%–64.1%)	– 3.3	39.4	(32.2%–46.7%)	–20.6
Mississippi	46.7	(35.9%–57.6%)	–13.3	27.8	(18.3%–37.4%)	–32.2
Missouri	48.6	(37.3%–59.8%)	–11.4	33.0	(22.4%–43.6%)	–27.0
Montana	65.8	(53.3%–78.4%)	5.8	48.6	(35.1%–62.2%)	–11.4
Nebraska	61.6	(51.4%–71.7%)	1.6	35.7	(25.9%–45.5%)	–24.3
Nevada	49.5	(27.9%–71.2%)	–10.5	38.1	(18.3%–58.0%)	–21.9
New Hampshire	46.4	(32.2%–60.5%)	–13.6	44.5	(30.6%–58.5%)	–15.5
New Jersey	56.9	(47.2%–66.5%)	– 3.1	30.5	(21.6%–39.4%)	–29.5
New Mexico	67.4	(56.3%–78.5%)	7.4	42.3	(31.0%–53.5%)	–17.7
New York	49.0	(40.0%–58.0%)	–11.0	25.9	(17.9%–34.0%)	–34.1
North Carolina	56.7	(49.2%–64.2%)	– 3.3	39.7	(32.1%–47.2%)	–20.3
North Dakota	54.6	(42.2%–67.0%)	– 5.4	41.4	(28.9%–53.9%)	–18.6
Ohio	62.2	(53.6%–70.8%)	2.2	38.9	(30.0%–47.8%)	–21.1
Oklahoma	49.0	(39.0%–59.0%)	–11.0	27.0	(18.8%–35.1%)	–33.0
Oregon	56.7	(47.9%–65.4%)	– 3.3	41.6	(32.6%–50.5%)	–18.4
Pennsylvania	55.3	(47.3%–63.3%)	– 4.7	38.4	(30.4%–46.5%)	–21.6
Puerto Rico	29.1	(23.1%–35.1%)	–30.9	22.5	(16.8%–28.3%)	–37.5
Rhode Island	57.5	(46.2%–68.7%)	– 2.5	31.7	(21.1%–42.2%)	–28.3
South Carolina	49.8	(39.5%–60.0%)	–10.2	25.9	(17.6%–34.1%)	–34.1
South Dakota	62.5	(50.5%–74.6%)	2.5	36.7	(25.1%–48.3%)	–23.3
Tennessee	49.8	(41.1%–58.6%)	–10.2	29.0	(20.9%–37.1%)	–31.0
Texas	50.2	(41.2%–59.3%)	– 9.8	27.0	(19.2%–34.8%)	–33.0
Utah	56.4	(43.7%–69.0%)	– 3.6	40.2	(28.0%–52.5%)	–19.8
Vermont	54.2	(41.0%–67.4%)	– 5.8	34.6	(24.1%–45.1%)	–25.4
Virginia	44.4	(35.5%–53.2%)	–15.6	29.6	(21.7%–37.6%)	–30.4
Washington	63.0	(54.5%–71.5%)	3.0	43.7	(34.7%–52.7%)	–16.3
West Virginia	56.6	(47.9%–65.3%)	– 3.4	36.1	(27.9%–44.4%)	–23.9
Wisconsin	56.6	(42.7%–70.6%)	– 3.4	31.7	(20.4%–42.9%)	–28.3
Wyoming	61.3	(49.5%–73.0%)	1.3	38.0	(26.3%–49.7%)	–22.0

*Confidence interval.

Influenza and Pneumococcal Vaccination — Continued

centage points of the objective. Rates for pneumococcal vaccination ranged from 22.0% in Arkansas and Puerto Rico to 48.6% in Montana (Table 2); no reporting areas reached the national health objective. Overall, rates for both vaccines were lowest in the southeast regions and highest in the northwest regions.

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Editorial Note: Although the vaccination rates in this report are higher than those reported in 1993, a large gap remains between influenza and pneumococcal vaccination rates among persons with diabetes and the national health objective for 2000. Pneumonia and influenza are more likely to be listed as a cause of death for persons with diabetes than for persons without diabetes, and many deaths associated with pneumonia and influenza can be attributed to diabetes (*1*). For persons with diabetes, influenza and pneumococcal vaccines can reduce the number of respiratory infections, the number and length of hospitalizations for respiratory infections, the number of deaths from these infections, and medical expenses associated with influenza and pneumonia (*2*).

The national health objective for 2000 was reached only for influenza vaccination among persons aged ≥65 years with diabetes. Since the ACIP recommends that everyone aged ≥65 years receive influenza and pneumococcal vaccinations (*5,6*), it may be routine for providers to offer vaccinations to persons aged ≥65 years with diabetes. The findings indicate that many patients and providers may not be aware of the ACIP guidelines for persons with diabetes. Increased efforts are necessary to heighten awareness of the need for increased vaccination and to improve routine use of vaccination among persons of all ages with diabetes. These efforts should include incorporating recommendations for influenza and pneumococcal vaccinations into standard-of-care guidelines for persons with diabetes.

The findings that Hispanics and non-Hispanic blacks had lower vaccination rates than non-Hispanic whites are consistent with the 1993 examination of vaccination rates among persons with diabetes (*4*). These disparities may result from differences in access to vaccination services across these groups, differences in the quality of care received by different racial/ethnic groups, or social and cultural factors that impact vaccine acceptance. These disparities must be investigated further to improve vaccination rates in these populations.

Vaccination rates varied substantially among reporting areas, perhaps because of differences in demographic distribution, provision of adult vaccination programs,

Influenza and Pneumococcal Vaccination — Continued

physician practice patterns, access to health care, and patient attitudes. CDC is evaluating these patterns to learn why they occur and how reporting areas with low coverage levels can improve them.

The findings in this analysis are subject to at least two limitations. First, persons residing in nursing homes and in households without telephones were not included in this survey; therefore, these results cannot be generalized to these segments of the population. Second, because data were self-reported, they are subject to recall bias. Self-report of diabetes and of influenza vaccination are highly accurate (*7,8*), but self-report of pneumococcal vaccination may be less accurate than self-report of influenza vaccination (*9*).

Most reporting areas did not meet the national vaccination objectives among their populations with diabetes. Recognizing the importance of preventive-care practices in reducing morbidity and mortality among persons with diabetes, CSTE has recommended that receipt of preventive-care practices among persons with diabetes, including influenza and pneumococcal vaccination, be placed under national public health surveillance.

CDC and other federal agencies have implemented the racial/ethnic disparities initiative. One objective is to eliminate racial/ethnic health disparities in vaccination rates by 2010. Additional information about the initiative is available from the World-Wide Web at http://raceandhealth.hhs.gov/* and http://www.cdc.gov/diabetes/projs/racial_init.htm.

In 1998, to improve vaccination rates among persons with diabetes, CDC implemented the Diabetes Flu/Pneumococcal Campaign entitled "Diabetes. One Disease. Many Risks." Through state-based diabetes-control programs (DCPs), the campaign encourages persons with diabetes to receive influenza and pneumococcal vaccinations. DCPs are implementing health systems-based interventions to encourage health-care professionals to recommend influenza and pneumococcal vaccinations. Because persons with diabetes report a high rate of routine medical care, these interventions can have a large impact on improving vaccination rates. Interventions that include standing orders for vaccination, using provider and patient recalls and reminders, and feedback on vaccination levels have been shown to be effective in increasing vaccination rates (*10*). In addition, opportunities for vaccination outside of traditional health-care settings should be extended to persons with diabetes who routinely do not have access to traditional health-care facilities (*10*). Additional information about the Diabetes Flu/Pneumococcal Campaign is available from the World-Wide Web at http://www.cdc.gov/diabetes/projs/cdc-flu.htm and http://www.cdc.gov/diabetes/states/states.htm.

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Influenza and Pneumococcal Vaccination — Continued

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Progress Toward Poliomyelitis Eradication — Myanmar, 1996–1999

Myanmar borders polio-free countries (China, Laos, and Thailand) and countries with widespread poliovirus transmission (India and Bangladesh). Myanmar began to intensify its efforts toward polio eradication in 1996, when National Immunization Days (NIDs)* were initiated. That year, wild polioviruses (one type 1 virus and two type 3 viruses) were isolated from Myanmar children with acute poliomyelitis seeking care in Yunnan Province, China. The importation of poliovirus from Myanmar into China stimulated the establishment of surveillance for acute flaccid paralysis (AFP) in 1996 and discussions between Myanmar and China on cross-border management of poliomyelitis eradication. This report summarizes polio eradication efforts in Myanmar, which focus primarily on supplemental vaccination activities and AFP surveillance.

Routine Vaccination

The national Expanded Program on Immunization was initiated in April 1978, and activities were accelerated in 1986 to meet the goal of universal childhood vaccination in 1990. Reported routine coverage of infants with three doses of oral poliovirus vaccine (OPV3) in 1995 was 84% and in 1997 was 90%; however, survey† results indicated that coverage was 75% and 82%, respectively (*1*).

Results of the 1997 survey revealed large differences within states/divisions; lowest OPV3 coverage was observed in rural Myanmar (border and hill areas): Shan East (50%), Kayah (52%), Chin (58%), Kayin (62%), Kokang/Wa in Shan North (45%), and Kabaw/Naga in Sagaing (65%). Another survey† in Rakhine showed OPV3 coverage in 1996 to be 19% in Maungdaw and 30% in Buthidaung (compared with reported cover-

*Nationwide mass campaigns over a short period (days to weeks), in which two doses of oral poliovirus vaccine are administered to all children in the target age group (usually aged <5 years), regardless of vaccination history, with an interval of 4–6 weeks between doses.

†Reported coverage may be affected by uncertainties of the numerator (doses of vaccine administered) and denominator (actual target population). Because these uncertainties do not affect population-based surveys, data from such surveys usually provide more precise estimates of the actual vaccination coverage.

Poliomyelitis Eradication — Continued

age of 78.9% and 75.2%, respectively) (*2*). These townships share a border with Bangladesh.

NIDs and Supplemental ("Mopping-Up") Vaccination Activities

NIDs were first conducted in February and March 1996, and since then Myanmar has organized two rounds of NIDs (one day each) in December and January during 1996–1999, targeting all children aged <5 years. Reported coverage during those years has been >95%. However, no post-NID coverage surveys have been conducted. Since the winter of 1996, NIDs in Myanmar have been synchronized with those in neighboring countries, including Bangladesh, China, India, and Thailand. The fifth NIDs will be conducted on December 12, 1999, and January 16, 2000.

Mopping-up vaccination campaigns[§] are being planned for October and November 1999, targeting 917,000 children in high-risk areas (those along the border with India and Bangladesh, with recent wild virus circulation or known low vaccination coverage, or with minorities and migrating groups). These campaigns will be carried out by mobile teams over approximately 5 days, focusing on reaching previously unvaccinated children by going house to house. Volunteers also will collect information on the number of children who have never received OPV ("zero dose" children) and ascertain recent cases of paralysis.

AFP Surveillance

In 1996, when AFP became a reportable condition in Myanmar, intensive training and advocacy sessions were organized for clinicians and public health staff. Reporting rates for AFP and nonpolio AFP improved from 1997 to 1998, from 0.75 to 0.91 per 100,000 children aged <15 years (Table 1). Approximately 2000 health facilities (health centers and hospitals) participate in a routine reporting system of "zero-case reporting," submitting weekly reports, even if no cases are seen. In addition, surveillance staff make weekly visits to 30 large hospitals to search actively for AFP cases. Since

[§]Focal mass campaigns in high-risk areas during a short period (days to weeks) in which two doses of oral poliovirus vaccine are administered during house-to-house visits to all children in the target age groups, regardless of vaccination history, with an interval of 4–6 weeks between doses.

TABLE 1. Acute flaccid paralysis (AFP) and confirmed poliomyelitis cases — Myanmar, 1995–1999

Year	Reported polio or AFP cases	Confirmed polio cases	Wild virus isolated	Total AFP rate*	Nonpolio AFP rate*	% AFP cases with 2 stool specimens
1995	7	7	0	0.04	0.00	NA[†]
1996	13	8	0[§]	0.08	0.03	62%
1997	172	55	0	1.11	0.75	58%
1998	183	40	0	1.18	0.91	72%
1999[¶]	92	16	4	0.78	0.39	73%

*Per 100,000 children aged <15 years.
[†]Not available.
[§]One polio type 1 and two polio type 3 viruses were isolated from Myanmar patients hospitalized in Yunnan, China.
[¶]As of October 15, 1999. Rates annualized.

Poliomyelitis Eradication — Continued

early 1999, the AFP surveillance system also has been used for reporting of measles and neonatal tetanus cases.

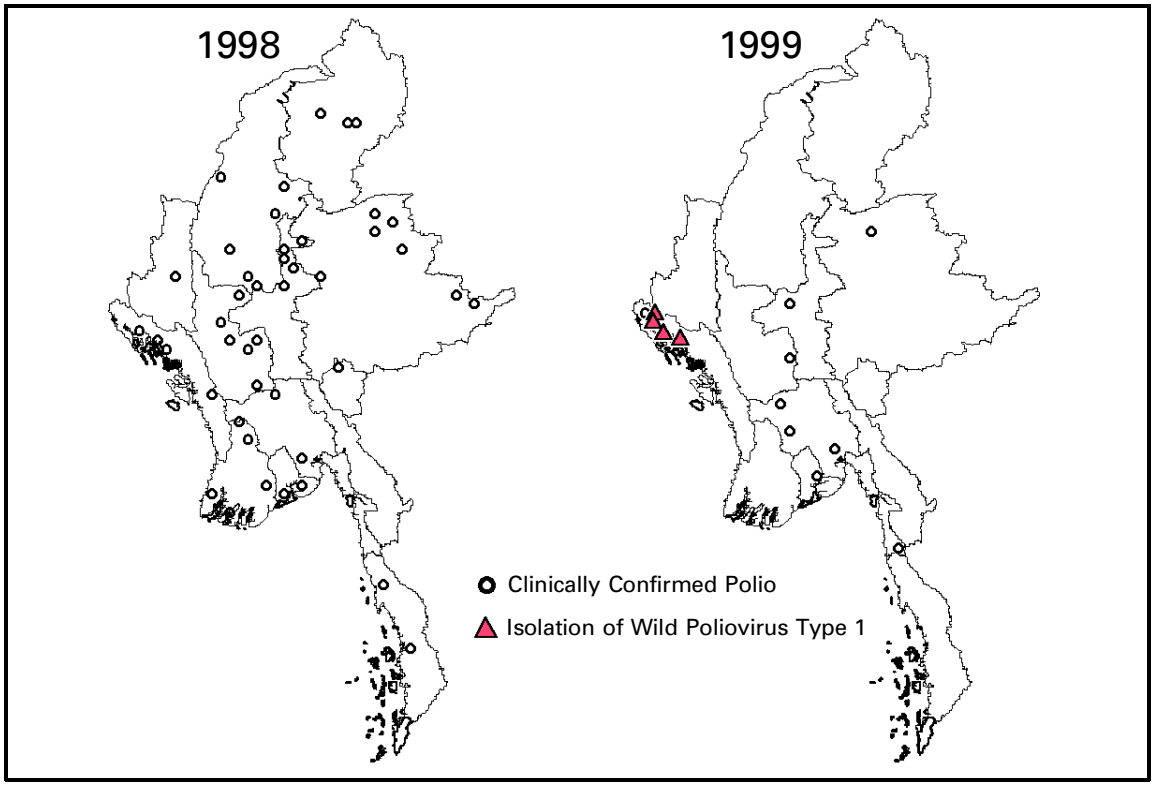
Of 92 AFP cases reported during January 1–October 15, 1999, 91 (99%) had at least one stool specimen taken, and 62 (67%) had two specimens taken within 14 days after onset of paralysis (i.e., "adequate specimens"). Of 37 (40%) persons with AFP for whom follow-up results were available, three (8%) had died, one (3%) was lost to follow-up, 20 (54%) had no residual paralysis, and 13 (35%) had residual paralysis.

Myanmar classifies AFP cases using the clinical classification scheme¶. In 1999, wild poliovirus type 1 was isolated from four persons with AFP (Figure 1), all of whom were children among the Muslim minority living in Rakhine state, near the border with Bangladesh.

Stool specimens from persons with AFP are processed at the national health laboratories in Yangoon, which have been accredited provisionally as a National Polio Laboratory. Intra-typic differentiation is performed by the Regional Reference Laboratory at the National Institute of Health in Bangkok, Thailand. A national certification committee has been established and monitors progress in the polio eradication program.

¶An AFP case is confirmed as polio if wild poliovirus was isolated from stool specimens; in the absence of wild poliovirus isolation, the following criteria confirm a case of polio: 1) residual paralysis at follow-up examination; 2) lost to follow-up; and 3) died.

FIGURE 1. Acute flaccid paralysis (AFP) cases clinically confirmed as poliomyelitis cases and AFP cases with isolation of wild poliovirus type 1 — Myanmar, 1998 and 1999*



*As of October 15, 1999.

Poliomyelitis Eradication — Continued

Reported by: Expanded Program on Immunization, Ministry of Health, Yangoon, Myanmar. Country Office, World Health Organization, Yangoon, Myanmar; Regional Office for South-East Asia, World Health Organization, New Delhi, India; Vaccines and Biologicals Department, World Health Organization, Geneva, Switzerland. Respiratory and Enteric Viruses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Vaccine Preventable Disease Eradication Div, National Immunization Program, CDC.

Editorial Note: In 1999, Myanmar, situated between countries with endemic polio and polio-free countries, has confirmed four cases of polio based on isolation of wild poliovirus type 1. This is the first evidence of ongoing transmission of wild poliovirus since 1996. All AFP cases with wild poliovirus isolation occurred in persons who resided in areas adjacent to the Bangladesh border, illustrating the importance of border areas in polio eradication activities and the continuing vulnerability of countries to a resurgence of polio unless eradication strategies are fully implemented and sustained.

Vaccination coverage in Myanmar is not uniform across the country. Border and mountain areas with difficult access are underserved, allowing pockets of low coverage to develop. Low coverage in these areas can be explained by difficulties in access, cultural differences between health staff and local sub-populations, and lack of awareness among the population. Children who have not been reached by routine services also are likely to be missed during NIDs. The planned mopping-up operations in high-risk areas are an appropriate response to the situation provided that these supplemental campaigns succeed in reaching all children, including those missed by NIDs.

AFP surveillance in Myanmar has not yet reached the level that would define the extent of poliovirus transmission. The nonpolio AFP rate approached the target of one case per 100,000 children aged <15 years in 1998, but declined in 1999. The rate of collection of two stool specimens in 14 days of onset of paralysis also is lower than the 80% target.

Although mopping-up campaigns and high-quality NIDs are needed to eliminate the remaining foci of poliovirus circulation, AFP surveillance needs to be strengthened to support these activities. Ongoing advocacy, supervision, feedback, and monitoring are needed to sustain the momentum achieved since 1997. The successful approach taken by India (*3*) (i.e., the establishment of a team dedicated to AFP surveillance), may provide some guidance to improve AFP surveillance in Myanmar. With fewer than 16 months remaining to reach the target of polio eradication, Myanmar is stepping up efforts to vaccinate previously unreached children. This effort must be supported by high-quality surveillance.

The priorities for the Myanmar program** for the next year include 1) continuing to improve the quality of the upcoming NIDs in 1999 and 2000; 2) vaccinating a high proportion of previously unreached children during the mopping-up campaigns this fall; and 3) improving the sensitivity of AFP surveillance rapidly to identify high-risk areas for special programmatic action and, eventually, to meet the certification requirements. Further progress in these priority areas should enable Myanmar to reach the polio eradication target.

** Polio eradication in Myanmar is supported by the national government and a coalition of organizations and governments, including WHO, UNICEF, Rotary International, and Japan.

Poliomyelitis Eradication — Continued

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Public Health Response to a Potentially Rabid Bear Cub — Iowa, 1999

On August 27, 1999, a 5–6 month-old black bear cub in a petting zoo in Clermont, Iowa, died after developing acute central nervous system signs; the initial direct fluorescent-antibody (DFA) test results available on August 28 indicated the bear had rabies. On August 29, in response to the positive laboratory report, the Iowa Department of Public Health (IDPH) initiated a campaign to identify and inform persons potentially exposed to the bear's saliva. Within 72 hours, IDPH staff verified contact and exposure information for approximately 350 persons. Subsequent testing found no evidence of rabies virus in brain or spinal cord tissues. This report describes the public health response to this potential rabies outbreak and reviews testing procedures and protocols for rabies.

On August 27, the bear developed acute neurologic signs, progressing from mild tremors and anisocoria to coma and death within 4 hours. The attending veterinarian submitted the bear to Iowa State University's Veterinary Diagnostic Laboratory (ISU VDL) for a full postmortem examination. On August 28, ISU VDL notified the veterinarian that the bear had tested positive for rabies*. The veterinarian immediately alerted IDPH. After consultation with CDC, IDPH established a conservative estimate of the period of potential rabies exposure to humans as 28 days before the bear's death. IDPH contacted media statewide to help publicize the potential exposures of the zoo visitors.

The local county health department and the area hospital established a rabies exposure assessment and treatment clinic in the emergency department. Based on information from a voluntary sign-in log for visitors, IDPH used a variety of tools (i.e., media campaign, Internet locator sites, directory assistance, and law enforcement) to reach persons from 10 states (Arizona, California, Florida, Illinois, Iowa, Minnesota, New Mexico, New York, Ohio, and Wisconsin) and Australia; 200 visitors were identified. On August 29, IDPH personnel began contacting the 200 visitors. In addition, efforts were made to contact 150 potentially exposed persons who attended an August 14 "barnwarming" at which the bear was present. On September 3, a dispatch was published in *MMWR* (*1*) to notify other health departments of efforts to locate zoo visitors. By September 1, an estimated 99% of potentially exposed persons had been contacted.

On August 30, IDPH, the Iowa State Veterinarian's Office, and the U.S. Department of Agriculture visited the petting zoo to assess exposure factors and implement quarantine measures. On August 31, the ISU VDL reported a positive reverse transcriptase

*This was subsequently described as a weak DFA positive test. A repeat DFA test was again described as weakly positive and ISU VDL set up reverse transcriptase polymerase chain reaction (RT-PCR) testing.

Potentially Rabid Bear — Continued

polymerase chain reaction (RT-PCR) for rabies[†] and submitted brain tissues to CDC to identify the potential wildlife reservoir species associated with the virus. During the ISU VDL necropsy, no alternative cause of death was identified; however, pathologic studies were limited by the advanced state of postmortem autolysis. On the evening of September 1, IDPH was notified by CDC that the DFA of the tissues submitted for virus typing were negative for rabies virus. On September 2, brain and spinal cord tissues were submitted to University Hygienic Laboratory (UHL) and CDC. On September 3, DFA testing at UHL was reported as negative; DFA, RT-PCR, and nested PCR tests at CDC on brain and spinal cord tissues also were reported negative.

On September 3, the available information included the bear's clinical presentation of acute death atypical for but consistent with rabies; the initial positive DFA test and the positive PCR test at ISU VDL; the negative tests conducted by CDC on the bear's brain and spinal cord; the negative DFA test conducted by UHL on the bear's brain; a documented case of a rabid bear with a DFA-negative test on brain tissue (*2*); the paucity of literature on rabies and rabies testing in bears, and follow-up of humans after exposure to animals with negative laboratory results; and the lack of a reasonable alternative explanation for the bear's neurologic illness and death. IDPH also was aware that the risk for death from symptomatic rabies was 100% and the risk for receiving vaccine was minimal. Consultation with national clinical infectious disease specialists and other medical experts, including epidemiologists, resulted in the conclusion that the vaccine series be continued. IDPH then issued a press release stating that the negative tests made it less likely the bear died from rabies (*3*). By the end of September, an estimated 150 persons had completed the rabies vaccination series. On approximately October 18, ISU VDL reported mouse inoculation studies negative for rabies.

Reported by: SC Gleason, DO, R Currier, DVM, P Quinlisk, MD, State Epidemiologist, Iowa Dept of Public Health. Viral and Rickettsial Zooneses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; and EIS officers, CDC.

Editorial Note: The false-positive test result for rabies in a bear in Iowa affords an opportunity to review testing procedures and protocols for rabies virus infection, the public health record in the United States resulting from these procedures and protocols, and recommendations for handling inconsistent test results.

The DFA test for detection of rabies virus antigen in brain tissue is used as the primary diagnostic test in all public health laboratories in the United States. The test has a sensitivity approaching 100% (*4,5*). Rabies diagnosis and administration of prophylaxis to potential human exposures are based on the observation that, in all mammals, rabies virus reaches the salivary glands and is excreted in saliva only after replication in the central nervous system. Absence of rabies virus antigen in the brain of an animal by DFA (i.e., a negative diagnostic test result) essentially precludes the presence of virus in saliva, the risk for rabies transmission, and the need for postexposure prophylaxis. Clinical signs leading to a suspicion of rabies occur only after substantial virus replication. At that time, most tests for rabies reveal considerable amounts of viral antigen in all areas of the brain.

DFA test results in which staining of antigen is weak or that reveals sparse or focal inclusions often are caused by nonspecific antibody binding or less-than-optimum

[†]This test was subsequently determined to be a positive nested PCR obtained following a negative primary RT-PCR. Sequencing of the amplified product from the nested PCR did not reveal a rabies gene product.

Potentially Rabid Bear — Continued

test conditions. Cross-contamination of negative samples at necropsy with material from strong positive samples tested earlier also can cause sporadic staining in a negative sample. DFA tests that are not clearly positive or negative should be repeated by remaking slides from reserved brain tissue and repeating the test, using reagents from two different commercial sources and using additional specificity controls. If test results remain equivocal, alternative confirmatory tests, such as virus isolation (through cell culture or mouse inoculation) or PCR assays, should be performed (*5*). Additional amplification, such as a nested RT-PCR assay, is unnecessary and inappropriate for routine diagnostic applications. Postexposure prophylaxis can be initiated during the diagnostic testing process and discontinued if negative results are obtained.

In 1997, approximately 100,000 animal brains were tested for rabies virus antigen by DFA; of these, 8509 (8.5%) were positive (*6*). The absolute number of persons potentially exposed to an animal with suspected rabies and who did not receive prophylaxis because of a negative diagnostic test result is unknown. Nevertheless, since the initiation of current rabies testing procedures in 1958, there is no evidence that a false negative laboratory test has ever led to rabies in a person subsequently left untreated.

Each laboratory that provides rabies diagnostic services should plan routine evaluation of its DFA test procedures and should participate in national rabies virus proficiency testing. Negative test results obtained by appropriate and systematic examination of specimens can be interpreted reliably by public health practitioners so that no postexposure prophylaxis is required or postexposure prophylaxis that was initiated pending laboratory evaluation can be curtailed (*7*). To assist state and local health departments, national and international reference laboratories, such as the World Health Organization Collaborating Center for Reference and Research on Rabies at CDC, are available to clarify and interpret rabies test results.

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Notice to Readers

National Epilepsy Month — November 1999

November is National Epilepsy Month. Epilepsy is a central nervous system disorder, characterized by unprovoked recurrent seizures, that affects approximately 2.3 million persons in the United States. Of these, approximately 300,000 are school-aged children.

Many persons in the United States do not know how to appropriately assist a person having a seizure; some incorrectly believe they should place something in the seizing person's mouth or restrain movements. However, both actions can be harmful. Instead, anyone assisting a seizing person should loosen clothing, remove objects the person may bump against or hit, and remain nearby to help the person move to a chair or couch when the seizure ends.

The Epilepsy Foundation has launched the "Be Seizure Smart" campaign as the focus of this month's activities. The campaign is a nationwide initiative directed at schools to dispel myths and to educate school staff about effectively responding to students during seizures.

Additional information about epilepsy or the "Be Seizure Smart" campaign is available from the Epilepsy Foundation, telephone (800) 332-1000, or on the World-Wide Web, http://www.seizuresmart.org* and http://www.epilepsyfoundation.org.

*References to sites of non-CDC organizations on the Internet are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

Notice to Readers

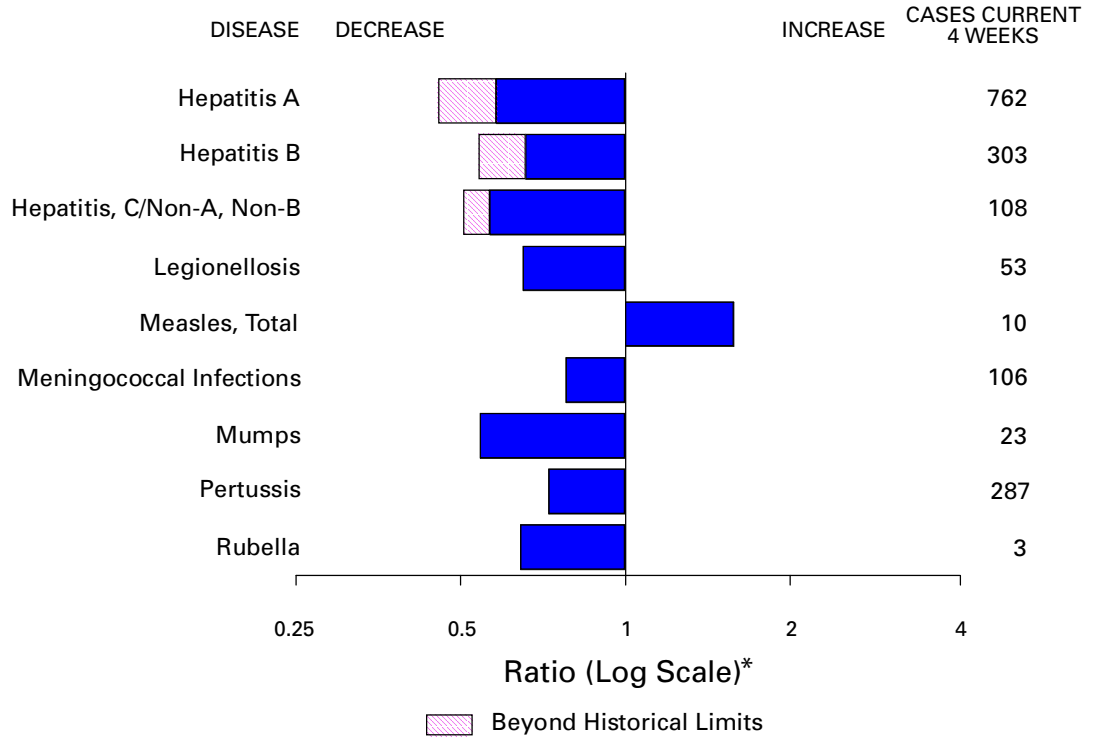
Shortage of Intravenous Penicillin G — United States

In June 1999, Schein Pharmaceuticals, Inc (Florham Park, New Jersey)* announced that its subsidiary Marsam pharmaceuticals was voluntarily recalling all of its penicillin products to address the Food and Drug Administration's (FDA) regulatory concerns at Schein Pharmaceuticals' manufacturing site. Marsam Pharmaceuticals is a major manufacturer of penicillin G (potassium and sodium) in finished product vials in the United States. It is unknown when this facility will resume distribution of these products. This situation has caused a shortage of these types of penicillin in many parts of the country.

In response to this shortage, FDA has begun to identify and assist alternative manufacturers of these products. Until the product is again available, the existing supplies of penicillin should be used only for patients for whom alternative antibiotics are not appropriate. There is no known shortage of procaine or benzathine penicillin or of oral penicillin preparations. For a few conditions (e.g., congenital syphilis and neurosyphilis, and intrapartum prophylaxis for perinatal group B streptococcal disease), intravenous penicillin G is the drug of choice. Alternative treatment recommendations can be found at http://www.cdc.gov/nchstp/dstd/pencillinG.htm; or by toll-free FAX-BACK request, (888) 232-3299.

*Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services or CDC.

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



*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 October 23, 1999 (42nd Week)

	Cum. 1999		Cum. 1999
Anthrax	-	HIV infection, pediatric*§	109
Brucellosis*	36	Plague	5
Cholera	5	Poliomyelitis, paralytic	-
Congenital rubella syndrome	5	Psittacosis*	17
Cyclosporiasis*	49	Rabies, human	-
Diphtheria	2	Rocky Mountain spotted fever (RMSF)	438
Encephalitis: California*	49	Streptococcal disease, invasive Group A	1,702
eastern equine*	5	Streptococcal toxic-shock syndrome*	30
St. Louis*	3	Syphilis, congenital¶	155
western equine*	-	Tetanus	31
Ehrlichiosis human granulocytic (HGE)*	119	Toxic-shock syndrome	96
human monocytic (HME)*	35	Trichinosis	8
Hansen Disease*	78	Typhoid fever	254
Hantavirus pulmonary syndrome*†	18	Yellow fever	-
Hemolytic uremic syndrome, post-diarrheal*	77		

-: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 September 26, 1999.
¶ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 23, 1999, and October 24, 1998 (42nd Week)

Reporting Area	AIDS		Chlamydia		Cryptosporidiosis		*Escherichia coli* O157:H7*			
							NETSS		PHLIS	
	Cum. 1999†	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	34,088	37,409	458,235	475,663	1,776	3,208	2,671	2,439	1,848	1,915
NEW ENGLAND	1,698	1,444	16,195	16,417	122	137	276	285	278	239
Maine	54	24	738	812	24	29	34	33	-	-
N.H.	36	25	750	803	17	14	28	42	29	42
Vt.	13	18	387	338	33	22	31	19	18	17
Mass.	1,116	766	7,438	6,783	44	65	156	132	156	136
R.I.	77	105	1,857	1,858	4	7	27	11	6	1
Conn.	402	506	5,025	5,823	-	-	U	48	69	43
MID. ATLANTIC	8,684	10,309	50,747	49,402	275	483	222	261	60	83
Upstate N.Y.	952	1,248	N	N	131	287	172	187	-	-
N.Y. City	4,588	5,843	21,963	21,348	112	174	8	12	15	12
N.J.	1,619	1,839	8,632	9,585	22	22	42	62	32	50
Pa.	1,525	1,379	20,152	18,469	10	N	N	N	13	21
E.N. CENTRAL	2,280	2,651	67,472	80,335	399	651	574	387	421	317
Ohio	345	567	19,151	21,807	54	63	199	103	167	60
Ind.	258	412	8,856	8,905	33	51	82	81	52	47
Ill.	1,108	986	21,692	21,629	17	75	188	102	81	73
Mich.	456	530	17,773	16,763	42	36	105	101	73	62
Wis.	113	156	U	11,231	253	426	N	N	48	75
W.N. CENTRAL	770	685	26,710	28,234	182	245	520	410	360	368
Minn.	138	135	5,529	5,675	69	79	207	178	155	194
Iowa	69	58	3,438	3,637	51	61	102	84	67	54
Mo.	370	313	9,298	10,180	24	21	42	41	55	59
N. Dak.	6	5	325	831	16	28	16	10	14	15
S. Dak.	14	13	1,293	1,240	7	19	42	25	57	33
Nebr.	60	60	2,601	2,278	14	31	90	43	-	-
Kans.	113	101	4,226	4,393	1	6	21	29	12	13
S. ATLANTIC	9,423	9,742	95,743	91,406	324	284	280	200	142	156
Del.	129	112	2,207	2,080	-	3	6	-	3	2
Md.	1,113	1,386	8,200	6,043	15	18	30	35	2	14
D.C.	412	692	N	N	8	21	-	1	U	U
Va.	608	769	11,398	11,199	21	20	66	N	48	51
W. Va.	53	68	1,204	1,971	3	1	10	8	7	8
N.C.	629	703	18,284	17,661	20	N	61	46	48	47
S.C.	797	637	9,885	13,833	-	-	19	11	14	8
Ga.	1,382	980	21,374	19,100	121	92	28	66	-	-
Fla.	4,300	4,395	23,191	19,519	136	129	60	33	20	26
E.S. CENTRAL	1,536	1,540	37,113	33,034	24	24	107	106	56	61
Ky.	214	246	6,084	5,166	6	10	38	33	-	-
Tenn.	588	570	11,502	11,011	6	8	43	47	36	39
Ala.	405	417	10,365	8,200	10	N	21	21	16	18
Miss.	329	307	9,162	8,657	2	6	5	5	4	4
W.S. CENTRAL	3,524	4,667	67,148	72,268	66	887	90	83	101	92
Ark.	132	176	4,751	3,145	1	6	12	10	8	10
La.	663	756	10,879	11,978	22	15	9	4	13	7
Okla.	101	238	6,432	7,940	9	N	21	13	17	8
Tex.	2,628	3,497	45,086	49,205	34	866	48	56	63	67
MOUNTAIN	1,343	1,289	25,725	26,438	86	118	251	317	152	224
Mont.	8	26	1,262	1,043	10	10	22	15	-	5
Idaho	19	19	1,375	1,623	7	17	39	36	20	24
Wyo.	10	3	630	566	1	2	14	53	5	55
Colo.	235	254	4,944	6,520	11	16	90	71	81	57
N. Mex.	74	188	2,992	2,866	38	46	11	17	5	18
Ariz.	697	502	10,201	9,436	12	18	28	43	19	26
Utah	116	101	1,752	1,706	N	N	32	67	20	21
Nev.	184	196	2,569	2,678	7	9	15	15	2	18
PACIFIC	4,830	5,082	71,382	78,129	298	379	351	390	278	375
Wash.	285	331	9,534	8,875	N	N	136	84	119	116
Oreg.	151	138	5,041	4,480	87	63	71	99	66	93
Calif.	4,319	4,452	52,994	61,204	211	313	135	201	82	152
Alaska	13	17	1,528	1,511	-	-	1	6	1	-
Hawaii	62	144	2,285	2,059	-	3	8	-	10	14
Guam	5	-	302	341	-	-	N	N	U	U
P.R.	1,013	1,421	U	U	-	N	5	5	U	U
V.I.	25	25	U	U	U	U	U	U	U	U
Amer. Samoa	-	-	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	U	U	U	U	U	U	U

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

†Updated monthly from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update September 26, 1999.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending October 23, 1999, and October 24, 1998 (42nd Week)

Reporting Area	Gonorrhea		Hepatitis C/NA,NB		Legionellosis		Lyme Disease	
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	254,085	283,198	2,652	2,671	693	1,059	8,986	13,498
NEW ENGLAND	4,980	4,889	59	54	63	73	3,114	4,194
Maine	42	55	2	-	3	1	41	70
N.H.	88	75	-	-	6	6	16	38
Vt.	37	32	6	4	13	5	18	11
Mass.	2,064	1,800	48	47	23	31	990	658
R.I.	478	312	3	3	7	19	408	503
Conn.	2,271	2,615	-	-	11	11	1,641	2,914
MID. ATLANTIC	32,408	30,713	109	177	129	258	4,358	7,406
Upstate N.Y.	5,618	5,726	74	90	49	80	3,226	3,450
N.Y. City	11,762	9,602	-	-	9	33	29	203
N.J.	5,309	6,463	-	U	13	15	389	1,635
Pa.	9,719	8,922	35	87	58	130	714	2,118
E.N. CENTRAL	45,168	55,302	1,333	573	192	354	103	687
Ohio	11,535	14,165	3	7	64	110	68	38
Ind.	4,893	5,250	1	5	32	62	19	34
Ill.	16,115	18,030	38	37	10	48	10	14
Mich.	12,625	12,733	700	392	57	70	1	12
Wis.	U	5,124	591	132	29	64	5	589
W.N. CENTRAL	10,852	13,976	159	35	42	59	195	188
Minn.	2,125	2,179	7	9	9	6	132	142
Iowa	903	1,219	-	8	11	9	19	23
Mo.	4,686	7,316	141	12	14	16	21	11
N. Dak.	31	66	-	-	1	-	1	-
S. Dak.	153	187	-	-	3	3	-	-
Nebr.	1,128	944	5	4	4	18	10	3
Kans.	1,826	2,065	6	2	-	7	12	9
S. ATLANTIC	71,513	76,024	178	89	110	118	948	765
Del.	1,372	1,214	1	-	11	12	41	58
Md.	6,502	7,508	39	12	24	29	671	550
D.C.	3,013	3,617	1	-	3	6	4	4
Va.	7,547	7,529	10	11	28	17	109	56
W. Va.	363	708	17	6	N	N	16	11
N.C.	16,265	15,308	33	19	13	11	63	48
S.C.	5,704	8,720	22	5	7	10	5	5
Ga.	14,359	16,162	1	9	1	8	-	5
Fla.	16,388	15,258	54	27	23	25	39	28
E.S. CENTRAL	29,689	31,860	213	246	38	56	70	94
Ky.	2,759	3,004	15	19	20	26	8	24
Tenn.	9,268	9,620	80	146	14	18	30	41
Ala.	9,285	10,527	2	4	4	5	19	16
Miss.	8,377	8,709	116	77	-	7	13	13
W.S. CENTRAL	37,663	44,318	191	443	6	29	28	19
Ark.	2,474	3,243	16	16	-	1	4	6
La.	8,653	10,154	102	80	2	3	-	4
Okla.	3,162	4,348	14	12	3	12	4	2
Tex.	23,374	26,573	59	335	1	13	20	7
MOUNTAIN	7,625	7,394	124	335	41	62	16	14
Mont.	43	32	5	7	-	2	-	-
Idaho	69	142	7	86	2	2	5	4
Wyo.	26	28	37	83	-	1	3	1
Colo.	1,936	1,702	20	26	11	15	-	-
N. Mex.	602	711	8	82	1	2	1	4
Ariz.	3,699	3,413	33	11	6	14	-	-
Utah	174	183	6	21	15	20	5	-
Nev.	1,076	1,183	8	19	6	6	2	5
PACIFIC	14,187	18,722	286	719	72	50	154	131
Wash.	1,625	1,591	16	21	11	9	7	7
Oreg.	730	644	17	16	N	N	11	19
Calif.	11,257	15,811	253	628	60	39	136	104
Alaska	247	253	-	-	1	1	-	1
Hawaii	328	423	-	54	-	1	N	N
Guam	39	57	1	1	-	2	-	1
P.R.	255	303	-	-	-	-	N	N
V.I.	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	U	U	U	U	U	U	U	U

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

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending October 23, 1999, and October 24, 1998 (42nd Week)

Reporting Area	Malaria		Rabies, Animal		Salmonellosis*			
					NETSS		PHLIS	
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	1,023	1,201	4,909	6,155	29,210	34,104	23,596	28,586
NEW ENGLAND	51	52	735	1,226	1,381	2,025	1,642	1,952
Maine	3	4	142	201	120	146	90	56
N.H.	2	5	48	71	113	156	121	198
Vt.	4	1	86	56	80	116	73	91
Mass.	16	16	174	432	959	1,136	923	1,164
R.I.	4	8	78	80	109	114	52	34
Conn.	22	18	207	386	U	357	383	409
MID. ATLANTIC	230	361	906	1,335	3,249	5,481	2,995	5,010
Upstate N.Y.	60	80	681	937	1,082	1,319	900	1,187
N.Y. City	106	206	U	U	1,133	1,644	853	1,291
N.J.	43	49	152	180	508	1,214	535	1,164
Pa.	21	26	73	218	526	1,304	707	1,368
E.N. CENTRAL	95	127	136	114	4,459	5,287	2,936	4,036
Ohio	18	14	32	52	1,109	1,271	895	980
Ind.	18	10	12	9	440	568	350	451
Ill.	20	51	10	N	1,366	1,628	399	1,274
Mich.	33	42	79	34	826	965	824	886
Wis.	6	10	3	19	718	855	468	445
W.N. CENTRAL	63	75	600	616	1,886	1,926	1,913	1,993
Minn.	33	42	92	102	557	467	599	553
Iowa	13	7	140	134	225	325	186	259
Mo.	13	14	13	36	586	524	773	722
N. Dak.	-	2	125	122	41	52	47	67
S. Dak.	-	-	140	140	83	99	105	107
Nebr.	-	1	3	7	175	155	-	38
Kans.	4	9	87	75	219	304	203	247
S. ATLANTIC	296	249	1,758	2,025	7,007	6,835	4,415	5,130
Del.	1	3	37	40	114	67	137	106
Md.	84	75	337	398	738	766	802	742
D.C.	17	16	-	-	65	64	U	U
Va.	62	49	466	481	1,102	916	789	757
W. Va.	2	2	93	65	138	121	135	132
N.C.	26	23	362	498	1,071	990	1,140	1,184
S.C.	16	6	129	121	566	511	394	462
Ga.	21	33	178	261	1,133	1,363	651	1,275
Fla.	67	42	156	161	2,080	2,037	367	472
E.S. CENTRAL	20	27	223	237	1,576	1,900	902	1,354
Ky.	7	5	33	27	333	310	-	124
Tenn.	6	14	79	124	317	497	451	599
Ala.	6	6	110	84	494	584	374	501
Miss.	1	2	1	2	432	509	77	130
W.S. CENTRAL	16	32	87	28	2,654	3,800	2,752	2,667
Ark.	3	1	14	28	526	490	120	300
La.	10	13	-	-	334	563	472	657
Okla.	2	3	73	N	359	398	271	189
Tex.	1	15	-	-	1,435	2,349	1,889	1,521
MOUNTAIN	41	58	172	224	2,505	2,127	2,094	1,764
Mont.	4	1	52	47	50	70	1	43
Idaho	3	8	-	N	90	101	77	81
Wyo.	1	-	41	55	55	57	22	50
Colo.	15	18	1	38	609	467	631	444
N. Mex.	2	12	9	6	295	255	217	224
Ariz.	9	8	57	46	799	672	665	608
Utah	4	1	7	26	441	300	428	122
Nev.	3	10	5	6	166	205	53	192
PACIFIC	211	220	292	350	4,493	4,723	3,947	4,680
Wash.	22	17	-	-	523	399	670	556
Oreg.	19	15	1	7	378	259	446	283
Calif.	162	182	284	320	3,255	3,785	2,569	3,561
Alaska	1	2	7	23	50	50	15	31
Hawaii	7	4	-	-	287	230	247	249
Guam	-	2	-	-	24	29	U	U
P.R.	-	-	61	45	255	622	U	U
V.I.	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	U	U	U	U	U	U	U	U

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending October 23, 1999, and October 24, 1998 (42nd Week)

Reporting Area	Shigellosis*				Syphilis (Primary & Secondary)		Tuberculosis	
	NETSS		PHLIS					
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999†	Cum. 1998†
UNITED STATES	12,166	17,156	5,931	9,764	5,089	5,801	11,290	13,425
NEW ENGLAND	578	365	556	328	46	63	330	348
Maine	5	12	-	-	-	1	16	11
N.H.	16	15	14	18	-	2	10	-
Vt.	6	6	4	1	3	4	1	4
Mass.	529	243	481	236	28	35	194	197
R.I.	22	31	9	13	2	1	35	41
Conn.	U	58	48	60	13	20	74	95
MID. ATLANTIC	743	2,035	370	1,519	216	259	2,087	2,342
Upstate N.Y.	239	489	45	172	24	35	259	291
N.Y. City	238	620	82	542	79	60	1,120	1,154
N.J.	195	603	121	566	48	79	422	497
Pa.	71	323	122	239	65	85	286	400
E.N. CENTRAL	2,274	2,369	1,120	1,258	950	850	1,061	1,341
Ohio	368	424	115	110	75	121	199	194
Ind.	250	143	90	35	374	165	76	130
Ill.	868	1,295	592	1,051	316	349	465	634
Mich.	363	227	255	4	185	160	239	299
Wis.	425	280	68	58	U	55	82	84
W.N. CENTRAL	942	882	609	515	102	112	360	382
Minn.	207	268	208	296	9	8	129	119
Iowa	46	61	41	40	9	2	37	38
Mo.	575	117	316	88	67	84	137	142
N. Dak.	2	7	2	3	-	-	6	8
S. Dak.	13	31	6	21	-	1	17	16
Nebr.	62	338	-	19	7	4	15	18
Kans.	37	60	36	48	10	13	19	41
S. ATLANTIC	1,979	3,506	385	1,086	1,604	2,100	2,343	2,470
Del.	12	27	8	25	8	20	12	32
Md.	136	177	47	63	300	570	219	253
D.C.	46	25	U	U	58	71	35	89
Va.	112	168	43	78	124	121	221	222
W. Va.	8	11	5	7	2	2	35	32
N.C.	168	252	77	139	400	608	348	351
S.C.	109	147	53	71	218	240	207	227
Ga.	195	928	37	219	248	233	457	431
Fla.	1,193	1,771	115	484	246	235	809	833
E.S. CENTRAL	913	925	450	713	936	1,014	715	918
Ky.	216	110	-	45	85	87	151	135
Tenn.	508	366	393	457	517	476	257	293
Ala.	96	401	47	204	186	235	251	309
Miss.	93	48	10	7	148	216	56	181
W.S. CENTRAL	1,740	3,385	1,727	1,073	783	873	1,239	2,007
Ark.	71	177	23	55	57	94	135	114
La.	118	266	99	233	200	347	U	243
Okla.	425	396	143	111	153	77	108	142
Tex.	1,126	2,546	1,462	674	373	355	996	1,508
MOUNTAIN	894	1,034	533	629	199	212	366	439
Mont.	7	8	-	3	1	-	10	18
Idaho	24	18	9	13	1	2	14	10
Wyo.	3	3	1	1	-	1	3	4
Colo.	156	170	121	131	2	10	U	52
N. Mex.	109	251	62	141	11	22	49	54
Ariz.	460	498	322	294	176	159	180	157
Utah	57	38	12	28	2	4	35	45
Nev.	78	48	6	18	6	14	75	99
PACIFIC	2,103	2,655	181	2,643	253	318	2,789	3,178
Wash.	92	171	79	149	57	27	136	208
Oreg.	78	124	75	131	9	4	86	115
Calif.	1,905	2,318	-	2,318	184	283	2,384	2,667
Alaska	2	6	2	3	1	1	43	43
Hawaii	26	36	25	42	2	3	140	145
Guam	8	31	U	U	1	1	11	76
P.R.	62	47	U	U	134	151	41	122
V.I.	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	U	U	U	U	U	U	U	U

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

†Cumulative reports of provisional tuberculosis cases for 1999 are unavailable ("U") for some areas using the Tuberculosis Information System (TIMS).

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending October 23, 1999, and October 24, 1998 (42nd Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported*		Total	
	Cum. 1999†	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	1999	Cum. 1999	1999	Cum. 1999	Cum. 1999	Cum. 1998
UNITED STATES	943	883	12,405	18,126	5,122	7,815	1	53	-	22	75	77
NEW ENGLAND	77	62	228	237	78	174	-	6	-	5	11	3
Maine	5	3	11	16	1	2	-	-	-	-	-	-
N.H.	17	10	15	11	13	16	U	-	U	1	1	-
Vt.	5	7	17	14	2	8	-	-	-	-	-	1
Mass.	28	36	70	106	33	64	-	5	-	3	8	2
R.I.	5	5	16	14	29	58	-	-	-	-	-	-
Conn.	17	1	99	76	-	26	-	1	-	1	2	-
MID. ATLANTIC	142	140	768	1,423	520	1,021	-	-	-	2	2	14
Upstate N.Y.	70	47	222	295	156	197	-	-	-	2	2	2
N.Y. City	31	39	233	500	161	360	-	-	-	-	-	-
N.J.	40	47	64	299	41	175	-	-	-	-	-	8
Pa.	1	7	249	329	162	289	-	-	-	-	-	4
E.N. CENTRAL	147	150	2,345	2,920	536	1,190	-	1	-	1	2	15
Ohio	51	45	559	263	81	66	-	-	-	-	-	1
Ind.	21	36	94	128	36	93	-	1	-	-	1	3
Ill.	62	53	545	659	1	202	-	-	-	-	-	-
Mich.	13	9	1,104	1,701	413	383	-	-	-	1	1	10
Wis.	-	7	43	169	5	446	-	-	-	-	-	1
W.N. CENTRAL	79	80	640	1,196	253	334	-	1	-	-	1	-
Minn.	38	62	63	110	41	41	-	1	-	-	1	-
Iowa	9	2	118	383	33	50	-	-	-	-	-	-
Mo.	23	9	358	556	137	197	-	-	-	-	-	-
N. Dak.	1	-	2	3	-	4	U	-	U	-	-	-
S. Dak.	1	-	9	28	1	2	-	-	-	-	-	-
Nebr.	3	1	50	25	14	18	-	-	-	-	-	-
Kans.	4	6	40	91	27	22	-	-	-	-	-	-
S. ATLANTIC	210	158	1,668	1,568	1,002	811	1	10	-	5	15	8
Del.	-	-	2	3	1	3	-	-	-	-	-	1
Md.	55	50	301	338	142	115	-	-	-	-	-	1
D.C.	4	-	54	55	21	11	-	-	-	-	-	-
Va.	16	16	142	174	75	84	1	10	-	3	13	2
W. Va.	6	6	32	6	22	8	-	-	-	-	-	-
N.C.	29	23	134	99	194	173	-	-	-	-	-	-
S.C.	5	3	41	33	63	33	-	-	-	-	-	-
Ga.	55	35	406	501	146	127	-	-	-	-	-	2
Fla.	40	25	556	359	338	257	U	-	U	2	2	2
E.S. CENTRAL	52	50	326	336	345	412	-	2	-	-	2	2
Ky.	6	7	55	27	36	40	-	2	-	-	2	-
Tenn.	28	29	142	193	166	230	-	-	-	-	-	1
Ala.	15	12	47	61	74	65	-	-	-	-	-	1
Miss.	3	2	82	55	69	77	-	-	-	-	-	-
W.S. CENTRAL	45	48	2,360	3,209	722	1,724	-	6	-	4	10	-
Ark.	2	-	43	74	49	91	-	1	-	-	1	-
La.	7	20	73	85	77	127	U	-	U	-	-	-
Okla.	32	25	389	491	108	71	-	-	-	-	-	-
Tex.	4	3	1,855	2,559	488	1,435	-	5	-	4	9	-
MOUNTAIN	96	97	1,083	2,714	487	693	-	3	-	-	3	-
Mont.	2	-	17	87	17	5	-	-	-	-	-	-
Idaho	1	-	36	221	25	38	-	-	-	-	-	-
Wyo.	1	1	7	33	12	9	-	-	-	-	-	-
Colo.	11	21	189	271	79	89	-	-	-	-	-	-
N. Mex.	18	6	43	126	152	271	-	-	-	-	-	-
Ariz.	52	46	630	1,617	129	149	-	1	-	-	1	-
Utah	8	4	45	164	29	62	-	2	-	-	2	-
Nev.	3	19	116	195	44	70	-	-	-	-	-	-
PACIFIC	95	98	2,987	4,523	1,179	1,456	-	24	-	5	29	35
Wash.	4	8	270	857	56	87	-	-	-	-	-	1
Oreg.	38	37	216	357	81	154	-	9	-	-	9	-
Calif.	40	43	2,480	3,242	1,016	1,190	-	15	-	4	19	7
Alaska	6	3	9	16	14	12	-	-	-	-	-	27
Hawaii	7	7	12	51	12	13	-	-	-	1	1	-
Guam	-	-	2	1	2	2	U	1	U	-	1	-
P.R.	1	2	112	58	102	203	-	-	-	-	-	-
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.	U	U	U	U	U	U	U	U	U	U	U	U

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

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

†Of 180 cases among children aged <5 years, serotype was reported for 92 and of those, 24 were type b.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending October 23, 1999, and October 24, 1998 (42nd Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998
UNITED STATES	1,938	2,162	6	269	553	87	4,374	5,244	-	226	345
NEW ENGLAND	97	96	2	8	7	11	522	847	-	7	38
Maine	5	6	-	-	-	-	-	5	-	-	-
N.H.	12	11	U	1	-	U	78	95	U	-	-
Vt.	4	5	-	1	-	2	54	66	-	-	-
Mass.	57	42	-	4	4	-	343	633	-	7	8
R.I.	4	7	2	2	1	9	33	9	-	-	1
Conn.	15	25	-	-	2	-	14	39	-	-	29
MID. ATLANTIC	174	228	1	29	178	1	689	520	-	22	146
Upstate N.Y.	55	62	1	10	6	1	603	278	-	18	114
N.Y. City	45	29	-	3	155	-	10	31	-	-	18
N.J.	41	51	-	-	6	-	12	23	-	1	13
Pa.	33	86	-	16	11	-	64	188	-	3	1
E.N. CENTRAL	341	332	-	33	69	17	343	664	-	2	-
Ohio	121	122	-	14	26	4	177	232	-	-	-
Ind.	56	57	-	4	6	4	58	120	-	1	-
Ill.	93	87	-	8	9	8	57	91	-	1	-
Mich.	40	39	-	7	26	1	47	59	-	-	-
Wis.	31	27	-	-	2	-	4	162	-	-	-
W.N. CENTRAL	213	186	-	12	28	-	329	469	-	123	39
Minn.	46	29	-	1	12	-	186	271	-	5	-
Iowa	39	35	-	6	10	-	46	63	-	29	-
Mo.	84	69	-	2	3	-	50	32	-	2	2
N. Dak.	3	5	U	-	2	U	4	3	U	-	-
S. Dak.	11	7	-	-	-	-	5	8	-	-	-
Nebr.	12	13	-	-	-	-	3	15	-	87	-
Kans.	18	28	-	3	1	-	35	77	-	-	37
S. ATLANTIC	341	354	2	45	43	-	341	273	-	36	18
Del.	8	2	-	-	-	-	5	5	-	-	-
Md.	49	25	1	4	-	-	96	53	-	1	1
D.C.	1	1	-	2	-	-	-	1	-	-	-
Va.	45	32	1	10	7	-	19	29	-	-	1
W. Va.	6	14	-	-	-	-	3	1	-	-	-
N.C.	38	49	-	8	10	-	85	89	-	35	13
S.C.	42	49	-	4	6	-	15	25	-	-	-
Ga.	54	84	-	4	1	-	35	24	-	-	-
Fla.	98	98	U	13	19	U	83	46	U	-	3
E.S. CENTRAL	120	168	-	11	14	-	69	109	-	1	2
Ky.	26	30	-	-	-	-	21	49	-	-	-
Tenn.	43	60	-	-	1	-	27	32	-	-	2
Ala.	30	44	-	8	8	-	18	24	-	1	-
Miss.	21	34	-	3	5	-	3	4	-	-	-
W.S. CENTRAL	146	265	-	30	54	3	151	322	-	15	87
Ark.	31	27	-	-	11	-	18	71	-	6	-
La.	34	51	U	3	7	U	3	8	U	-	-
Okla.	26	36	-	1	-	-	12	31	-	-	-
Tex.	55	151	-	26	36	3	118	212	-	9	87
MOUNTAIN	123	120	-	23	35	32	600	904	-	16	5
Mont.	2	4	-	-	-	-	2	9	-	-	-
Idaho	10	10	-	1	4	4	135	212	-	-	-
Wyo.	4	5	-	-	1	-	2	8	-	-	-
Colo.	31	23	-	5	6	12	177	223	-	1	-
N. Mex.	14	24	N	N	N	16	126	86	-	-	1
Ariz.	41	37	-	7	6	-	98	181	-	13	1
Utah	14	10	-	5	5	-	55	146	-	1	2
Nev.	7	7	-	5	13	-	5	39	-	1	1
PACIFIC	383	413	1	78	125	23	1,330	1,136	-	4	10
Wash.	59	58	-	2	9	8	587	270	-	-	5
Oreg.	66	72	N	N	N	2	46	77	-	-	-
Calif.	247	275	1	62	91	13	663	759	-	4	3
Alaska	5	3	-	2	2	-	4	14	-	-	-
Hawaii	6	5	-	12	23	-	30	16	-	-	2
Guam	2	2	U	1	5	U	1	1	U	-	-
P.R.	5	9	-	-	3	-	16	5	-	-	12
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	U	U	U	U	U	U	U	U

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

TABLE IV. Deaths in 122 U.S. cities,* week ending October 23, 1999 (42nd Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	421	305	67	30	12	7	38
Boston, Mass.	140	94	23	15	4	4	11
Bridgeport, Conn.	38	26	5	3	3	1	2
Cambridge, Mass.	14	12	2	-	-	-	2
Fall River, Mass.	23	17	3	1	1	1	1
Hartford, Conn.	U	U	U	U	U	U	U
Lowell, Mass.	18	13	3	2	-	-	5
Lynn, Mass.	10	9	-	1	-	-	3
New Bedford, Mass.	38	28	7	3	-	-	-
New Haven, Conn.	33	22	5	2	3	1	2
Providence, R.I.	30	24	3	2	1	-	-
Somerville, Mass.	3	2	1	-	-	-	-
Springfield, Mass.	U	U	U	U	U	U	U
Waterbury, Conn.	19	17	2	-	-	-	2
Worcester, Mass.	55	41	13	1	-	-	10
MID. ATLANTIC	2,172	1,493	431	160	44	42	93
Albany, N.Y.	44	32	10	1	-	1	-
Allentown, Pa.	U	U	U	U	U	U	U
Buffalo, N.Y.	80	51	16	8	3	2	11
Camden, N.J.	34	20	10	3	-	1	2
Elizabeth, N.J.	U	U	U	U	U	U	U
Erie, Pa.	40	30	10	-	-	-	3
Jersey City, N.J.	37	24	11	1	1	-	-
New York City, N.Y.	1,194	835	231	86	23	18	33
Newark, N.J.	47	26	5	7	4	4	1
Paterson, N.J.	26	17	7	1	1	-	-
Philadelphia, Pa.	267	162	63	33	2	7	8
Pittsburgh, Pa.§	85	52	14	10	4	5	6
Reading, Pa.	28	23	2	2	-	1	1
Rochester, N.Y.	127	100	19	4	3	1	10
Schenectady, N.Y.	21	18	3	-	-	-	3
Scranton, Pa.	36	26	7	1	2	-	3
Syracuse, N.Y.	69	52	13	2	-	2	9
Trenton, N.J.	21	12	9	-	-	-	2
Utica, N.Y.	16	13	1	1	1	-	1
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,971	1,338	391	140	45	57	132
Akron, Ohio	42	24	9	4	-	5	4
Canton, Ohio	36	28	7	-	-	1	7
Chicago, Ill.	381	235	74	38	16	18	31
Cincinnati, Ohio	U	U	U	U	U	U	U
Cleveland, Ohio	146	89	34	17	1	5	3
Columbus, Ohio	214	150	44	9	7	4	14
Dayton, Ohio	112	83	20	6	1	2	7
Detroit, Mich.	230	134	62	23	7	4	13
Evansville, Ind.	43	29	11	1	1	1	3
Fort Wayne, Ind.	58	44	8	2	1	3	7
Gary, Ind.	U	U	U	U	U	U	U
Grand Rapids, Mich.	60	45	10	1	-	4	4
Indianapolis, Ind.	171	113	36	15	4	3	11
Lansing, Mich.	44	32	10	1	1	-	8
Milwaukee, Wis.	142	105	26	7	1	3	10
Peoria, Ill.	34	28	3	2	-	1	2
Rockford, Ill.	50	40	5	4	-	1	2
South Bend, Ind.	43	33	7	1	-	2	-
Toledo, Ohio	106	82	14	6	4	-	2
Youngstown, Ohio	59	44	11	3	1	-	4
W.N. CENTRAL	703	492	134	43	16	18	51
Des Moines, Iowa	U	U	U	U	U	U	U
Duluth, Minn.	32	25	7	-	-	-	4
Kansas City, Kans.	39	25	10	3	1	-	2
Kansas City, Mo.	70	41	19	8	2	-	4
Lincoln, Nebr.	42	32	6	3	1	-	5
Minneapolis, Minn.	157	113	30	11	2	1	16
Omaha, Nebr.	78	55	15	3	1	4	4
St. Louis, Mo.	84	53	14	6	7	4	-
St. Paul, Minn.	121	94	19	4	-	4	12
Wichita, Kans.	80	54	14	5	2	5	4
S. ATLANTIC	1,076	684	214	108	33	36	70
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	263	151	53	41	9	9	28
Charlotte, N.C.	93	62	16	11	2	2	13
Jacksonville, Fla.	133	78	30	14	4	7	3
Miami, Fla.	101	66	21	10	4	-	5
Norfolk, Va.	51	34	11	3	3	-	-
Richmond, Va.	54	32	9	7	-	6	4
Savannah, Ga.	60	38	16	1	3	2	6
St. Petersburg, Fla.	38	31	3	1	2	1	3
Tampa, Fla.	187	124	41	12	4	6	7
Washington, D.C.	71	45	12	8	2	3	1
Wilmington, Del.	25	23	2	-	-	-	-
E.S. CENTRAL	769	477	186	60	26	18	52
Birmingham, Ala.	182	118	36	14	6	6	13
Chattanooga, Tenn.	76	50	16	8	2	-	5
Knoxville, Tenn.	86	55	24	4	2	1	5
Lexington, Ky.	44	27	11	3	2	1	3
Memphis, Tenn.	106	50	39	10	5	2	5
Mobile, Ala.	54	36	10	5	2	1	3
Montgomery, Ala.	70	48	13	4	5	-	10
Nashville, Tenn.	151	93	37	12	2	7	8
W.S. CENTRAL	1,247	794	278	111	24	40	77
Austin, Tex.	77	51	19	5	2	-	4
Baton Rouge, La.	73	55	12	5	1	-	-
Corpus Christi, Tex.	53	40	12	1	-	-	2
Dallas, Tex.	165	98	35	18	5	9	1
El Paso, Tex.	55	39	12	3	-	1	4
Ft. Worth, Tex.	123	78	34	10	-	1	13
Houston, Tex.	316	181	71	44	8	12	27
Little Rock, Ark.	101	52	31	11	3	4	7
New Orleans, La.	86	56	16	6	2	6	7
San Antonio, Tex.	U	U	U	U	U	U	U
Shreveport, La.	47	31	10	3	2	1	4
Tulsa, Okla.	151	113	26	5	1	6	8
MOUNTAIN	997	688	178	77	33	21	87
Albuquerque, N.M.	91	60	20	7	3	1	16
Boise, Idaho	45	35	6	2	1	1	5
Colo. Springs, Colo.	59	44	8	5	1	1	2
Denver, Colo.	101	64	15	11	3	8	7
Las Vegas, Nev.	216	154	42	14	3	3	13
Ogden, Utah	35	26	6	3	-	-	7
Phoenix, Ariz.	162	103	32	16	8	3	11
Pueblo, Colo.	26	22	2	2	-	-	7
Salt Lake City, Utah	117	69	24	12	10	2	9
Tucson, Ariz.	145	111	23	5	4	2	10
PACIFIC	1,185	835	222	81	27	20	107
Berkeley, Calif.	27	15	6	3	1	2	-
Fresno, Calif.	93	66	17	7	2	1	11
Glendale, Calif.	15	11	2	2	-	-	2
Honolulu, Hawaii	69	48	14	7	-	-	5
Long Beach, Calif.	U	U	U	U	U	U	U
Los Angeles, Calif.	316	213	64	23	10	6	17
Pasadena, Calif.	15	10	3	-	-	2	-
Portland, Oreg.	U	U	U	U	U	U	U
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	150	109	25	10	3	3	17
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	195	151	30	8	2	4	21
Santa Cruz, Calif.	32	22	5	4	1	-	4
Seattle, Wash.	115	81	22	8	4	-	9
Spokane, Wash.	67	47	11	5	3	1	10
Tacoma, Wash.	91	62	23	4	1	1	11
TOTAL	10,541¶	7,106	2,101	810	260	259	707

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.

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