

MMWRTM
**MORBIDITY AND MORTALITY
WEEKLY REPORT**

- 729** Health Status of and Intervention for U.S.-Bound Kosovar Refugees — Fort Dix, New Jersey, May–July 1999
- 732** Progress Toward the Elimination of Tuberculosis — United States, 1998
- 736** Progress Toward the Global Interruption of Wild Poliovirus Type 2 Transmission, 1999

**Health Status of and Intervention for
U.S.-Bound Kosovar Refugees — Fort Dix, New Jersey, May–July 1999**

In March 1999, as a result of armed conflict in the Kosovo province of the Federal Republic of Yugoslavia, approximately 860,000 ethnic Albanians sought refuge in neighboring Albania, the Former Yugoslav Republic of Macedonia (FYROM), the Republic of Montenegro—Federal Republic of Yugoslavia, and Bosnia-Herzegovina. As a result of massive refugee movement into FYROM, many nations, including the United States, accepted refugees for resettlement. Refugee processing centers were established in FYROM and the United States. In the United States, the Migration Health Assessment (MHA)* of refugees was undertaken at Fort Dix, New Jersey (i.e., Operation Provide Refuge), in collaboration with the Office of Emergency Preparedness (OEP), Public Health Service, under the direction of the Office of Refugee Resettlement, U.S. Department of Health and Human Services. Assessments in Skopje, FYROM, were conducted by the International Organization for Migration. This report summarizes the results of collaboration between OEP and CDC to provide preventive health programs for 4045 Kosovar refugees at Fort Dix during a 10-week period, which found that the refugees were in good health and underscores the need for a tailored intervention program targeted at the health conditions of the specific population.

The first refugees arrived at Fort Dix on May 5. On arrival, acute medical care was provided as needed, and all refugees were scheduled to undergo the required MHA. As part of the MHA, refugees aged ≥ 15 years underwent a general physical examination and were screened for human immunodeficiency virus infection, syphilis, and TB.

Intervention and prevention services were established at Fort Dix in addition to the acute-care services and MHA. Because of reports of inadequate vaccination programs in Kosovo during the 2 years preceding the mass exodus (1) and the emergency resettlement of the refugees in the United States, approximately 10,600 vaccines were administered to refugees from a set of recommended vaccines (unless vaccination documentation was provided) (Table 1). Because high birth rates were reported in Kosovo before the conflict (2), women of childbearing age (18–45 years) who had

*MHA is a health examination mandated by U.S. law for all refugees and immigrants. The assessment is designed to identify "inadmissible" health conditions, which are infectious tuberculosis, human immunodeficiency virus infection, infectious syphilis and other sexually transmitted diseases, infectious (lepromatous) Hansen disease, any physical or mental health disorder associated with harmful behavior, and drug abuse or addiction.

U.S.-Bound Kosovar Refugees — Continued

TABLE 1. Recommended vaccinations for Kosovar refugees resettling in the United States — 1999

Group	Vaccine
Age 2 months–6 years	Diphtheria and tetanus toxoids and acellular pertussis
Age ≥7 years (including pregnant women)	Tetanus and diphtheria toxoids
Age 2 months–17 years	Oral poliovirus
Age 6 months*–17 years	Measles-mumps-rubella (MMR)
Nonpregnant women aged 18–45 years	MMR
Age 2 months–1 year	<i>Haemophilus influenzae</i> type b
Newborn through age 17 years (including pregnant women)	Hepatitis B
Age ≥65 years (and age ≥2 years with chronic disease)	Pneumococcal

*MMR vaccination should be initiated at age 6 months in high-risk circumstances (e.g., overcrowding). If a child is vaccinated at age <12 months, repeat vaccination is recommended at age 12–15 months. The routine dose at age 4–6 years (i.e., preschool age) should still be administered.

abnormal menstruation or amenorrhea were screened for pregnancy to determine whether they needed prenatal care and should not receive live vaccines. Approximately 120 pregnancy tests were performed during the first month; 58 women received prenatal care, including approximately 400 prenatal visits, and seven babies were born.

On the basis of reports from camps in FYROM, refugees also were assessed for selected conditions (e.g., untreated chronic diseases in the elderly and dental conditions). A pharmacy was established and dispensed approximately 7600 medications for conditions such as hypertension and diabetes. In addition, approximately 1000 dental visits were reported.

Pharmacy- and laboratory-based surveillance systems were established within 1 day of the arrival of the first refugees to identify potential disease outbreaks. Pharmacy-based surveillance of 1% permethrin prescriptions was included because of lice infestations reported from camps in FYROM: use was 20%–40% among refugees arriving during the first week. Among the 1051 newly arriving refugees during the second week, the prevalence of lice or nits within ¼ inch of the scalp (currently infested cases only) was 10%. On the basis of treatment outcomes, no drug resistance was documented. A treatment program was initiated for head lice at Fort Dix and treatment recommendations were made for the FYROM camps.

The first step in TB screening consisted of a chest radiograph. If the radiograph suggested active TB, serial sputum samples were collected for microscopy, culture, and sensitivity through the state laboratory. If radiographs were suggestive of inactive TB and the refugee was not symptomatic, no further evaluation was performed.

Among 4045 refugees screened at Fort Dix, two had infectious (smear-positive) TB, 26 had chest radiographs suggestive of active TB (all smear-negative, eight with clinical indications for treatment), and 65 had radiographs suggestive of inactive TB. All will be reevaluated at their health departments after resettlement. Six refugees had culture-confirmed TB (all sensitive to first-line TB drugs), and 10 refugees (including two with infectious TB) were begun on treatment.

U.S.-Bound Kosovar Refugees — Continued

Refugees with “inadmissible” health conditions received treatment, or received waivers, and physicians were identified to provide continuity of health care. Six refugees were treated for syphilis. Seven refugees were treated for mental health disorders associated with harmful behaviors and placed with physicians in their resettlement area. No other “inadmissible” health conditions were identified. No refugees were involuntarily deported because of “inadmissible” health conditions.

Refugees were treated at a 24-hour acute-care clinic (5127 visits) and referred to specialized care when necessary (72 hospitalized during the first month). Medical charts, including medical history, conditions and medications, vaccinations, dental and prenatal records, and results of MHA, were transferred to the state and local health agencies providing health care after resettlement.

During the same period, 5303 refugees entered the United States through JFK International Airport in New York; similar numbers of refugees with chest radiographs suggestive of active (n=23) and inactive (n=60) TB were identified. No differences were reported in the age and sex distribution of refugees by port of entry. All of these refugees were referred to the state and local health agencies that provide follow-up care for TB patients.

As of August 25, Kosovar refugees continued to enter through JFK International Airport, although their numbers have diminished. On July 16, Operation Provide Refuge was declared completed and the facilities at Fort Dix closed.

Reported by: K Yeskey, MD, Office of Emergency Preparedness, Public Health Service; Div of Tuberculosis Elimination, National Center for HIV, STD, and TB Prevention; Div of Epidemiology and Surveillance, National Immunization Program; Div of Parasitic Diseases and Div of Quarantine, National Center for Infectious Diseases, CDC.

Editorial Note: The health status of refugee populations varies considerably depending on 1) the demographics of the migrating population; 2) the prevalence of health conditions and quality of health services before displacement and in the country of first refuge; 3) the length of time the population was deprived of health care; and 4) the harshness of their living conditions during displacement. Despite these variations, screening for U.S. immigration purposes has been the same for all refugee and immigrant populations. To provide more timely interventions, CDC is tailoring health assessments to specific migrating populations (3).

Before this migration emergency, the only medical information transmitted to the refugee health providers in the resettlement areas was that related to the “inadmissible” health conditions. Health information collected in refugee emergency settings should include 1) baseline health status of the refugee population; 2) refugee camp health provision and surveillance; 3) immigrant/refugee health clearance; 4) identification and design for preventive interventions; and 5) postsettlement follow-up care. The CDC/OEP response at Fort Dix underscores the value of a tailored approach, including preventive health interventions specifically targeted at this population. During this emergency, using information on health conditions in Kosovo before the armed conflict and on health conditions in the camps in FYROM, health services were prepared to meet the needs of Kosovar refugees.

To establish continuity of care, medical records developed at Fort Dix were transmitted to the resettlement health providers through the refugees. In addition, health fact sheets were drafted periodically and relayed to the refugee health coordinators in the states to assist them in planning health services programs before the arrival of the

U.S.-Bound Kosovar Refugees — Continued

refugees. This health information and data collection and dissemination should be considered basic components of the refugee admission and resettlement process.

References

1. Institute of Public Health of Serbia, Institute of Public Health of Montenegro, United Nations Children's Fund. Multiple Indicator Cluster Survey, Federal Republic of Yugoslavia, 1996. Belgrade, Federal Republic of Yugoslavia: United Nations Children's Fund, 1997.
2. Federal Institute of Public Health, Federal Republic of Yugoslavia. Health statistical yearbook 1996 of the Federal Republic of Yugoslavia. Belgrade, Federal Republic of Yugoslavia: Federal Institute of Public Health, 1997.
3. CDC. Enhanced medical assessment strategy for Barawan Somali refugees—Kenya, 1997. *MMWR* 1998;46:1250–4.

Progress Toward the Elimination of Tuberculosis — United States, 1998

In 1998, a total of 18,361 tuberculosis (TB) cases were reported from the 50 states and the District of Columbia, a decrease of 8% from 1997 and 31% from 1992, the height of the TB resurgence in the United States (1,2). The 1998 rate of 6.8 per 100,000 population was 35% lower than in 1992 (10.5) but remained above the national goal for 2000 of 3.5 (3) (Table 1). This report summarizes national TB surveillance data for 1998 and compares them with similar data from previous years. The findings indicate that the overall number of TB cases continued to decrease, and that trends in the number of reported cases and TB incidence varied by geographic area and population characteristics.

All states reported at least one case in 1998, and 18 states reported <100 cases. Among the states reporting <100 cases in 1998, 17 reported <100 cases in 1992, and 14 had no change or a decrease in the number of reported cases in 1998 compared with 1992 (Table 1). Among all states, the proportion of counties reporting no TB cases increased from 42% in 1992 to 49% in 1998; these counties represented 11% of the total U.S. population in 1998. The 1998 TB rate in 19 states was lower than the 2000 national goal (3).

California, Florida, Illinois, New York, and Texas reported the highest number of cases in 1998 and represented 54% of all reported TB cases. During 1992–1998, the five states observed a marked decrease in the number of new cases and together accounted for 68% of the overall decrease. The four cities with the highest number of TB cases were New York (1558), Los Angeles (544), Chicago (473), and Houston (424). The number of reported cases in all four cities decreased between 1992 and 1998: 59% in New York, 51% in Los Angeles, and 41% in Chicago and Houston, and together these cities accounted for 41% of the overall decline in the number of reported TB cases in the United States.

The number of reported TB cases in 1998 compared with 1992 decreased in both sexes and all age groups at varying rates (Table 2). The largest decrease occurred among children aged <15 years and adults aged 25–44 years. During 1992–1998, the number of cases in U.S.-born persons decreased 44%, and the number of cases in foreign-born persons increased 4%. The proportion of TB cases among foreign-born persons steadily increased, from 27% in 1992 to 42% in 1998. The TB rate in foreign-born persons remained approximately four to six times higher than for U.S.-born persons. In 1998, among the 7591 TB cases in foreign-born persons, the birth

*Tuberculosis — Continued***TABLE 1. Number of reported tuberculosis cases, percentage change in number of cases, and rates*, by state and year — United States, 1992 and 1998**

State	No. cases		% Change from 1992 to 1998	Rate	
	1992	1998		1992	1998
Alabama	418	381	-9%	10.1	8.8
Alaska	57	55	-4%	9.7	9.0
Arizona	259	254	-2%	6.8	5.4
Arkansas	257	171	-33%	10.7	6.7
California	5,382	3,852	-28%	17.4	11.8
Colorado	104	79	-24%	3.0	2.0
Connecticut	156	128	-18%	4.8	3.9
Delaware	55	36	-35%	8.0	4.8
District of Columbia	146	107	-27%	24.8	20.5
Florida	1,707	1,302	-24%	12.7	8.7
Georgia	893	631	-29%	13.2	8.3
Hawaii	273	181	-34%	23.5	15.2
Idaho	26	14	-46%	2.4	1.1
Illinois	1,270	850	-33%	10.9	7.1
Indiana	247	188	-24%	4.4	3.2
Iowa	49	55	12%	1.7	1.9
Kansas	56	56	0%	2.2	2.1
Kentucky	402	179	-55%	10.7	4.5
Louisiana	373	380	2%	8.7	8.7
Maine	24	13	-46%	1.9	1.0
Maryland	442	324	-27%	9.0	6.3
Massachusetts	428	282	-34%	7.1	4.6
Michigan	495	385	-22%	5.2	3.9
Minnesota	165	161	-2%	3.7	3.4
Mississippi	281	225	-20%	10.7	8.2
Missouri	245	184	-25%	4.7	3.4
Montana	16	20	25%	1.9	2.3
Nebraska	28	31	11%	1.7	1.9
Nevada	99	128	29%	7.5	7.3
New Hampshire	18	14	-22%	1.6	1.2
New Jersey	984	640	-35%	12.6	7.9
New Mexico	88	68	-23%	5.6	3.9
New York	4,574	2,000	-56%	25.2	11.0
North Carolina	604	498	-18%	8.8	6.6
North Dakota	11	10	-9%	1.7	1.9
Ohio	358	230	-36%	3.2	2.1
Oklahoma	216	198	-8%	6.7	5.9
Oregon	145	156	8%	4.9	4.8
Pennsylvania	758	448	-41%	6.3	3.7
Rhode Island	54	63	17%	5.4	6.4
South Carolina	387	286	-26%	10.7	7.5
South Dakota	32	23	-28%	4.5	3.1
Tennessee	527	439	-17%	10.5	8.1
Texas	2,510	1,820	-27%	14.2	9.2
Utah	78	52	-33%	4.3	2.5
Vermont	7	5	-29%	1.2	0.8
Virginia	457	339	-26%	7.2	5.0
Washington	306	265	-13%	6.0	4.7
West Virginia	92	42	-54%	5.1	2.3
Wisconsin	106	109	3%	2.1	2.1
Wyoming	8	4	-50%	1.7	0.8
Total	26,673	18,361	-31%	10.5	6.8

*Per 100,000 population.

Tuberculosis — Continued

TABLE 2. Number of reported tuberculosis cases, percentage change in number of cases, and rates*, by sex, age, and year — United States, 1992 and 1998

Characteristic	No. reported cases		% Change from 1992 to 1998	Rate	
	1992	1998		1992	1998
Sex†					
Male	17,433	11,413	-34.5%	14.0	8.6
Female	9,236	6,935	-24.9%	7.1	5.0
Age group (yrs)†					
0-14	1,707	1,082	-36.6%	3.1	1.9
15-24	1,974	1,548	-21.6%	5.5	4.2
25-44	10,444	6,365	-39.1%	12.7	7.6
45-64	6,487	4,973	-23.3%	13.4	8.7
≥65	6,025	4,393	-27.1%	18.7	12.8
Total	26,673	18,361	-31.2%	10.5	6.8

* Per 100,000 population.

† Persons were excluded for whom sex (four in 1992 and 13 in 1998) and age (36 in 1992) were not reported.

countries with the highest number of cases were Mexico with 1757 (23%), Philippines with 968 (13%), and Vietnam with 748 (10%).

In 1993, CDC began to collect drug susceptibility results for initial *Mycobacterium tuberculosis* isolates on the TB case report. During 1998, results were reported for 91% (13,477 of 14,830 culture-positive cases). Overall, 1086 (8.1%) case-patients had isolates resistant to at least isoniazid, and 150 (1.1%) had isolates resistant to at least isoniazid and rifampin (i.e., multidrug-resistant TB [MDR-TB]); New York (38) and California (36) reported 49% of the MDR-TB cases. During 1993-1998, resistance to isoniazid decreased slightly (from 8.9% in 1993), and MDR-TB decreased markedly (from 2.8% in 1993). The decrease in MDR-TB reflected declines from 2.7% to 0.7% in U.S.-born persons and from 3.0% to 1.6% in foreign-born persons. As a result, the proportion of MDR-TB cases among foreign-born persons increased from 31% in 1993 to 61% in 1998. Forty-five states and the District of Columbia reported at least one MDR-TB case during 1993-1998.

In 1993, CDC began collecting information about human immunodeficiency virus (HIV) status on TB case reports; 48 states submit HIV test results on TB case reports. In 1998, 3509 (55%) of 6365 TB case reports for persons aged 25-44 years included information about HIV status, an increase from 1993 when 33% had HIV status. Among the states with information for ≥75% of the cases in this age group, the proportion of TB cases in HIV-infected persons ranged from 0% (Montana, North Dakota, Vermont, and Wyoming) to 47% (Florida).

Reported by: Div of Tuberculosis Elimination, National Center for HIV, STD, and TB Prevention; and an EIS Officer, CDC.

Editorial Note: The decline in the overall number of reported TB cases reflects the apparent strengthening of TB-control programs nationwide, particularly in states and cities with the largest number of cases. Supporting this inference are data indicating that the largest decreases in cases among U.S.-born persons during 1993-1994 occurred in areas that reported the largest increases in measures associated with effective TB control: completion of therapy, conversion of patients' sputum from

Tuberculosis — Continued

positive to negative, and number of contacts per case-patient (4). These improvements occurred in the same cities that had the largest increases in cases during the TB resurgence.

The elimination of TB in the United States will depend increasingly on eliminating TB among persons born in countries with high TB rates (5). Because the percentage of reported TB cases among foreign-born persons continues to increase, CDC, in collaboration with local and state health departments, updated recommendations to prevent and control TB among foreign-born persons (5). Priority is placed on case-finding, completion of treatment for active TB, contact tracing, screening, and completion of preventive therapy for high-risk groups. Because rates of TB differ among countries, local TB-control staff should develop epidemiologic profiles to identify groups of foreign-born persons at high risk for TB.

Although the number and proportion of MDR-TB cases decreased markedly during 1993–1998, MDR-TB remains a serious concern. One MDR-TB case can challenge the resources and effectiveness of a TB program, and nearly every state has reported at least one MDR-TB case since 1993. Incidence of MDR-TB is increasing in eastern Europe, Asia, and Africa (6), and will continue to affect the clinical management and contact investigations of foreign-born TB patients who are at risk for resistant TB strains.

Incomplete reporting of HIV to the national TB surveillance system leads to underestimates of the incidence of HIV among TB cases. Incomplete reporting has made it necessary to estimate the proportion of TB cases in HIV-infected persons based on TB and acquired immunodeficiency syndrome registry matching (7–9). Using registry match data to supplement HIV test results submitted on the TB case report, minimum estimates of the proportion of TB cases with HIV infection ranged from 15% during 1993–1994 to 10% in 1997 for persons of all ages and from 29% to 21%, respectively, for persons aged 25–44 years (CDC, unpublished data, 1999). CDC and state and local health departments are collaborating to improve HIV testing and reporting for TB patients.

Although TB rates have been decreasing since 1992, the TB elimination goal of 3.5 cases per 100,000 by 2000 and <1 case per 1,000,000 population by 2010 are unlikely to be achieved at the current rate of decrease (3). The Advisory Council for the Elimination of TB (ACET), which provides advice and recommendations for eliminating TB to the U.S. Department of Health and Human Services and CDC, recently reassessed its 1989 plan and published updated recommendations for TB elimination in the United States (10). To move from TB control to TB elimination, ACET recommends new and improved diagnostic and treatment methods, and prevention efforts that include establishing broad-based partnerships with public health programs, community-based organizations, and managed-care plans. TB elimination in the United States requires global commitment. Dedication to the goal of TB elimination is critical to sustain the progress evidenced by declining TB morbidity in the United States.

References

1. CDC. Tuberculosis morbidity—United States, 1997. *MMWR* 1998;47:253–7.
2. CDC. Tuberculosis morbidity—United States, 1992. *MMWR* 1993;42:363.
3. CDC. A strategic plan for the elimination of tuberculosis in the United States. *MMWR* 1989; 38(no. S-3).

Tuberculosis — Continued

4. McKenna MT, McCray E, Jones JL, Onorato IM, Castro KG. The fall after the rise: tuberculosis in the United States, 1991 through 1994. *Am J Public Health* 1998;88:1059–63.
5. CDC. Recommendations for prevention and control of tuberculosis among foreign-born persons: report of the Working Group on Tuberculosis Among Foreign-born Persons. *MMWR* 1998;47(no. RR-16).
6. Pablos-Mendez A, Raviglione MC, Laszlo A, et al. Global surveillance for antituberculosis-drug resistance, 1994–1997. *N Engl J Med* 1998;338:1641–9.
7. Burwen DR, Bloch AB, Griffin LD, Ciesielski CA, Stern HA, Onorato IM. National trends in the concurrence of tuberculosis and acquired immunodeficiency syndrome. *Arch Intern Med* 1995;155:1281–6.
8. Moore M, McCray E, Onorato IM. Cross-matching TB and AIDS registries: TB patients with HIV co-infection, United States, 1993–1994. *Public Health Rep* 1999;114:269–77.
9. Moore M, McCray E, Onorato IM. Trends in TB in the United States, 1993–1997 [Abstract]. Presented at the 29th World Conference of the International Union Against Tuberculosis and Lung Disease, Bangkok, Thailand, November 23–26, 1998.
10. CDC. Tuberculosis elimination revisited: obstacles, opportunities, and a renewed commitment. Advisory Council for the Elimination of Tuberculosis (ACET). *MMWR* 1999;48(no. RR-9).

Progress Toward the Global Interruption of Wild Poliovirus Type 2 Transmission, 1999

Since 1988, when the World Health Assembly resolved to eradicate poliomyelitis globally by 2000 (1), substantial progress has been made in attaining this goal: the Americas, the Pacific Rim, Europe, and central Asia appear to be polio-free. The remaining reservoirs where polio is endemic are confined to India and contiguous countries and to sub-Saharan Africa. In 1999, the recommended polio eradication strategies (i.e., achieving and maintaining high routine vaccination coverage with oral poliovirus vaccine [OPV]; conducting National Immunization Days [NIDs]* to decrease rapid poliovirus circulation; establishing sensitive surveillance systems for polio cases and poliovirus; and carrying out mopping-up vaccination activities† to eliminate poliovirus transmission) have been accelerated in most of the major reservoir countries‡ (2,3). This report summarizes progress toward interrupting transmission of wild poliovirus type 2, which appears to be on the threshold of extinction.

The goal of the polio eradication initiative is to interrupt all chains of wild poliovirus transmission globally. Most poliovirus genotypes (i.e., a group of polioviruses sharing >85% nucleotide sequence similarity in the capsid genes) found in 1988 have disappeared (4). The genetic diversity of the remaining genotypes has been reduced as chains of transmission are broken and reservoir countries become polio-free.

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

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

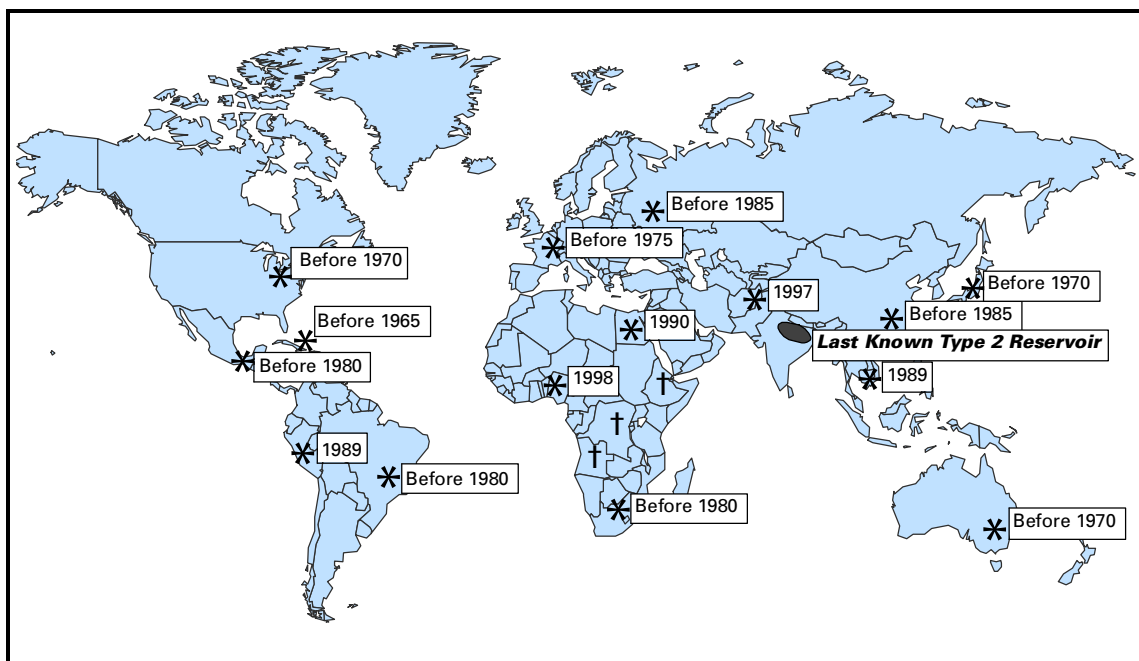
‡ Countries where polio is endemic that have large populations and that may export poliovirus to neighboring countries and elsewhere.

*Wild Poliovirus Type 2 — Continued***Successive Extinction of Wild Poliovirus Type 2 Genotypes**

During the prevaccine era, the three poliovirus serotypes were distributed worldwide. Continuous transmission occurred in large population centers, and sporadic outbreaks occurred in isolated communities (4,5). By the mid-1960s, the incidence of cases associated with wild poliovirus type 2 had declined rapidly in areas with high vaccination coverage rates. By the mid-1970s, indigenous wild type 2 polioviruses had disappeared from Australia, Japan, North America, and western Europe (Figure 1). By 1980, type 2 poliovirus had been eliminated in Brazil, Central America, Mexico, and South Africa, and in China and the Soviet Union by 1985. Wild poliovirus type 2 circulation continued until the late 1980s in Colombia, Peru, and Vietnam. The last indigenous wild poliovirus type 2 isolates were found in Egypt in 1990, in Afghanistan and Pakistan in 1997, and in Nigeria in 1998 (Figure 1). Although no wild poliovirus type 2 isolates have been reported from Africa for >1 year, inadequate surveillance in some African countries, particularly Angola, the Democratic Republic of the Congo, and Ethiopia, makes these data difficult to interpret. By 1999, the only known reservoir for wild type 2 polioviruses was in the Ganges valley of India (6).

Areas with Wild Poliovirus Type 2 Circulation

Endemic circulation of type 2 poliovirus appears to be localized to the northern Indian states of Uttar Pradesh and Bihar (1998 estimated combined population: 250 million). Before accelerated efforts were initiated to eradicate polio in 1995, wild poliovirus type 2 was distributed widely in India, and clinical isolates showed high genetic diversity, indicating multiple independent reservoirs. Isolates from 1998–1999 are closely related to each other, meaning type 2 endemicity is sustained by a few chains of transmission.

FIGURE 1. Last wild poliovirus type 2 isolates — worldwide, 1999

* Indigenous poliovirus type 2 eliminated.

† Inadequate poliovirus surveillance.

Source: World Health Organization Polio Laboratory Network.

Wild Poliovirus Type 2 — Continued

The states of Uttar Pradesh and Bihar have been at particularly high risk for continued poliovirus transmission (6,7). In these states, the critical risk factors are low vaccination coverage, high population densities, large annual birth cohorts, poor sanitation, and humid subtropical climate. To overcome these challenges to polio control and to interrupt poliovirus transmission, the government of India is planning to conduct four rounds of NIDs from October 1999 through January 2000, followed by two rounds of Sub-National Immunization Days (SNIDs) in Uttar Pradesh, Bihar, and six additional high-risk states during February–March 2000.

Reported by: Vaccines and Other Biologicals Dept, World Health Organization, Geneva, Switzerland. Respiratory and Enterovirus Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Vaccine Preventable Disease Eradication Div, National Immunization Program, CDC.

Editorial Note: The usual order of disappearance of wild polioviruses within a country or region has been type 2, type 3, and type 1 (4,5). The high immunogenicity of type 2 polioviruses in OPV and the efficient spread of type 2 OPV-derived strains to contacts (8) appear to be important factors contributing to the rapid control of this serotype. Continued detection of wild poliovirus type 2 circulation reflects serious deficiencies in vaccination coverage levels.

The year of cessation of wild poliovirus type 2 circulation is uncertain in many countries because of inadequate surveillance for cases and because of the imprecision of earlier methods for distinguishing wild from vaccine-derived polioviruses (4). Type 2 polioviruses are the most difficult to detect through polio case surveillance because they have the lowest case:infection ratio (approximately 1:2000) of the three serotypes (5). Consequently, the number of wild poliovirus type 2 isolates available for analysis is smaller than for the other two serotypes.

During the prevaccine era, wild poliovirus type 2 genotypes had wide geographic distribution (4), and the early estimates of the years of elimination probably applied to groups of countries (e.g., western Europe or eastern South America) rather than specific countries. These early extinction estimates are conservative, and are based in part on the years when exogenous genotypes were first detected in cases and outbreaks, which suggested that indigenous circulation had ceased already.

Wild poliovirus type 2 circulation might persist in the major reservoir countries of Angola, the Democratic Republic of Congo, and Ethiopia (2), where vaccination coverage levels remain low and polio surveillance remains inadequate. However, only poliovirus types 1 and 3 have been detected in these or neighboring countries.

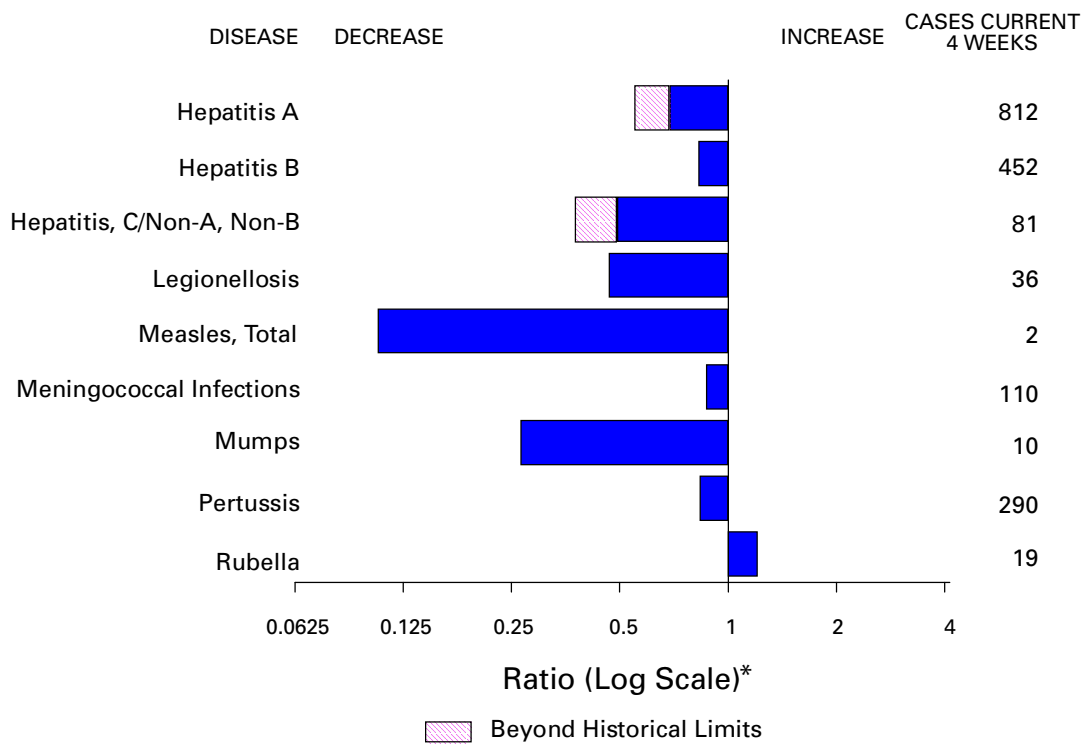
Within the next year the only type 2 polioviruses found in nature probably will be OPV-derived. However, intensification of vaccination and surveillance activities will be needed to meet the 2000 goal for the eradication of all wild poliovirus serotypes.

References

1. World Health Assembly. Global eradication of poliomyelitis by the year 2000: resolution of the 41st World Health Assembly. Geneva, Switzerland: World Health Organization, 1988. (Resolution no. WHA 41.28).
2. CDC. Progress toward global poliomyelitis eradication—1997–1998. *MMWR* 1999;48:416–21.
3. Hull HF, Ward NA, Hull BP, Milstein JB, de Quadros C. Paralytic poliomyelitis: seasoned strategies, disappearing disease. *Lancet* 1994;343:1331–7.
4. Kew OM, Mulders MN, Lipskaya GY, da Silva EE, Pallansch MA. Molecular epidemiology of polioviruses. *Semin Virol* 1995;6:401–14.

(Continued on page 747)

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending August 21, 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 August 21, 1999 (33rd Week)

	Cum. 1999		Cum. 1999
Anthrax	-	HIV infection, pediatric* ⁵	86
Brucellosis*	28	Plague	3
Cholera	4	Poliomyelitis, paralytic	-
Congenital rubella syndrome	3	Psittacosis*	15
Cyclosporiasis*	28	Rabies, human	-
Diphtheria	2	Rocky Mountain spotted fever (RMSF)	330
Encephalitis: California*	9	Streptococcal disease, invasive Group A	1,447
eastern equine*	2	Streptococcal toxic-shock syndrome*	27
St. Louis*	-	Syphilis, congenital [¶]	109
western equine*	-	Tetanus	18
Ehrlichiosis human granulocytic (HGE)*	90	Toxic-shock syndrome	74
human monocytic (HME)*	21	Trichinosis	6
Hansen Disease*	53	Typhoid fever	192
Hantavirus pulmonary syndrome* [†]	14	Yellow fever	-
Hemolytic uremic syndrome, post-diarrheal*	47		

-: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).

⁵ 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 July 25, 1999.

[¶] Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending August 21, 1999, and August 22, 1998 (33rd Week)

Reporting Area	AIDS		Chlamydia		Cryptosporidiosis		<i>Escherichia coli</i> O157:H7*			
	Cum. 1999†	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	NETSS		PHLIS	
							Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	26,427	28,464	370,512	366,857	969	1,648	1,509	1,594	957	1,353
NEW ENGLAND	1,298	1,023	12,209	12,839	59	104	172	212	127	189
Maine	43	21	193	621	17	24	18	22	-	-
N.H.	31	25	596	607	8	12	22	31	23	35
Vt.	6	17	301	263	15	16	19	10	11	7
Mass.	842	506	5,872	5,262	19	47	95	108	52	108
R.I.	70	92	1,467	1,480	-	5	18	8	6	1
Conn.	306	362	3,780	4,606	-	-	U	33	35	38
MID. ATLANTIC	6,746	7,663	44,532	38,226	204	357	94	172	37	61
Upstate N.Y.	846	985	N	N	78	206	83	117	-	-
N.Y. City	3,592	4,055	21,963	16,755	107	137	5	9	13	11
N.J.	1,278	1,556	6,456	7,392	9	14	6	46	23	38
Pa.	1,030	1,067	16,113	14,079	10	-	N	N	1	12
E.N. CENTRAL	1,719	2,161	53,400	62,521	93	446	308	269	208	230
Ohio	262	459	15,462	16,916	29	49	120	70	88	43
Ind.	224	376	6,667	6,730	18	39	42	63	25	35
Ill.	783	818	17,685	16,813	16	49	86	74	33	52
Mich.	360	389	13,586	13,448	30	24	60	62	33	44
Wis.	90	119	U	8,614	-	285	N	N	29	56
W.N. CENTRAL	611	531	19,536	21,475	82	179	328	237	184	224
Minn.	105	102	3,264	4,401	14	58	131	89	103	107
Iowa	55	50	1,448	2,419	24	42	60	60	37	39
Mo.	295	243	8,428	7,835	17	16	27	27	34	42
N. Dak.	4	4	325	625	12	22	8	6	1	13
S. Dak.	13	11	832	1,002	5	19	32	15	4	16
Nebr.	45	48	2,060	1,801	9	18	56	23	-	-
Kans.	94	73	3,179	3,392	1	4	14	17	5	7
S. ATLANTIC	7,281	7,257	87,262	70,097	204	155	180	118	102	111
Del.	95	90	1,667	1,569	-	2	3	-	3	1
Md.	793	898	6,803	4,969	11	12	11	19	-	11
D.C.	274	568	N	N	7	4	-	1	-	-
Va.	372	526	9,081	7,879	11	4	44	-	37	41
W. Va.	40	59	1,148	1,513	-	1	7	-	2	4
N.C.	482	459	14,444	13,931	5	-	36	34	27	34
S.C.	683	449	15,603	11,736	-	-	17	5	13	3
Ga.	1,091	727	19,477	14,327	95	57	18	46	-	-
Fla.	3,451	3,481	19,039	14,173	75	75	44	13	20	17
E.S. CENTRAL	1,145	1,152	26,558	25,395	17	19	78	79	42	46
Ky.	176	155	4,631	3,981	5	8	20	25	-	-
Tenn.	442	397	8,873	8,258	6	6	38	32	26	28
Ala.	287	329	7,843	6,491	4	-	16	19	13	17
Miss.	240	271	5,211	6,665	2	5	4	3	3	1
W.S. CENTRAL	2,858	3,755	51,697	55,442	38	61	45	60	56	70
Ark.	107	136	3,597	2,350	-	6	9	7	5	8
La.	541	621	7,726	8,968	21	11	3	3	11	3
Okla.	74	224	5,276	6,310	4	-	15	11	9	5
Tex.	2,136	2,774	35,098	37,814	13	44	18	39	31	54
MOUNTAIN	1,021	1,015	20,731	20,484	53	73	136	218	69	178
Mont.	5	20	975	783	8	8	8	10	-	4
Idaho	16	19	1,064	1,236	3	-	15	26	6	17
Wyo.	4	1	445	397	-	-	5	49	5	53
Colo.	197	209	4,364	5,088	6	9	48	41	34	37
N. Mex.	65	153	2,781	2,282	22	35	6	16	2	14
Ariz.	518	384	8,066	7,108	9	14	19	27	12	23
Utah	84	70	1,232	1,448	-	-	24	40	8	18
Nev.	132	159	1,804	2,142	5	7	11	9	2	12
PACIFIC	3,748	3,907	54,587	60,378	219	254	168	229	132	244
Wash.	218	266	7,518	6,949	-	-	56	38	50	71
Oreg.	118	117	3,632	3,343	79	26	39	68	35	68
Calif.	3,348	3,411	40,525	47,382	140	228	72	120	40	95
Alaska	13	17	1,179	1,202	-	-	-	3	-	-
Hawaii	51	96	1,733	1,502	-	-	1	-	7	10
Guam	5	-	226	252	-	-	N	N	-	-
P.R.	821	1,191	U	U	-	-	5	3	U	U
V.I.	19	19	N	N	-	-	N	N	U	U
Amer. Samoa	-	-	U	U	-	-	N	N	U	U
C.N.M.I.	-	-	N	N	-	-	N	N	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 July 25, 1999.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending August 21, 1999, and August 22, 1998 (33rd 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	199,851	216,743	2,187	2,054	500	817	5,790	8,627
NEW ENGLAND	3,738	3,704	59	46	39	48	1,717	2,799
Maine	15	40	2	-	4	1	22	50
N.H.	64	58	-	-	3	3	5	28
Vt.	33	23	4	2	8	4	8	8
Mass.	1,635	1,313	50	41	15	23	624	588
R.I.	378	229	3	3	3	8	267	263
Conn.	1,613	2,041	-	-	6	9	791	1,862
MID. ATLANTIC	24,548	23,121	97	146	105	203	3,069	4,388
Upstate N.Y.	3,837	4,212	62	74	33	64	2,206	2,157
N.Y. City	9,463	7,461	-	-	9	28	25	144
N.J.	3,621	4,822	-	-	5	13	124	836
Pa.	7,627	6,626	35	72	58	98	714	1,251
E.N. CENTRAL	35,361	42,627	1,133	464	128	279	74	543
Ohio	9,393	10,826	1	7	54	95	49	25
Ind.	3,676	3,960	1	5	21	51	14	23
Ill.	12,490	13,805	24	33	10	34	10	11
Mich.	9,802	10,230	525	309	40	53	1	12
Wis.	U	3,806	582	110	3	46	U	472
W.N. CENTRAL	8,441	10,311	85	26	31	42	82	133
Minn.	1,208	1,622	4	7	4	3	38	96
Iowa	417	778	-	7	11	5	10	21
Mo.	4,387	5,480	72	9	11	11	16	9
N. Dak.	31	50	-	-	-	-	1	-
S. Dak.	83	156	-	-	2	3	-	-
Nebr.	939	733	3	2	3	15	6	3
Kans.	1,376	1,492	6	1	-	5	11	4
S. ATLANTIC	62,051	58,416	145	68	78	93	633	588
Del.	1,037	868	1	-	8	8	19	47
Md.	5,807	5,669	33	8	14	27	452	422
D.C.	1,175	2,860	-	-	1	6	3	4
Va.	6,162	5,176	10	10	17	15	66	42
W. Va.	311	511	13	4	N	N	14	8
N.C.	12,633	12,020	29	15	13	7	48	38
S.C.	8,345	7,485	15	3	7	7	5	3
Ga.	13,070	12,494	1	9	-	4	-	5
Fla.	13,511	11,333	43	19	18	19	26	19
E.S. CENTRAL	21,333	24,335	195	167	31	45	69	65
Ky.	2,030	2,296	12	16	14	22	6	15
Tenn.	7,150	7,187	84	89	14	11	36	28
Ala.	7,124	8,309	1	4	3	5	16	12
Miss.	5,029	6,543	98	58	-	7	11	10
W.S. CENTRAL	28,406	34,058	143	325	3	14	21	17
Ark.	1,808	2,575	8	13	-	1	3	6
La.	6,054	7,774	100	21	1	2	-	3
Okla.	2,599	3,437	12	8	2	8	4	2
Tex.	17,945	20,272	23	283	-	3	14	6
MOUNTAIN	5,799	5,664	96	284	32	46	11	8
Mont.	26	28	4	7	-	2	-	-
Idaho	50	117	6	85	-	2	2	3
Wyo.	14	18	31	65	-	1	3	1
Colo.	1,412	1,278	15	18	9	11	-	-
N. Mex.	566	560	7	68	1	2	1	2
Ariz.	2,893	2,606	21	4	5	9	-	-
Utah	115	156	5	19	11	16	3	-
Nev.	723	901	7	18	6	3	2	2
PACIFIC	10,174	14,507	234	528	53	47	114	86
Wash.	1,289	1,180	12	13	10	9	4	5
Oreg.	497	488	15	13	N	N	9	12
Calif.	7,955	12,318	207	448	42	36	101	68
Alaska	196	209	-	-	1	1	-	1
Hawaii	237	312	-	54	-	1	-	-
Guam	32	34	-	-	-	2	-	-
P.R.	181	258	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	25	-	-	-	-	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending August 21, 1999, and August 22, 1998 (33rd Week)

Reporting Area	Malaria		Rabies, Animal		Salmonellosis*			
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	NETSS		PHLIS	
					Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	751	848	3,587	4,738	19,584	23,504	16,038	20,681
NEW ENGLAND	28	42	529	902	999	1,523	1,032	1,450
Maine	2	3	100	144	87	111	60	43
N.H.	2	3	32	51	83	122	96	158
Vt.	3	-	69	40	55	82	48	61
Mass.	10	16	116	303	710	849	498	860
R.I.	3	2	65	57	64	85	48	31
Conn.	8	18	147	307	U	274	282	297
MID. ATLANTIC	167	245	683	1,048	2,296	3,990	2,068	3,869
Upstate N.Y.	47	53	492	726	727	928	580	892
N.Y. City	70	139	U	U	710	1,272	637	1,090
N.J.	29	29	118	128	332	827	442	842
Pa.	21	24	73	194	527	963	409	1,045
E.N. CENTRAL	72	93	73	79	2,670	3,943	2,075	2,932
Ohio	16	6	24	44	732	950	545	784
Ind.	10	8	-	7	300	440	250	365
Ill.	19	41	4	-	996	1,213	399	795
Mich.	25	32	42	26	604	751	576	655
Wis.	2	6	3	2	38	589	305	333
W.N. CENTRAL	47	58	462	520	1,393	1,409	1,264	1,490
Minn.	20	29	74	87	409	333	444	402
Iowa	11	7	84	113	157	246	121	196
Mo.	12	12	10	27	417	404	539	552
N. Dak.	-	2	104	98	32	42	4	54
S. Dak.	-	-	117	120	68	62	26	79
Nebr.	-	1	2	5	119	111	-	27
Kans.	4	7	71	70	191	211	130	180
S. ATLANTIC	225	169	1,320	1,573	4,609	4,294	3,168	3,409
Del.	1	1	29	28	58	46	104	83
Md.	66	53	261	322	513	547	486	536
D.C.	13	12	-	-	51	48	-	-
Va.	48	35	338	387	803	632	615	548
W. Va.	1	1	74	59	93	100	105	98
N.C.	13	13	270	414	687	600	695	772
S.C.	8	4	102	98	321	296	244	285
Ga.	21	21	122	136	684	772	651	780
Fla.	54	29	124	129	1,399	1,253	268	307
E.S. CENTRAL	18	20	186	193	1,102	1,260	586	1,007
Ky.	6	4	29	27	252	249	-	122
Tenn.	7	10	63	104	297	339	302	459
Ala.	4	4	94	60	339	405	242	349
Miss.	1	2	-	2	214	267	42	77
W.S. CENTRAL	10	16	77	25	1,335	2,118	1,546	1,779
Ark.	1	1	14	25	275	261	76	208
La.	6	6	-	-	159	261	333	434
Okla.	2	2	63	-	228	262	130	110
Tex.	1	7	-	-	673	1,334	1,007	1,027
MOUNTAIN	28	41	126	144	1,848	1,532	1,260	1,349
Mont.	4	-	44	35	38	59	1	36
Idaho	3	7	-	-	64	76	45	63
Wyo.	1	-	32	47	29	42	22	37
Colo.	10	11	1	22	489	363	498	347
N. Mex.	2	11	6	3	227	184	166	162
Ariz.	5	6	37	29	560	476	475	463
Utah	2	1	4	8	324	206	-	120
Nev.	1	5	2	-	117	126	53	121
PACIFIC	156	164	131	254	3,332	3,435	3,039	3,396
Wash.	14	15	-	-	411	274	477	424
Oreg.	15	13	1	1	307	195	360	227
Calif.	119	131	123	231	2,344	2,793	2,001	2,560
Alaska	1	1	7	22	29	29	6	19
Hawaii	7	4	-	-	241	144	195	166
Guam	-	2	-	-	20	19	-	-
P.R.	-	-	45	34	242	445	-	-
V.I.	U	U	U	U	-	-	-	-
Amer. Samoa	U	U	U	U	-	-	-	-
C.N.M.I.	-	-	-	-	-	20	-	-

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 August 21, 1999, and August 22, 1998 (33rd 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	7,943	11,993	16,038	20,681	4,046	4,442	8,730	10,158
NEW ENGLAND	302	281	1,032	1,450	33	45	261	262
Maine	4	9	60	43	-	1	12	6
N.H.	9	10	96	158	-	1	12	-
Vt.	4	5	48	61	3	4	1	3
Mass.	270	183	498	860	21	27	153	144
R.I.	15	22	48	31	1	1	27	34
Conn.	U	52	282	297	8	11	56	75
MID. ATLANTIC	496	1,614	2,068	3,869	142	190	1,592	1,847
Upstate N.Y.	163	332	580	892	22	23	181	226
N.Y. City	158	518	637	1,090	67	40	864	895
N.J.	103	484	442	842	32	66	339	391
Pa.	72	280	409	1,045	21	61	208	335
E.N. CENTRAL	1,312	1,784	2,075	2,932	749	664	727	1,020
Ohio	309	358	545	784	66	89	148	161
Ind.	141	115	250	365	258	123	U	100
Ill.	571	952	399	795	296	274	360	471
Mich.	243	171	576	655	129	130	180	218
Wis.	48	188	305	333	U	48	39	70
W.N. CENTRAL	700	604	1,264	1,490	86	89	276	279
Minn.	157	130	444	402	5	6	95	96
Iowa	15	49	121	196	7	-	29	20
Mo.	452	76	539	552	58	70	110	100
N. Dak.	2	4	4	54	-	-	2	3
S. Dak.	10	28	26	79	-	1	9	14
Nebr.	37	296	-	27	6	4	12	11
Kans.	27	21	130	180	10	8	19	35
S. ATLANTIC	1,488	2,609	3,168	3,409	1,427	1,634	1,904	1,731
Del.	8	14	104	83	6	16	12	24
Md.	90	126	486	536	237	460	169	188
D.C.	34	15	-	-	31	52	32	71
Va.	73	116	615	548	110	102	131	174
W. Va.	7	11	105	98	2	2	30	29
N.C.	136	197	695	772	331	473	285	265
S.C.	86	106	244	285	284	179	194	196
Ga.	135	731	651	780	225	181	405	315
Fla.	919	1,293	268	307	201	169	646	469
E.S. CENTRAL	792	546	586	1,007	714	764	567	750
Ky.	175	82	-	122	63	72	111	113
Tenn.	490	97	302	459	409	362	208	242
Ala.	72	331	242	349	149	174	192	254
Miss.	55	36	42	77	93	156	56	141
W.S. CENTRAL	1,065	2,294	1,546	1,779	560	651	1,001	1,484
Ark.	56	126	76	208	40	79	108	75
La.	76	151	333	434	121	265	U	110
Okla.	357	204	130	110	132	32	85	110
Tex.	576	1,813	1,007	1,027	267	275	808	1,189
MOUNTAIN	522	731	1,260	1,349	153	155	262	334
Mont.	7	8	1	36	-	-	10	15
Idaho	16	12	45	63	1	1	14	7
Wyo.	2	1	22	37	-	1	1	3
Colo.	88	109	498	347	1	8	U	40
N. Mex.	68	183	166	162	10	19	42	37
Ariz.	262	372	475	463	133	111	141	123
Utah	37	26	-	120	2	3	27	36
Nev.	42	20	53	121	6	12	27	73
PACIFIC	1,266	1,530	3,039	3,396	182	250	2,140	2,451
Wash.	64	81	477	424	46	23	114	162
Oreg.	48	88	360	227	5	3	64	82
Calif.	1,129	1,330	2,001	2,560	128	223	1,822	2,059
Alaska	-	4	6	19	1	-	39	34
Hawaii	25	27	195	166	2	1	101	114
Guam	7	28	-	-	1	1	-	56
P.R.	58	38	-	-	105	131	41	88
V.I.	-	-	-	-	U	U	U	U
Amer. Samoa	-	-	-	-	U	U	U	U
C.N.M.I.	-	16	-	-	-	156	-	73

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 August 21, 1999, and August 22, 1998 (33rd Week)

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
	Cum. 1999†	Cum. 1998	A		B		Indigenous		Imported*		Total	
			Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	1999	Cum. 1999	1999	Cum. 1999	Cum. 1999	Cum. 1998
UNITED STATES	782	739	9,475	14,332	4,002	6,177	-	36	-	17	53	49
NEW ENGLAND	58	49	127	187	65	129	-	6	-	4	10	3
Maine	5	2	5	15	1	2	-	-	-	-	-	-
N.H.	14	8	10	9	10	11	-	-	-	1	1	-
Vt.	5	5	4	13	2	4	-	-	-	-	-	1
Mass.	21	31	41	73	29	50	-	5	-	2	7	2
R.I.	1	2	13	11	23	43	-	-	-	-	-	-
Conn.	12	1	54	66	-	19	-	1	-	1	2	-
MID. ATLANTIC	125	113	627	1,106	464	817	-	-	-	2	2	13
Upstate N.Y.	61	36	166	221	130	152	-	-	-	2	2	2
N.Y. City	28	35	155	381	132	283	-	-	-	-	-	-
N.J.	35	35	57	221	40	145	-	-	-	-	-	8
Pa.	1	7	249	283	162	237	-	-	-	-	-	3
E.N. CENTRAL	121	125	1,811	2,175	401	926	-	1	-	1	2	15
Ohio	44	42	446	221	62	52	-	-	-	-	-	1
Ind.	20	27	74	105	32	74	-	1	-	-	1	3
Ill.	48	47	319	516	-	159	-	-	-	-	-	-
Mich.	9	4	946	1,185	306	282	-	-	-	1	1	10
Wis.	-	5	26	148	1	359	U	-	U	-	-	1
W.N. CENTRAL	59	63	491	1,054	213	258	-	-	-	-	-	-
Minn.	24	48	45	89	30	26	-	-	-	-	-	-
Iowa	6	2	89	367	25	44	U	-	U	-	-	-
Mo.	21	8	275	476	122	154	-	-	-	-	-	-
N. Dak.	-	-	1	3	-	4	-	-	-	-	-	-
S. Dak.	1	-	8	21	1	1	-	-	-	-	-	-
Nebr.	3	-	40	20	11	11	-	-	-	-	-	-
Kans.	4	5	33	78	24	18	-	-	-	-	-	-
S. ATLANTIC	186	138	1,268	1,172	770	646	-	1	-	4	5	8
Del.	-	-	2	3	-	-	-	-	-	-	-	1
Md.	48	43	241	252	112	91	-	-	-	-	-	1
D.C.	4	-	37	39	14	8	U	-	U	-	-	-
Va.	13	13	102	150	59	69	-	1	-	2	3	2
W. Va.	6	5	26	1	16	4	-	-	-	-	-	-
N.C.	28	21	100	72	147	149	-	-	-	-	-	-
S.C.	3	3	28	21	53	24	-	-	-	-	-	-
Ga.	49	30	314	354	105	122	-	-	-	-	-	2
Fla.	35	23	418	280	264	179	-	-	-	2	2	2
E.S. CENTRAL	51	42	277	268	305	316	-	-	-	-	-	2
Ky.	5	7	50	21	27	31	-	-	-	-	-	-
Tenn.	30	23	139	153	165	175	-	-	-	-	-	1
Ala.	14	10	39	50	55	47	-	-	-	-	-	1
Miss.	2	2	49	44	58	63	U	-	U	-	-	-
W.S. CENTRAL	41	38	1,632	2,533	446	1,363	-	5	-	3	8	-
Ark.	2	-	35	65	33	62	-	-	-	-	-	-
La.	7	17	59	45	72	64	U	-	U	-	-	-
Okla.	28	19	336	379	94	58	-	-	-	-	-	-
Tex.	4	2	1,202	2,044	247	1,179	-	5	-	3	8	-
MOUNTAIN	67	85	890	2,174	409	551	-	2	-	-	2	-
Mont.	1	-	16	69	16	5	-	-	-	-	-	-
Idaho	1	-	30	179	20	22	-	-	-	-	-	-
Wyo.	1	1	4	26	9	3	-	-	-	-	-	-
Colo.	10	17	152	175	59	67	-	-	-	-	-	-
N. Mex.	17	4	32	103	136	212	-	-	-	-	-	-
Ariz.	30	42	536	1,337	108	133	-	1	-	-	1	-
Utah	5	3	34	136	24	51	-	1	-	-	1	-
Nev.	2	18	86	149	37	58	-	-	-	-	-	-
PACIFIC	74	86	2,352	3,663	929	1,171	-	21	-	3	24	8
Wash.	3	6	211	724	42	63	-	-	-	-	-	1
Oreg.	30	35	169	281	57	122	-	9	-	-	9	-
Calif.	33	37	1,958	2,608	808	968	-	11	-	3	14	6
Alaska	5	1	4	15	12	10	-	-	-	-	-	1
Hawaii	3	7	10	35	10	8	-	1	-	-	1	-
Guam	-	-	2	1	2	2	U	1	U	-	1	-
P.R.	1	2	107	38	99	168	-	-	-	-	-	-
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	-	45	U	-	U	-	-	-

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

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

†Of 156 cases among children aged <5 years, serotype was reported for 74 and of those, 18 were type b.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending August 21, 1999, and August 22, 1998 (33rd 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	1,615	1,837	3	214	468	58	3,274	3,503	8	175	318
NEW ENGLAND	84	80	-	4	4	5	373	627	-	7	38
Maine	5	5	-	-	-	-	-	5	-	-	-
N.H.	12	10	-	1	-	2	67	48	-	-	-
Vt.	4	1	-	1	-	2	35	59	-	-	-
Mass.	47	36	-	2	3	-	240	480	-	7	8
R.I.	4	3	-	-	-	1	20	7	-	-	1
Conn.	12	25	-	-	1	-	11	28	-	-	29
MID. ATLANTIC	152	196	-	25	170	2	613	373	-	21	142
Upstate N.Y.	40	50	-	6	2	2	527	193	-	17	113
N.Y. City	40	24	-	3	153	-	10	23	-	-	15
N.J.	39	47	-	-	6	-	12	11	-	1	13
Pa.	33	75	-	16	9	-	64	146	-	3	1
E.N. CENTRAL	251	295	1	27	59	7	291	422	-	2	-
Ohio	110	106	1	11	21	5	148	137	-	-	-
Ind.	37	52	-	3	5	-	37	69	-	1	-
Ill.	70	77	-	6	9	-	46	44	-	1	-
Mich.	33	36	-	7	22	2	33	45	-	-	-
Wis.	1	24	U	-	2	U	27	127	U	-	-
W.N. CENTRAL	178	158	-	10	21	6	153	268	5	83	32
Minn.	38	25	-	1	10	5	62	159	5	5	-
Iowa	32	27	U	4	7	U	24	55	U	28	-
Mo.	68	60	-	2	3	-	36	17	-	2	2
N. Dak.	3	2	-	-	1	-	4	3	-	-	-
S. Dak.	10	6	-	-	-	-	5	7	-	-	-
Nebr.	9	11	-	-	-	-	1	10	-	48	-
Kans.	18	27	-	3	-	1	21	17	-	-	30
S. ATLANTIC	285	303	-	37	32	20	258	176	2	31	10
Del.	6	1	-	-	-	-	4	3	-	-	-
Md.	42	24	-	3	-	11	70	29	-	1	1
D.C.	1	-	U	2	-	U	-	1	U	-	-
Va.	34	26	-	8	5	-	13	9	-	-	-
W. Va.	4	12	-	-	-	-	1	1	-	-	-
N.C.	32	46	-	8	9	2	63	69	2	30	6
S.C.	33	44	-	3	5	-	13	22	-	-	-
Ga.	49	68	-	3	1	3	25	10	-	-	-
Fla.	84	82	-	10	12	4	69	32	-	-	3
E.S. CENTRAL	114	129	-	8	11	1	62	79	-	1	1
Ky.	22	21	-	-	-	-	16	33	-	-	-
Tenn.	46	47	-	-	1	-	27	23	-	-	1
Ala.	27	38	-	7	6	1	15	20	-	1	-
Miss.	19	23	U	1	4	U	4	3	U	-	-
W.S. CENTRAL	140	204	-	28	44	4	113	226	-	7	80
Ark.	30	26	-	-	7	3	15	37	-	-	-
La.	34	42	U	3	5	U	3	2	U	-	-
Okla.	25	30	-	1	-	-	12	20	-	-	-
Tex.	51	106	-	24	32	1	83	167	-	7	80
MOUNTAIN	101	103	-	12	29	10	352	626	1	16	5
Mont.	2	3	-	-	-	-	2	4	-	-	-
Idaho	8	7	-	1	4	-	93	168	-	-	-
Wyo.	3	5	-	-	1	-	2	8	-	-	-
Colo.	27	21	-	3	5	5	113	160	1	1	-
N. Mex.	13	17	N	N	N	1	60	75	-	-	1
Ariz.	29	35	-	-	5	1	30	137	-	13	1
Utah	13	10	-	5	4	3	49	45	-	1	2
Nev.	6	5	-	3	10	-	3	29	-	1	1
PACIFIC	310	369	2	63	98	3	1,059	706	-	7	10
Wash.	51	51	-	2	7	3	539	196	-	-	5
Oreg.	57	62	N	N	N	-	27	54	-	-	-
Calif.	193	250	-	51	71	-	468	435	-	4	3
Alaska	5	2	-	1	2	-	4	8	-	-	-
Hawaii	4	4	2	9	18	-	21	13	-	3	2
Guam	1	2	U	1	2	U	1	-	U	-	-
P.R.	5	9	-	-	2	-	16	4	-	-	-
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	-	2	U	-	1	U	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

TABLE IV. Deaths in 122 U.S. cities,* week ending August 21, 1999 (33rd Week)

Reporting Area	All Causes, By Age (Years)						P&J†	Total	Reporting Area	All Causes, By Age (Years)						P&J†	Total
	All Ages	>65	45-64	25-44	1-24	<1				All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	519	363	100	29	10	17	42	S. ATLANTIC	845	526	192	67	28	31	38		
Boston, Mass.	144	97	32	5	1	9	14	Atlanta, Ga.	U	U	U	U	U	U	U		
Bridgeport, Conn.	30	17	9	2	-	2	2	Baltimore, Md.	161	83	46	24	5	2	7		
Cambridge, Mass.	10	9	1	-	-	-	-	Charlotte, N.C.	107	69	24	2	4	8	17		
Fall River, Mass.	27	18	8	-	1	-	1	Jacksonville, Fla.	148	97	25	10	7	9	5		
Hartford, Conn.	45	29	8	5	3	-	6	Miami, Fla.	99	63	19	11	5	1	-		
Lowell, Mass.	26	19	5	-	2	-	2	Norfolk, Va.	56	44	7	3	1	1	1		
Lynn, Mass.	U	U	U	U	U	U	U	Richmond, Va.	58	33	17	6	1	1	-		
New Bedford, Mass.	16	14	2	-	-	-	-	Savannah, Ga.	37	24	9	1	2	1	-		
New Haven, Conn.	29	18	5	3	2	1	1	St. Petersburg, Fla.	U	U	U	U	U	U	U		
Providence, R.I.	55	38	12	2	1	2	3	Tampa, Fla.	162	101	40	10	3	8	8		
Somerville, Mass.	2	2	-	-	-	-	-	Washington, D.C.	U	U	U	U	U	U	U		
Springfield, Mass.	54	39	6	6	-	3	5	Wilmington, Del.	17	12	5	-	-	-	-		
Waterbury, Conn.	28	22	4	2	-	-	3	E.S. CENTRAL	855	565	174	65	27	23	46		
Worcester, Mass.	53	41	8	4	-	-	5	Birmingham, Ala.	186	126	38	11	4	6	10		
MID. ATLANTIC	1,987	1,342	413	172	33	27	58	Chattanooga, Tenn.	75	52	11	9	2	1	3		
Albany, N.Y.	47	31	10	3	1	2	3	Knoxville, Tenn.	84	56	21	4	2	1	1		
Allentown, Pa.	U	U	U	U	U	U	U	Lexington, Ky.	88	61	15	7	3	2	3		
Buffalo, N.Y.	75	57	9	7	1	1	4	Memphis, Tenn.	163	105	37	12	5	4	12		
Camden, N.J.	25	14	6	1	2	2	1	Mobile, Ala.	78	53	12	5	2	6	1		
Elizabeth, N.J.	14	9	5	-	-	-	-	Montgomery, Ala.	36	30	3	2	1	-	4		
Erie, Pa.	42	38	3	1	-	-	4	Nashville, Tenn.	145	82	37	15	8	3	12		
Jersey City, N.J.	40	25	9	4	-	2	-	W.S. CENTRAL	1,349	911	270	97	52	19	67		
New York City, N.Y.	1,066	716	226	98	15	11	18	Austin, Tex.	79	55	18	2	4	-	4		
Newark, N.J.	49	27	11	10	1	-	-	Baton Rouge, La.	86	67	11	8	-	-	2		
Paterson, N.J.	25	16	5	4	-	-	3	Corpus Christi, Tex.	54	37	11	4	-	2	2		
Philadelphia, Pa.	199	115	54	20	8	2	9	Dallas, Tex.	188	119	39	10	14	6	1		
Pittsburgh, Pa.‡	81	57	17	5	2	-	3	El Paso, Tex.	75	51	17	5	2	-	1		
Reading, Pa.	26	22	1	2	-	1	1	Ft. Worth, Tex.	91	64	23	2	-	2	2		
Rochester, N.Y.	130	91	25	10	2	2	7	Houston, Tex.	307	201	62	26	12	6	30		
Schenectady, N.Y.	21	15	5	-	-	1	1	Little Rock, Ark.	66	43	15	3	4	1	1		
Scranton, Pa.	24	20	3	1	-	-	1	New Orleans, La.	100	58	26	9	6	1	8		
Syracuse, N.Y.	81	59	16	4	1	1	2	San Antonio, Tex.	205	143	36	21	4	1	12		
Trenton, N.J.	21	13	5	1	-	2	1	Shreveport, La.	U	U	U	U	U	U	U		
Utica, N.Y.	21	17	3	1	-	-	-	Tulsa, Okla.	98	73	12	7	6	-	6		
Yonkers, N.Y.	U	U	U	U	U	U	U	MOUNTAIN	819	532	174	63	31	18	35		
E.N. CENTRAL	1,380	942	271	89	43	35	73	Albuquerque, N.M.	103	66	21	7	8	1	-		
Akron, Ohio	52	37	7	3	1	4	-	Boise, Idaho	35	21	10	3	-	1	1		
Canton, Ohio	31	21	6	2	-	2	1	Colo. Springs, Colo.	41	27	7	6	-	1	-		
Chicago, Ill.	U	U	U	U	U	U	U	Denver, Colo.	113	83	16	7	1	6	7		
Cincinnati, Ohio	88	55	18	7	6	2	7	Las Vegas, Nev.	176	110	52	10	3	1	5		
Cleveland, Ohio	147	101	33	8	3	2	3	Ogden, Utah	28	24	4	-	-	-	4		
Columbus, Ohio	166	106	38	16	4	2	10	Phoenix, Ariz.	64	37	16	3	4	4	4		
Dayton, Ohio	131	87	27	7	4	6	6	Pueblo, Colo.	33	23	4	3	1	2	3		
Detroit, Mich.	U	U	U	U	U	U	U	Salt Lake City, Utah	119	69	25	15	7	2	6		
Evansville, Ind.	38	26	10	2	-	-	1	Tucson, Ariz.	107	72	19	9	7	-	5		
Fort Wayne, Ind.	57	37	12	5	3	-	3	PACIFIC	1,364	910	296	93	35	30	96		
Gary, Ind.	17	12	1	3	1	-	1	Berkeley, Calif.	18	10	7	1	-	-	1		
Grand Rapids, Mich.	58	45	6	3	3	1	7	Fresno, Calif.	94	67	20	4	3	-	10		
Indianapolis, Ind.	201	130	41	16	7	7	9	Glendale, Calif.	12	8	3	1	-	-	-		
Lansing, Mich.	38	26	7	2	2	1	1	Honolulu, Hawaii	59	46	7	3	1	2	5		
Milwaukee, Wis.	117	72	34	6	2	3	7	Long Beach, Calif.	63	45	13	2	2	1	3		
Peoria, Ill.	50	40	7	1	1	1	3	Los Angeles, Calif.	255	153	69	18	8	7	16		
Rockford, Ill.	42	28	8	2	3	1	-	Pasadena, Calif.	15	10	2	1	1	1	1		
South Bend, Ind.	51	40	8	1	1	1	4	Portland, Oreg.	105	76	19	7	2	1	1		
Toledo, Ohio	96	79	8	5	2	2	10	Sacramento, Calif.	122	74	31	9	3	5	15		
Youngstown, Ohio	U	U	U	U	U	U	U	San Diego, Calif.	142	95	32	8	6	1	13		
W.N. CENTRAL	525	393	85	26	14	7	30	San Francisco, Calif.	U	U	U	U	U	U	U		
Des Moines, Iowa	68	54	12	2	-	-	3	San Jose, Calif.	206	140	42	14	4	6	21		
Duluth, Minn.	32	29	3	-	-	-	1	Santa Cruz, Calif.	24	17	6	1	-	-	1		
Kansas City, Kans.	U	U	U	U	U	U	U	Seattle, Wash.	138	95	26	14	2	1	2		
Kansas City, Mo.	83	58	20	3	2	-	5	Spokane, Wash.	34	25	5	3	-	1	2		
Lincoln, Nebr.	U	U	U	U	U	U	U	Tacoma, Wash.	77	49	14	7	3	4	5		
Minneapolis, Minn.	163	125	18	10	5	5	14	TOTAL	9,643‡	6,484	1,975	701	273	207	485		
Omaha, Nebr.	85	60	17	5	3	-	5										
St. Louis, Mo.	U	U	U	U	U	U	U										
St. Paul, Minn.	94	67	15	6	4	2	2										
Wichita, Kans.	U	U	U	U	U	U	U										

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.

Wild Poliovirus Type 2 — Continued

5. Nathanson N, Martin JR. The epidemiology of poliomyelitis: enigmas surrounding its appearance, epidemicity, and disappearance. *Am J Epidemiol* 1979;110:672–92.
6. CDC. Progress toward poliomyelitis eradication—South East Asia Region, 1997–1998. *MMWR* 1999;48:230–2,239.
7. CDC. Progress toward poliomyelitis eradication—India, 1998. *MMWR* 1998;47:778–81.
8. WHO Collaborative Study Group on Oral and Inactivated Poliovirus Vaccines. Combined immunization of infants with oral and inactivated poliovirus vaccines: results of a randomized trial in The Gambia, Oman, and Thailand. *J Infect Dis* 1997;175(suppl 1):S215–S227.

**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
Jose Aponte
Gerald Jones
David Nitschke
Carol A. Worsham

CDC Operations Team

Carol M. Knowles
Deborah A. Adams
Willie J. Anderson
Frederick Browder
Patsy A. Hall
Kathryn Snavelly

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.

All material in the *MMWR* Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

Director, Centers for Disease Control
and Prevention

Jeffrey P. Koplan, M.D., M.P.H.

Acting Deputy Director for Science
and Public Health, Centers for

Disease Control and Prevention

Stephen M. Ostroff, M.D.

Director, Epidemiology Program Office

Stephen B. Thacker, M.D., M.Sc.

Editor, *MMWR* Series

John W. Ward, M.D.

Managing Editor,

MMWR (weekly)

Karen L. Foster, M.A.

Writers-Editors,

MMWR (weekly)

Jill Crane

David C. Johnson

Teresa F. Rutledge

Caran R. Wilbanks

Desktop Publishing

Morie M. Higgins

Peter M. Jenkins