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International Notes

Schistosomiasis in U.S. Peace Corps Volunteers — Malawi, 1992

Schistosomiasis (i.e., "snail fever" or "bilharzia") is a parasitic infection caused by trematodes (flukes) and is endemic in 74 countries in Africa, South America, the Caribbean, and Asia. U.S. residents who work or travel in these countries may be at risk for schistosomiasis. During 1992, two U.S. Peace Corps volunteers (PCVs) were evacuated from Africa because of *Schistosoma hematobium* infection of the central nervous system (CNS). Both were exposed to fresh water while vacationing at Cape Maclear, a popular resort area on Lake Malawi (Figure 1), in December 1991. This report summarizes the investigation of these two cases and a follow-up investigation of expatriates residing in Malawi.

Patient 1

In March 1992, a 30-year-old PCV was evacuated from Namibia and evaluated at a U.S. medical center because of a 2-week history of headaches, unilateral (left) vision loss, and one episode of loss of consciousness consistent with a seizure. The patient had been a PCV for 2 years in Tunisia and was serving an additional 2 years in Namibia. He had no history of recreational freshwater exposure in Tunisia or Namibia. However, in December 1991, he had snorkeled during a 2-day period at Cape Maclear in Lake Malawi.

A physical examination and white blood cell count (including eosinophil count) were normal. However, computed tomography (CT) and magnetic resonance imaging (MRI) scans detected an enhancing left parietal lesion with extensive edema. Because the lesion was initially presumed to be a meningioma, an open brain biopsy was performed. The biopsy specimen demonstrated a granulomatous abscess containing distorted eggs that had peripheral spines consistent with schistosome eggs. *S. hematobium* eggs were identified in his urinary sediment but not in his stool. Schistosomiasis serology using the Falcon assay screening test–enzyme-linked immunosorbent assay (FAST-ELISA) was positive at CDC (*1*). A confirmatory immunoblot was positive for *S. hematobium* antibody but not *S. mansoni* antibody.

Schistosomiasis — Continued

The patient was treated with praziquantel (60 mg per kg body weight per day, orally in three divided doses) for schistosomiasis, phenytoin for his seizure disorder, and dexamethasone for the cerebral edema. In June, his symptoms had resolved, and a CT scan documented continuing improvement. He returned to Namibia to complete his Peace Corps service.

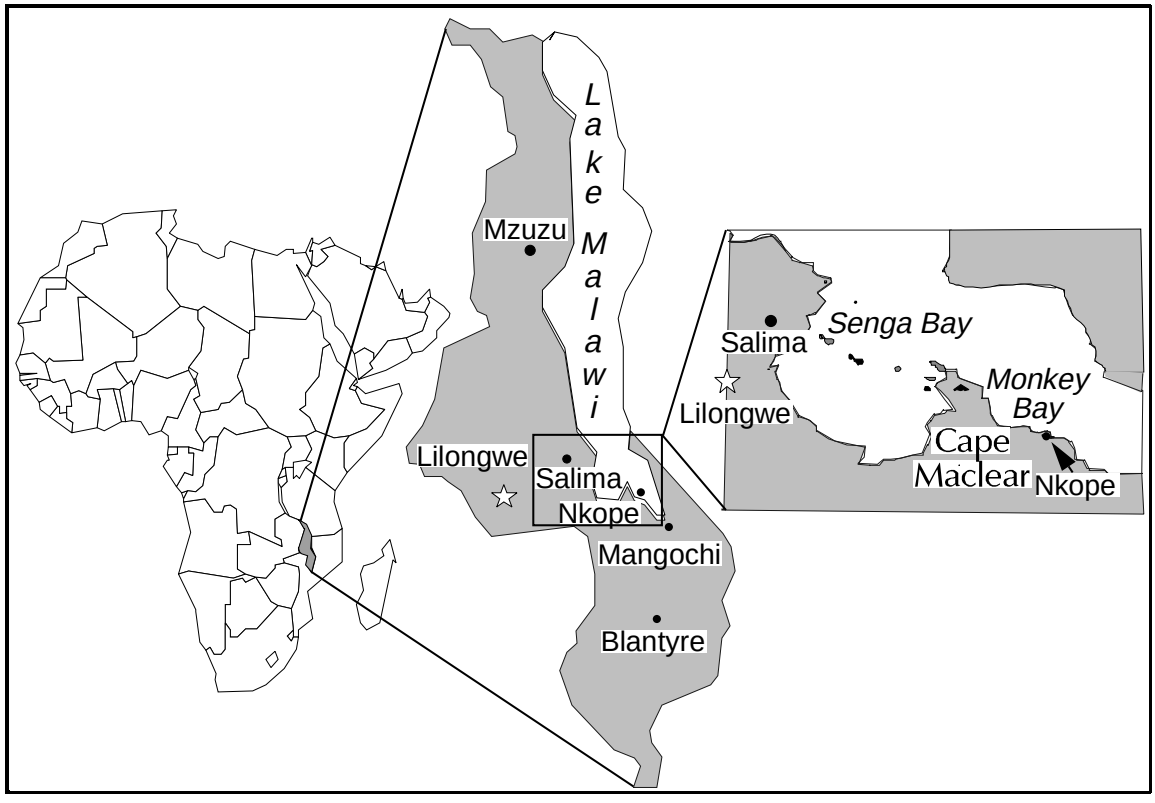
Patient 2

In January 1992, a 26-year-old PCV had onset of urinary frequency. In April 1992 she was evaluated in Botswana by a Peace Corps medical officer. Although a urinalysis was normal, she was treated in Botswana with antibiotics for a presumed bacterial cystitis. The patient had been stationed in an arid area of southern Botswana since 1990 and reported no recreational freshwater exposure in that country. However, in December 1991 she had snorkeled during a 7-day period at Cape Maclear, Lake Malawi.

Because of progressive symptoms, including incontinence, lower extremity pain, and difficulty walking, in August 1992 she was referred to a medical center in the Republic of South Africa for further evaluation, where an MRI scan revealed a mass in the conus medullaris of her spinal cord. A cauda equina tumor was suspected, and she was evacuated on August 25 to the United States for neurosurgical consultation.

On admission to the hospital in the United States, her general physical and neurologic examinations, complete blood count (including eosinophil count), urinalysis, and liver function tests were normal. On September 1, an exploratory laminectomy revealed that the area of the spinal cord opposite the body of the T11 vertebra was swollen, hyperemic, and firm to the touch. Examination of a biopsy

FIGURE 1. Location of Malawi and southwestern region of Lake Malawi



Schistosomiasis — Continued

specimen was negative for a neoplasm or other definitive diagnoses. She was treated with dexamethasone to reduce the spinal cord inflammation. A schistosomiasis FAST-ELISA was positive at CDC, and an immunoblot confirmed the presence of antibody to *S. hematobium* but not *S. mansoni*. Routine stool and urine examinations, a 24-hour filtered urine examination, and a rectal biopsy specimen were all negative for schistosome eggs.

S. hematobium infection of the spinal cord was presumptively diagnosed based on the clinical presentation, exposure history, and positive serology. She was treated with praziquantel (60 mg per kg body weight per day, orally in three divided doses) and discharged from the hospital on September 9. By October 7, her leg pains and gait disturbance had improved. However, she has remained incontinent of urine and requires oxybutynin chloride and periodic self-catheterizations.

Follow-Up Investigation

These two cases prompted an investigation of the occurrence of and risk factors for schistosomiasis among expatriates in Malawi by CDC in collaboration with the Malawian Ministry of Health, the U.S. Department of State (DOS) (Malawi), the U.S. Peace Corps (Malawi), and the U.S. Agency for International Development (Malawi). In March 1993, a total of 995 resident expatriates in Malawi were surveyed to determine the prevalence of schistosomal antibody and to examine the seroprevalence in relation to recreational water exposure at Lake Malawi. In addition, the southwestern shoreline of the lake was searched for vector snails (Figure 1).

Of the 917 persons serologically tested, 302 (33%) had schistosomal antibody detectable by immunoblot; of these, 293 (97%) had antibody to *S. hematobium*. In addition, the seroprevalence was 33% among the 427 persons whose only reported recreational water exposure was at Lake Malawi (i.e., these persons reported no other recreational water contact in any country in which schistosomiasis is endemic).

Infected *Bulinus globosus* snails (an intermediate host of *S. hematobium*) were identified in protected coves adjacent to resort areas along the southern shore of Lake Malawi. This species of snail and *B. nyassanus* were found also on aquatic vegetation at Cape Maclear.

Reported by: M Wolfe, MD, D Parenti, MD, J Pollner, MD, A Kobrine, MD, A Schwartz, MD, George Washington Univ Medical Center, Washington, DC. Office of Medical Svcs, US Peace Corps, Washington, DC. US Agency for International Development, Lilongwe, Malawi. Malawian Ministry of Health, Lilongwe. Parasitic Diseases Br, Div of Parasitic Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: Worldwide, an estimated 200 million persons are infected with and more than 600 million are at risk for schistosomiasis (*2*). *S. mansoni* and *S. japonicum* primarily affect the genitourinary tract; chronic infection can lead to hepatosplenomegaly, variceal bleeding, and cirrhosis. *S. hematobium* primarily affects the genitourinary tract; chronic infection can lead to persistent cystitis, pyelonephritis, obstructive renal disease, and increased incidence of bladder cancer.

Infection is acquired by exposure to cercariae that penetrate the skin of persons in contact with fresh water containing infected snails. In the human host, cercariae mature into adult worms that mate and deposit eggs (Figure 2). Adult worm pairs are generally located in the venous plexi surrounding the intestines (*S. mansoni*) or bladder (*S. hematobium*). Migration of either adult worm pairs or ova may result in the dissemination of eggs to ectopic locations such as the CNS. Schistosome ova have

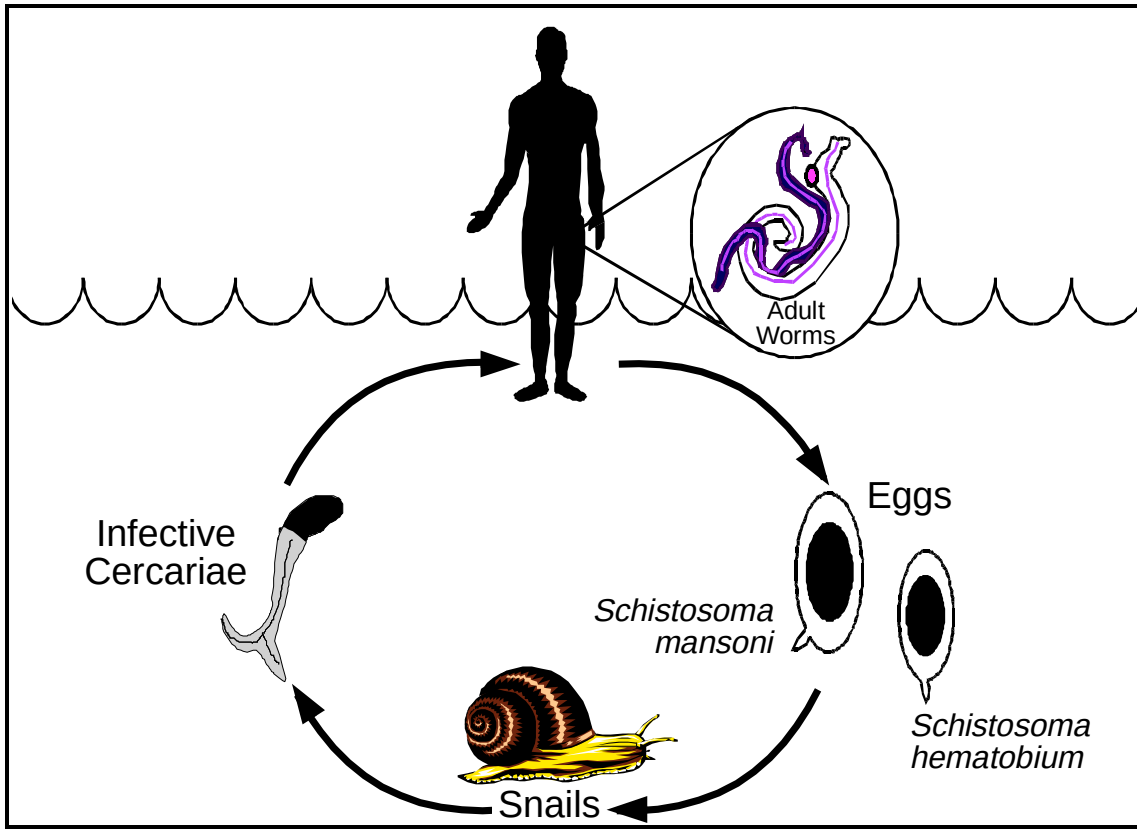
Schistosomiasis — Continued

been found in a variety of host tissues (*2–5*), but the factors influencing ectopic migration are not understood.

Most reported cases of acute cerebral schistosomiasis are caused by *S. japonicum* (*4,6*), and most cases of schistosomal transverse myelitis, by *S. mansoni* (*4,6*). CNS disease caused by *S. hematobium* is rare. Based on autopsy studies of patients with urinary schistosomiasis, *S. hematobium* ova may involve the brain in 30%–50% of those infected. However, CNS sequelae are uncommon (*3,5*), and the pathogenesis and risk factors for development of CNS disease are not understood.

Both *S. hematobium* and *S. mansoni* are endemic throughout much of Africa, including Malawi, although Lake Malawi has been widely regarded as "risk-free" for transmission of schistosomiasis (*7*). However, in addition to the two cases described in this report, CNS schistosomiasis in two British expatriates was associated with antecedent recreational freshwater exposure in Lake Malawi (one of these two persons acknowledged freshwater exposure elsewhere in Africa [Lake Tanganyika]) (*8,9*). The combination of the four case reports, the survey results documenting a high seroprevalence of schistosomiasis in expatriates, and the detection of infected snails strongly suggest Lake Malawi as a source of transmission of schistosomiasis.

FIGURE 2. Life cycle of *Schistosoma mansoni* and *S. hematobium*



Free-swimming cercariae penetrate intact skin in contact with infested fresh water. The cercariae mature into adult worms. Adult worms, developing within the human host, mate and begin depositing eggs in the vasculature surrounding the intestine (*S. mansoni*) or bladder (*S. hematobium*). Eggs released into the stool or urine develop into forms infective for intermediate snail hosts when deposited into fresh water. Infected snails release cercariae to reinitiate the cycle.

Schistosomiasis — Continued

All PCVs and most DOS employees in Malawi have been serologically screened for schistosomiasis. Clinical evaluation of seropositive expatriates in Malawi is planned to determine the rates of egg excretion and morbidity associated with infection. To prevent future morbidity associated with schistosomiasis, CDC recommends that expatriates and travelers with a history of freshwater exposure returning from areas with endemic schistosomiasis be serologically screened and that seropositive expatriates receive treatment with praziquantel following thorough clinical evaluation (i.e., quantitative stool and urine examinations for schistosome eggs).

All persons traveling in Africa should be advised of the risk for schistosomiasis associated with freshwater lakes, streams, and rivers throughout the continent, including Lake Malawi. The only completely effective method of prevention is avoiding contact with fresh water in areas with endemic disease. If contact with fresh water is unavoidable, water should be heated to 122 F (50 C) for 5 minutes or treated with iodine or chlorine. In addition, water can be strained with paper filters or allowed to stand for 3 days before use.

Physicians who treat travelers, expatriates, and immigrants should consider the possibility of neuroschistosomiasis in all patients who have a history of freshwater exposure in schistosomiasis-endemic areas and CNS abnormalities, even in the absence of classic signs and symptoms of acute schistosomiasis (e.g., fever, nausea, vomiting, abdominal pain, diarrhea, and hematuria). Neuroschistosomiasis can occur several months after exposure to infested water (*10*) and in low-intensity infections in which eggs may be undetectable or difficult to identify in urine or stool (*10*). Sensitive and specific serologic tests for diagnosing schistosomiasis (*1*) are available through CDC's Parasitic Diseases Branch, National Center for Infectious Diseases, telephone (404) 488-4050.

Treatment with a single dose of praziquantel (40–60 mg per kg body weight) is safe and effective therapy against the adult worms of the three major species of schistosomes infecting humans (*S. hematobium*, *S. mansoni*, and *S. japonicum*). Corticosteroids are often useful in neuroschistosomiasis to reduce edema and inflammation. Although CNS schistosomiasis is rare, substantial morbidity from this condition is preventable by early diagnosis and rapid treatment (*9*).

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Schistosomiasis — Continued

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Emerging Infectious Diseases

Update: Hantavirus Disease — Southwestern United States, 1993

Since May 1993, the state health departments in Arizona, Colorado, New Mexico, and Utah; the Indian Health Service; and CDC, with the assistance of the Navajo Nation Division of Health, have been investigating an outbreak of acute respiratory illness related to a newly recognized hantavirus (*1–5*). This report updates the investigation and presents information on a recent case of hantavirus-associated respiratory disease in a resident of Nevada.

Through July 27, laboratory evidence of acute hantavirus infection* has been confirmed in 18 persons in the four-corners area who were ill during 1993: 12 persons in New Mexico, four in Arizona, and two in Colorado. The median age of the 18 case-patients was 31 years (range: 13–64 years). Of these persons, 14 (78%) have died. The most recent onset of illness among the patients with confirmed cases was July 3 (Figure 1). Illnesses in an additional 28 persons in the four states are under investigation; 10 (36%) of these persons have died.

On July 10, CDC was contacted about a case of acute respiratory illness in a 24-year-old resident of central Nevada whose reported onset of illness was July 7. The case-patient had bilateral interstitial infiltrates and severe hypoxemia; she recovered fully. She had not traveled outside central Nevada during the 3-month period before illness onset. A serum specimen obtained July 10 demonstrated hantavirus-specific immunoglobulin M enzyme-linked immunosorbent assay antibodies. CDC and the Division of Health, Nevada State Department of Human Resources, are continuing the investigation of this case.

Through July 27, specimens from 55 persons with unexplained acute respiratory distress syndrome submitted by health authorities in 24 states outside the four-corners area and in the District of Columbia have been tested for evidence of hantavirus infection at CDC. In addition to the Nevada resident, specimens from a previously reported 58-year-old eastern Texas resident and a previously reported resident of another state who traveled to the four-corners area in 1992 have been positive (*4,5*).

Reported by: C Ward, DO, TB Callister, MD, H Hayes, Nye Regional Medical Center, Tonopah; LM Oksenholt, DO, Reno; D Nelson, AF DiSalvo, MD, State Health Laboratory, D Kwalick, MD, State Health Officer, Div of Health, Nevada State Dept of Human Resources. MJ Burkhardt, MPH, N Kalishman, MD, M Gallaher, MD, R Voorhees, MD, M Samuel, DrPH, M Tanuz, G Simpson, MD, L Hughes, PhD, E Umland, MD, G Oty, MS, L Nims, MS, CM Sewell, DrPH, State Epidemi-

*Any of the following tests positive: IgM antibodies to hantavirus antigens; fourfold or greater increase in antibody titers to hantavirus antigens in paired serum specimens; a positive immunohistochemical stain for hantavirus antigen in tissues; or positive polymerase chain reaction from tissue specimens.

Hantavirus Disease — Continued

ologist, New Mexico Dept of Health. K Komatsu, MPH, C Kioski, MPH, K Fleming, MA, J Doll, PhD, C Levy, MS, TM Fink, P Murphy, B England, MD, M Smolinski, MD, B Erickson, PhD, W Slanta, L Sands, DO, Acting State Epidemiologist, Arizona Dept of Health Svcs. P Shillam, MSPH, RE Hoffman, MD, State Epidemiologist, Colorado Dept of Health. S Lanser, MPH, CR Nichols, MPA, State Epidemiologist, Utah Dept of Health. L Hubbard-Pourier, MPH, Div of Health, Navajo Nation, Window Rock, Arizona. J Cheek, MD, A Craig, MD, R Haskins, MPH, B Muneta, MD, B Tempest, MD, M Carroll, MD, LA Shands, MPH, JP Sarisky, MPH, RE Turner, P Bohan, MS, Indian Health Svc. Div of Field Epidemiology, Epidemiology Program Office; Div of Bacterial and Mycotic Diseases, Div of Vector-Borne Infectious Diseases, Scientific Resources Program, and Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: Newly diagnosed cases of respiratory illness with evidence of acute hantavirus infection continue to be detected in the four-corners area. However, the detection of persons with evidence of acute hantavirus infection associated with respiratory illness in Texas and Nevada indicates that the potential for infection is not confined to the four-corners region of the Southwest. The continued occurrence of cases in the Southwest demonstrates the importance of adherence to recommended measures to minimize risk for exposure to rodents or their excreta (*6*). Examination of rodents trapped in the four-corners area indicates that *Peromyscus maniculatus* (deer mouse) continues to be the species most commonly trapped and most likely to show evidence of hantavirus infection.

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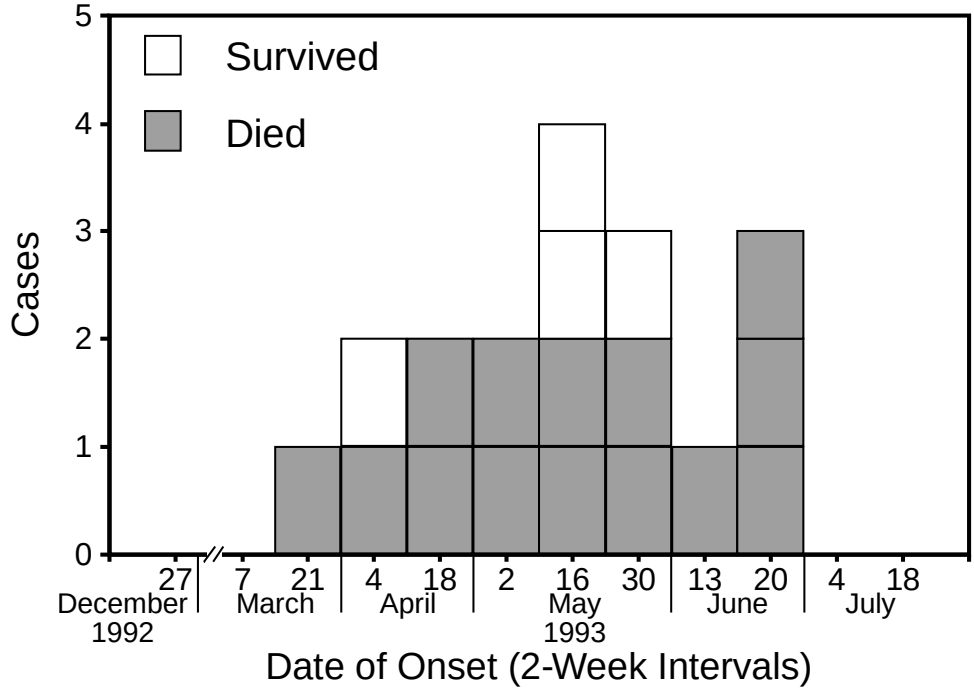
FIGURE 1. Confirmed cases of hantavirus illness, by 2-week interval of onset — Arizona, Colorado, and New Mexico, December 27, 1992–July 27, 1993



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Epidemiologic Notes and Reports

Tuberculosis in Imported Nonhuman Primates — United States, June 1990–May 1993

Nonhuman primates (NHPs) shipped to the United States must be quarantined and monitored for evidence of infectious diseases transmissible to humans. During May–October 1992, CDC investigated reports from NHP importers of mycobacterial infections in NHPs recently imported from Mauritius. This report describes a review of tuberculosis (TB) in all 249 imported shipments of CDC-permitted NHP species in the United States from June 1990 through May 1993 and updates recommendations regarding the identification and control of TB in imported NHPs and in workers exposed to such animals.

To determine mycobacterial infection rates in recently imported NHPs, in May 1993 CDC reviewed health records of all 249 shipments of imported cynomolgus (*Macaca fascicularis*), African green (*Cercopithicus aethiops*), and rhesus (*Macaca mulatta*) monkeys. These NHPs had completed a minimum 31-day import quarantine during June 1990–May 1993 under special permits issued by CDC (*1,2*). The review included 22,913 NHPs (20,580 cynomolgus, 1621 rhesus, and 712 African green monkeys) from nine countries (Barbados, Canada, China, Indonesia, Mauritius, Myanmar [Burma], the Philippines, Saint Kitts, and Tanzania).

Information was obtained from health records maintained for animals at all 18 NHP quarantine facilities that held special permits during this period and from records at five other facilities that received previously quarantined NHPs. All animals had received routine tuberculin skin tests (TSTs) (three tests, with 2-week intervals between tests) by experienced personnel in well-established quarantine facilities using accepted methods and a U.S. Department of Agriculture-licensed skin-test antigen. A diagnosis of TB infection was based on TST reactions and/or histopathologic examination or culture of granulomatous lesions found at necropsy.

Of the 20,580 cynomolgus monkeys, 8910 (43%) originated in the Philippines, 7703 (37%) in Indonesia, and 3967 (19%) in Mauritius. Of the 1621 rhesus monkeys, 1515 (93%) originated in China, 68 (4%) in Myanmar, and 38 (2%) in Canada. Of the 712 African green monkeys, 394 (55%) originated in Saint Kitts, 198 (28%) in Barbados, and 120 (17%) in Tanzania.

Overall, evidence of TB infection was identified in 90 (81 cynomolgus and nine rhesus monkeys) (0.4%) of the 22,913 NHPs, representing 17 (7%) of the 249 shipments. Sixteen of the shipments contained cynomolgus monkeys. Within these shipments, the prevalence of infection ranged from 0.8% (one of 130 cynomolgus monkeys shipped) to 80% (48 of 60 cynomolgus monkeys), with a median rate of 3%.

Nonhuman Primates — Continued

The prevalence of TB infection in cynomolgus monkeys varied by country of origin and included 2% (76 of 3967) of animals from Mauritius, 0.04% (three of 7703) from Indonesia, and 0.02% (two of 8910) from the Philippines. In addition, of the 81 total infected cynomolgus monkeys, 76 (94%) originated in Mauritius.

TB-infected NHPs were identified from 11 (69%) of the 16 total cynomolgus monkey shipments from Mauritius. Eight of these 11 shipments arrived from August 1991 through February 1992; the most highly infected shipment arrived during November 1991. TB surveillance and eradication efforts were increased by the exporters in Mauritius after U.S. importers notified them of the identification of TB-infected animals in May 1992. Of the seven shipments received since February 1992, two shipments have contained one TST-positive animal each. No evidence of additional secondary transmission has been reported by importers or by facilities receiving animals after quarantine.

Evidence of TB was detected during the initial 31-day quarantine period in 11 (65%) of the 17 shipments. However, most (69 [77%] of 90) infected animals were in the six shipments in which infection was first identified only after the completion of the routine 31-day postimport quarantine period, including one infected animal identified more than 15 months after release from quarantine. When 16 apparently healthy, TST-negative cynomolgus monkeys were euthanized to control the spread of infection at one facility, nine (56%) were found at necropsy to have granulomatous lesions suggestive of TB. Infection was confirmed by the presence of acid-fast bacilli (histopathologic sections) and/or positive mycobacteriologic culture.

During the review process, one NHP facility worker was reported to have developed a positive TST after exposure to infected animals but did not develop active TB. In addition, facility managers reported that TST conversion occasionally occurs among long-time NHP workers.

Reported by: Div of Quarantine, National Center for Prevention Svcs; Scientific Resources Program, National Center for Infectious Diseases, CDC.

Editorial Note: Regulation of the importation and quarantine of NHPs was instituted in 1948 to prevent the introduction and transmission of human pathogens. Beginning in 1975, importers of NHPs for permitted scientific, educational, or exhibition purposes were required to register with CDC, and a system was established for monitoring and reporting disease in quarantine facilities.* Following the identification of filovirus infection among cynomolgus monkeys imported from the Philippines during 1989–1990, CDC intensified disease-control measures for the handling of NHPs during importation and quarantine, including 1) unannounced inspection of registered importer quarantine facilities; 2) special permit requirements for the handling of imported cynomolgus, African green, and rhesus monkeys during transit and quarantine; 3) monitoring of arriving shipments of NHPs at U.S. ports of entry; and 4) surveillance of postimportation quarantine and distribution procedures (*1,3*).

CDC regulations require that newly imported NHPs undergo a 31-day quarantine period in the United States. Many registered importers and recipients of imported NHPs extend quarantine beyond the 31-day minimum. Because TB in captive NHPs is both an animal and a human health problem, surveillance by TST of imported NHPs and workers at NHP facilities is routine (*4,5*). Any NHP with a positive TST during import quarantine is considered to be infectious and to represent a high risk for dis-

*42 CFR § 71.181–189 (40 FR 33661).

Nonhuman Primates — Continued

ease transmission. When a quarantined TST-positive NHP is identified, the standard practice is to euthanize the animal, attempt laboratory confirmation of TB, and reinstitute quarantine and tuberculin skin testing (at 2-week intervals) of all other exposed NHPs until three consecutive negative TSTs have been completed (*5*).

The findings in this report indicate that the risk for TB infection in cynomolgus monkeys recently imported from Mauritius was substantially higher than that among those imported from Indonesia or the Philippines. However, all macaques are considered to be highly susceptible to TB, and virtually all are imported from areas of the world with high prevalences of TB in humans and animals. Close confinement of these and other NHPs in holding facilities and shipping crates creates conditions whereby one infected animal could potentially infect many others. Cynomolgus monkeys from Mauritius may have been held longer in identifiable groups than animals from other geographic areas; they are especially desirable for breeding colonies in the United States because they are free of herpes B, a pathogen fatal to humans and for which macaques are the natural hosts. The longer quarantine may have increased both the likelihood of transmission and detection of TB.

In the investigation described in this report, nine TST-negative animals had evidence of TB. The TST is less reliable for NHPs than for humans because of timing of the TST relative to individual exposure, lack of uniformity in testing procedures, and differences in host responses to the skin-test antigen. Ancillary TB diagnostic procedures commonly used in humans (e.g., booster or second-strength TST, chest radiographs, and sputum smears) are not standard elements of the NHP quarantine protocols.

The potential for transmission of TB and other pathogens among NHPs and humans underscores the importance of improved surveillance and testing procedures in NHP quarantine and research facility settings. The American Association for Accreditation of Laboratory Animal Care requires that its accredited facilities routinely perform TSTs in NHPs; however, test results are not routinely reported to any federal agency. CDC's NHP permit system is the only national disease-reporting system for imported NHPs, and TB reporting has not been required under this system. Daily contact with groups of potentially infected animals in the quarantine facility work environments may present an increased risk for exposure for humans. Although workers whose skin tests convert are referred to their health-care providers for medical evaluation, reporting of these cases with information on occupational exposure is not required by any federal public health agency, and therefore, background incidence and prevalence data for workers in this industry are not available.

The findings in this report indicate the need for improved estimates of the risks for TB in both NHPs and human contacts. The Division of Quarantine in CDC's National Center for Prevention Services is working with the Association of Primate Veterinarians, the American Association of Zoo Veterinarians, other federal agencies, and industry groups to address these issues. In addition, CDC has developed interim recommendations that update and modify procedures used to identify and control TB in imported NHPs and in workers exposed to such animals (see box).

Nonhuman Primates — Continued

Interim Guidelines for Tuberculin Skin Testing of Nonhuman Primates During Quarantine

1. All imported nonhuman primates (NHPs) should be administered a minimum of three tuberculin skin tests (TSTs), with at least 2 weeks between tests (*5*), before release from import quarantine. All cohorts containing animals with positive or suspicious reactions should remain in quarantine and be administered at least five additional TSTs following removal of the last affected animal.
2. Records of all TSTs performed during the lifetime of each imported NHP should be maintained at the facility housing the NHP and should accompany the NHP during moves to other facilities.
3. Necropsies of imported NHPs should be performed only by qualified veterinary pathologists or laboratory-animal veterinarians accredited by the American Association for Accreditation of Laboratory Animal Care. Necropsies of tuberculosis (TB)-suspect animals (NHPs with positive or suspicious TST results or NHPs from cohorts within which TB-infected animals have been identified previously) should be performed under animal biosafety level 3 conditions (*6*). Regardless of gross necropsy findings, fresh and formalin-fixed tissue specimens—to include tracheobronchial lymph node, liver, lung, and spleen—from all such NHPs should be collected for laboratory examination. Granulomatous lesions found in any NHP at necropsy, regardless of whether TB was previously suspected, should be submitted both for laboratory examination for acid-fast bacilli and for mycobacterial culture. Necropsy reports should address all major organ systems and should incorporate clinical history and laboratory findings.
4. All NHPs with positive or suspicious TST results, necropsy findings, or laboratory results should be reported to CDC (telephone [404] 639-8108; fax [404] 639-2599) within 48 hours, along with a copy or summary of the individual NHP's health records.
5. All facilities that house NHPs should adhere to the Institute for Laboratory Animal Research recommendations regarding baseline and (at a minimum) annual TST screening of employees and routine safe work practices involving NHPs (*5*). Results of employee TSTs should be maintained and reviewed by the occupational health professional responsible for the employee health program. Skin-test conversions among employees may suggest transmission of TB in the facility. Workers exposed to NHPs with laboratory-confirmed TB should receive a postexposure TST and, if negative, a TST 3 months after exposure. Workers with a reactive skin test should be referred for medical evaluation.
6. All persons directly involved in the transportation and quarantine of imported NHPs should adhere to the importer's standard operating procedures approved by CDC under the special permit process.
7. In addition to the protective clothing requirements described in previously published guidelines (*3*), inspection personnel and other transit workers who handle crates or pallets containing imported NHPs should wear disposable dust/mist respirator masks and be trained in their proper use. Because of the potential for aerosol transmission of certain pathogenic bacteria (e.g., TB) and viruses, face shields or eye protection should be worn by workers whose faces may come within 5 feet of the NHPs.
8. All NHPs should be individually identified with a unique number or alphanumeric code permanently applied to the animal by tattoo. Health certificates, shipping documents, and animal health records should always include this number or code and the age, sex, and species of the NHP (*5*).

Nonhuman Primates — Continued

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Current Trends

Prevalence of Sedentary Lifestyle — Behavioral Risk Factor Surveillance System, United States, 1991

Despite increasing evidence of the health benefits of physical activity, the United States remains predominantly a sedentary society (*1–4*). In 1990, nearly 60% of the U.S. adult population reported little or no leisure-time physical activity (*5*). Persons who engage in no physical activity are at higher risk for death from coronary heart disease than are persons who exercise regularly (*1*). To estimate the prevalence of sedentary lifestyle and identify groups characterized by a high prevalence of physical inactivity, CDC analyzed data on leisure-time physical activity from the 1991 Behavioral Risk Factor Surveillance System (BRFSS). This report summarizes the results of the survey.

Data were available for 87,433 respondents aged ≥18 years in 47 states and the District of Columbia that participated in the BRFSS, a population-based, random-digit–dialed telephone survey. Respondents were asked about the frequency, duration, and intensity of activities and were scored and categorized as having 1) no physical activity, 2) irregular activity only, 3) regular but not intensive activity (less than 50% of predicted maximal cardiorespiratory capacity, based on age), or 4) regular and intensive activity. Persons with no or irregular leisure-time activity were defined as having a sedentary lifestyle. Data were weighted and aggregated, and composite estimates and standard errors for selected groups were calculated using SESUDAAN (*6*). Prevalence of sedentary lifestyle and 95% confidence intervals were estimated by sex, race, and age (Figure 1). Because of limitations in sample sizes, race-specific prevalences could be estimated only for non-Hispanic whites and other races combined.

Overall, 58.1% of respondents were classified as sedentary; 29.8% reported no leisure-time activity. The crude prevalence did not differ by sex (57.7% for men and 58.5% for women). The prevalence of sedentary lifestyle was higher for other races (63.7%) than for non-Hispanic whites (56.7%), particularly for women of other races (64.9%).

Sedentary Lifestyle — Continued

The prevalence of sedentary lifestyle increased steadily with age (Figure 1). For younger respondents (aged 18–34 years) the prevalence was 54.6%; for persons aged 35–54 years, 58.9%; and for older respondents (aged ≥55 years), 61.9%. Prevalence did not differ by sex for the youngest age group (55.0% for men and 54.2% for women); however, for the 35–54 year age group, men (60.9%) were more sedentary than women (56.9%), and for the older age group, women (64.9%) were more sedentary than men (59.1%).

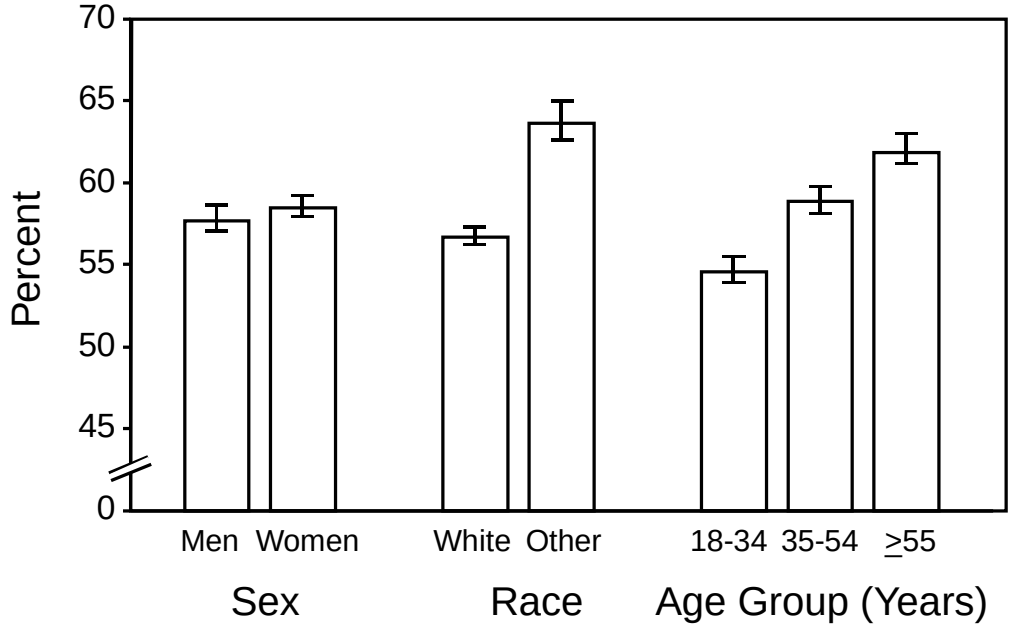
The prevalence of sedentary lifestyle was inversely related to income (Figure 2) (i.e., prevalence was highest [65.0%] for the lowest income category [<$15,000] and lowest [48.3%] for persons in the highest income category [>$50,000]). Prevalence also was inversely related to education and was 71.9% among persons with less than a 12th-grade education, compared with 50.1% among persons with a college education.

Reported by: State Behavioral Risk Factor Surveillance System coordinators. Statistics Br, Div of Chronic Disease Control and Community Intervention, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The findings in this report underscore the need for most persons in the United States to increase physical activity. A national health objective for the year 2000 is to reduce to 15% the proportion of persons aged ≥6 years who engage in no leisure-time physical activity (objective 1.5) (*7*).

The measurement of physical activity based on the BRFSS is subject to at least two limitations. First, the BRFSS findings reflect self-reported data and cannot be validated. Second, no equivalent estimates are available for occupational activity, which may be substantially higher in low-income and low-education groups; therefore, esti-

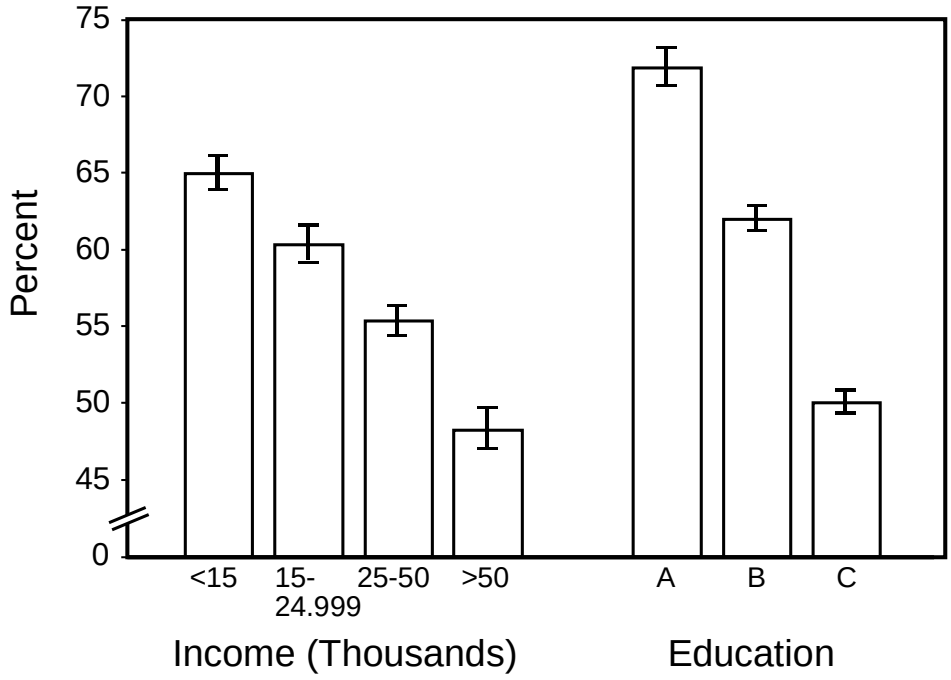
FIGURE 1. Prevalence of and associated 95% confidence intervals for sedentary lifestyle, by sex, race,* and age group — United States, 1991



*Because of limitations in sample sizes, race-specific prevalences could be estimated only for non-Hispanic whites and for other races combined.

Sedentary Lifestyle — Continued

FIGURE 2. Prevalence of and associated 95% confidence intervals for sedentary lifestyle, by income and education* — United States, 1991



* A=less than high school graduate; B=high school or technical school graduate; and C=college attendee or graduate.

mates restricted to leisure-time activities may overestimate the prevalence of sedentary lifestyle in these populations.

The increased prevalence of sedentary lifestyle among racial/ethnic minorities may be attributable to disparities in education and income, which were not adjusted for in this analysis. This pattern may reflect differences in availability of leisure time, access to facilities, or other barriers to increased physical activity.

Because of the high prevalence of sedentary lifestyle in the United States, CDC and the American College of Sports Medicine (ACSM) recently convened experts on physical activity and health to examine the science base supporting the health benefits of moderate physical activity and to develop a concise public health message for physical activity promotion. CDC and ACSM recommend that all U.S. residents aged ≥18 years participate in moderate physical activity for 30 minutes or more on most days. Participation in such activity at least 5 days per week is a suggested goal. Achievement of this goal will require intensified efforts by health-care providers and others to increase public awareness of the health benefits of an active lifestyle and to establish environments in which persons can be more physically active (*8*).

References

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Sedentary Lifestyle — Continued

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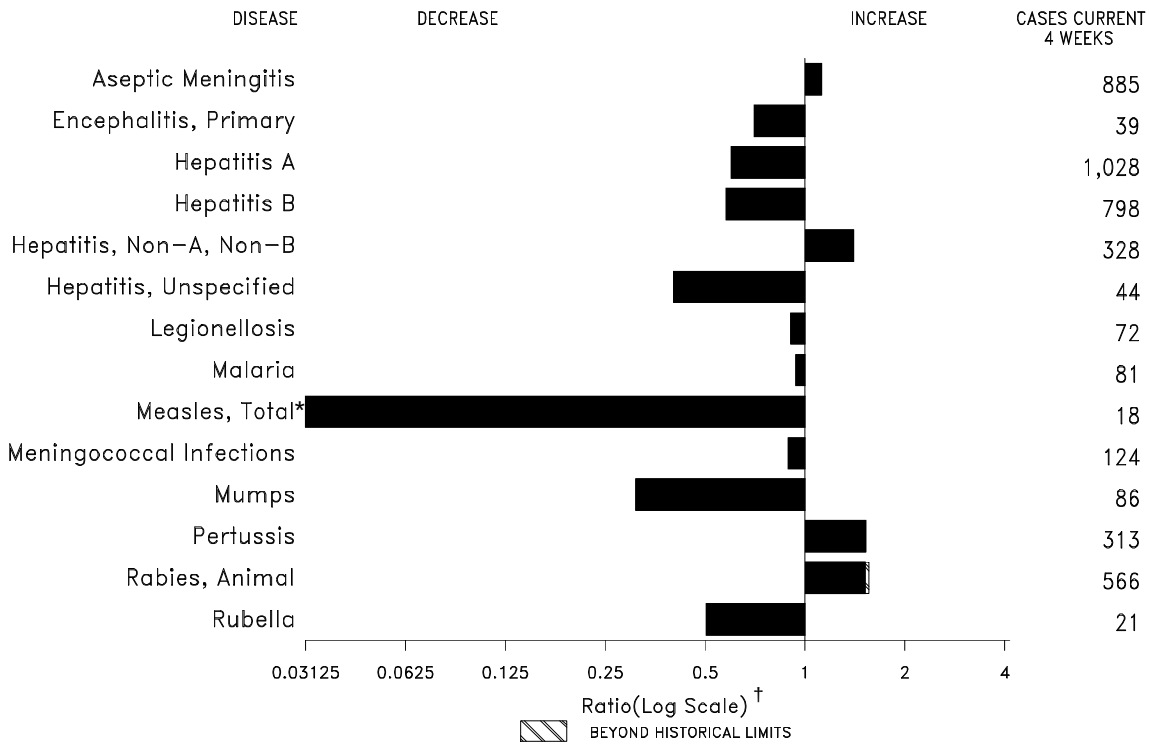
FIGURE I. Notifiable disease reports, comparison of 4-week totals ending July 24, 1993, with historical data — United States



*The large apparent decrease in reported cases of measles(total) reflects dramatic fluctuations in the historical baseline. (Ratio (log scale) for week twenty-nine is 0.02239).

† 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 thehatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending July 24, 1993 (29th Week)

	Cum. 1993		Cum. 1993
AIDS*	59,979	Measles: imported	20
Anthrax	-	indigenous	169
Botulism: Foodborne	8	Plague	3
Infant	14	Poliomyelitis, Paralytic§	-
Other	2	Psittacosis	30
Brucellosis	50	Rabies, human	-
Cholera	14	Syphilis, primary & secondary	14,462
Congenital rubella syndrome	6	Syphilis, congenital, age < 1 year¶	677
Diphtheria	-	Tetanus	17
Encephalitis, post-infectious	93	Toxic shock syndrome	134
Gonorrhea	210,635	Trichinosis	8
Haemophilus influenzae (invasive disease)†	712	Tuberculosis	11,256
Hansen Disease	94	Tularemia	65
Leptospirosis	18	Typhoid fever	176
Lyme Disease	2,704	Typhus fever, tickborne (RMSF)	143

*Updated monthly; last update July 3, 1993.
†Of 652 cases of known age, 212 (33%) were reported among children less than 5 years of age.
§No cases of suspected poliomyelitis have been reported in 1993; 10 cases of suspected poliomyelitis were reported in 1992; 6 of the 9 suspected cases with onset in 1991 were confirmed; the confirmed cases were vaccine associated.
¶Reports through first quarter of 1993.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending July 24, 1993, and July 18, 1992 (29th Week)

Reporting Area	AIDS*	Aseptic Menin-gitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionel-losis	Lyme Disease
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	59,979	4,336	311	93	210,635	271,098	11,594	6,617	2,542	341	614	2,704
NEW ENGLAND	2,815	63	5	4	4,180	5,626	165	190	258	5	16	590
Maine	60	12	1	-	46	49	8	9	-	-	4	4
N.H.	66	13	-	2	39	69	13	51	235	1	1	29
Vt.	14	11	3	-	14	14	3	5	2	-	-	3
Mass.	1,491	12	1	2	1,309	2,060	47	74	15	4	7	24
R.I.	192	15	-	-	204	416	51	15	6	-	4	91
Conn.	992	-	-	-	2,568	3,018	43	36	-	-	-	439
MID. ATLANTIC	13,675	332	25	6	23,353	28,939	627	800	175	4	123	1,554
Upstate N.Y.	2,162	137	18	3	4,278	5,890	196	217	102	1	36	955
N.Y. City	7,455	104	1	-	6,056	9,833	177	121	1	-	3	3
N.J.	2,561	-	-	-	3,951	4,127	172	230	51	-	17	261
Pa.	1,497	91	6	3	9,068	9,089	82	232	21	3	67	335
E.N. CENTRAL	4,967	560	82	17	41,347	49,741	1,310	809	389	8	168	24
Ohio	809	187	28	3	11,606	15,144	174	130	30	-	85	16
Ind.	585	80	6	7	4,230	4,597	442	130	7	1	34	4
Ill.	1,776	108	18	2	12,862	16,082	315	137	23	2	8	2
Mich.	1,290	175	26	5	9,603	11,576	123	245	301	5	34	2
Wis.	507	10	4	-	3,046	2,342	256	167	28	-	7	-
W.N. CENTRAL	2,274	264	14	-	10,841	14,171	1,409	361	88	10	42	64
Minn.	480	50	6	-	1,404	1,633	246	35	3	4	1	22
Iowa	131	48	1	-	602	950	20	14	5	1	5	6
Mo.	1,292	62	-	-	6,226	7,837	894	261	62	5	11	7
N. Dak.	-	8	3	-	25	52	53	-	-	-	1	2
S. Dak.	21	7	3	-	163	93	11	-	-	-	-	-
Nebr.	120	5	-	-	476	921	126	11	8	-	21	4
Kans.	230	84	1	-	1,945	2,685	59	40	10	-	3	23
S. ATLANTIC	12,950	1,064	57	39	56,668	84,289	721	1,261	330	43	111	373
Del.	235	29	3	-	765	963	7	96	71	-	8	189
Md.	1,425	95	13	-	8,729	8,108	98	163	8	5	23	49
D.C.	774	22	-	-	2,926	3,773	5	28	-	-	12	2
Va.	899	104	18	4	6,589	10,030	89	85	20	16	3	32
W. Va.	46	9	10	-	331	497	4	21	16	-	1	3
N.C.	742	82	12	-	13,981	13,929	38	176	35	-	15	55
S.C.	854	11	-	-	5,746	6,107	8	23	-	1	11	4
Ga.	1,661	63	1	-	4,660	26,020	63	99	41	-	23	18
Fla.	6,314	649	-	35	12,941	14,862	409	570	139	21	15	21
E.S. CENTRAL	1,588	255	15	5	24,299	26,195	142	698	498	1	28	12
Ky.	185	93	8	4	2,576	2,671	71	49	9	-	11	3
Tenn.	640	40	5	-	7,168	8,475	29	583	479	-	12	7
Ala.	490	80	1	-	8,881	8,723	28	63	4	1	2	2
Miss.	273	42	1	1	5,674	6,326	14	3	6	-	3	-
W.S. CENTRAL	6,332	480	24	2	25,039	29,568	1,066	862	143	104	16	19
Ark.	248	24	-	-	4,762	4,506	26	32	2	1	-	1
La.	806	37	1	-	6,629	8,404	46	111	51	2	2	-
Okla.	542	1	6	-	2,057	2,941	66	147	49	6	10	7
Tex.	4,736	418	17	2	11,591	13,717	928	572	41	95	4	11
MOUNTAIN	2,789	252	16	4	5,889	6,845	2,322	326	172	56	49	8
Mont.	17	-	-	1	35	60	56	4	-	-	5	-
Idaho	49	7	-	-	99	63	102	27	-	1	1	-
Wyo.	30	5	-	-	53	30	11	16	53	-	5	6
Colo.	925	65	6	-	1,777	2,482	585	44	30	36	5	-
N. Mex.	220	49	3	2	515	506	208	129	54	2	3	-
Ariz.	956	87	5	-	2,192	2,349	800	52	10	7	9	-
Utah	195	6	1	-	183	161	500	25	19	10	7	1
Nev.	397	33	1	1	1,035	1,194	60	29	6	-	14	1
PACIFIC	12,589	1,066	73	16	19,019	25,724	3,832	1,310	489	110	61	60
Wash.	882	-	-	-	2,100	2,272	433	118	108	7	9	1
Oreg.	522	-	-	-	993	897	57	21	9	-	-	1
Calif.	11,030	997	69	16	15,318	21,885	2,830	1,148	361	100	47	57
Alaska	20	9	3	-	277	403	461	6	9	-	-	-
Hawaii	135	60	1	-	331	267	51	17	2	3	5	1
Guam	-	2	-	-	38	48	2	2	-	1	-	-
P.R.	1,786	31	-	-	287	98	52	193	34	2	-	-
V.I.	33	-	-	-	63	60	-	2	-	-	-	-
Amer. Samoa	-	-	-	-	30	24	12	-	-	-	-	-
C.N.M.I.	-	2	-	-	47	45	-	-	-	1	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly; last update July 3, 1993.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 24, 1993, and July 18, 1992 (29th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1993	1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	Cum. 1993	1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	1993	Cum. 1993	Cum. 1992
UNITED STATES	547	8	169	1	20	2,038	1,457	17	992	99	1,693	1,052	4	130	117
NEW ENGLAND	28	-	42	-	3	51	60	-	6	9	345	84	-	1	6
Maine	1	-	-	-	-	-	5	-	-	-	8	3	-	1	1
N.H.	6	-	-	-	-	13	12	-	-	6	208	26	-	-	-
Vt.	1	-	30	-	1	-	4	-	-	2	47	2	-	-	-
Mass.	3	-	3	-	1	14	19	-	-	-	43	36	-	-	-
R.I.	2	-	-	-	1	20	1	-	2	-	3	-	-	-	4
Conn.	15	-	9	-	-	4	19	-	4	1	36	17	-	-	1
MID. ATLANTIC	94	-	7	-	3	193	183	2	75	20	226	56	1	36	10
Upstate N.Y.	34	-	-	-	1	109	83	2	24	7	86	25	-	6	7
N.Y. City	24	-	2	-	-	48	19	-	-	-	7	9	-	15	-
N.J.	26	-	5	-	2	36	27	-	8	-	26	22	1	11	3
Pa.	10	-	-	-	-	-	54	-	43	13	107	-	-	4	-
E.N. CENTRAL	29	5	7	-	-	39	226	-	144	11	284	108	-	2	8
Ohio	7	5	5	-	-	5	69	-	57	3	131	28	-	1	-
Ind.	3	-	-	-	-	20	33	-	3	6	35	14	-	-	-
Ill.	14	-	2	-	-	8	64	-	33	-	28	19	-	-	7
Mich.	5	-	-	-	-	4	41	-	48	2	22	5	-	-	1
Wis.	-	-	-	-	-	2	19	-	3	-	68	42	-	1	-
W.N. CENTRAL	17	-	1	-	2	10	96	-	28	10	124	86	-	1	5
Minn.	3	-	-	-	-	9	6	-	1	-	51	28	-	-	-
Iowa	1	-	-	-	-	1	16	-	7	-	1	3	-	-	-
Mo.	5	-	1	-	-	-	35	-	15	8	47	33	-	1	1
N. Dak.	2	-	-	-	-	-	3	-	4	-	3	10	-	-	-
S. Dak.	2	-	-	-	-	-	3	-	-	1	3	5	-	-	-
Nebr.	3	-	-	-	-	-	8	-	1	1	8	3	-	-	-
Kans.	1	-	-	-	2	-	25	-	-	-	11	4	-	-	4
S. ATLANTIC	168	-	20	-	3	117	288	8	315	20	187	70	-	8	11
Del.	2	-	3	-	-	1	11	-	4	-	5	1	-	2	-
Md.	15	-	-	-	2	16	31	2	56	2	66	14	-	2	4
D.C.	5	-	-	-	-	-	5	-	-	-	2	-	-	-	-
Va.	15	-	-	-	1	14	25	-	16	-	17	6	-	-	-
W. Va.	2	-	-	-	-	-	11	-	8	-	8	2	-	-	-
N.C.	88	-	-	-	-	24	55	-	176	5	29	14	-	-	-
S.C.	1	-	-	-	-	29	24	-	14	-	5	7	-	-	2
Ga.	9	-	-	-	-	-	60	5	15	7	12	8	-	-	-
Fla.	31	-	17	-	-	33	66	1	26	6	43	18	-	4	5
E.S. CENTRAL	16	-	1	-	-	454	89	-	35	8	74	17	-	-	1
Ky.	1	-	-	-	-	437	18	-	-	-	3	-	-	-	-
Tenn.	7	-	-	-	-	-	20	-	11	5	39	5	-	-	1
Ala.	4	-	1	-	-	-	32	-	19	3	30	11	-	-	-
Miss.	4	-	-	-	-	17	19	-	5	-	2	1	-	-	-
W.S. CENTRAL	13	-	1	-	-	1,060	128	4	147	5	49	143	-	16	6
Ark.	2	-	-	-	-	-	14	-	4	-	3	6	-	-	-
La.	-	-	1	-	-	-	25	-	12	-	6	1	-	1	-
Okla.	4	-	-	-	-	11	15	-	8	5	27	24	-	1	-
Tex.	7	-	-	-	-	1,049	74	4	123	-	13	112	-	14	6
MOUNTAIN	20	-	2	-	-	15	124	-	36	3	133	184	1	5	5
Mont.	2	-	-	-	-	-	11	-	-	-	1	1	-	-	-
Idaho	1	-	-	-	-	-	9	-	5	1	29	21	-	1	1
Wyo.	-	-	-	-	-	1	2	-	2	-	1	-	-	-	-
Colo.	12	-	2	-	-	14	21	-	8	-	50	25	-	-	-
N. Mex.	5	-	-	-	-	-	3	N	N	2	24	37	-	-	-
Ariz.	-	U	-	U	-	-	61	U	6	U	12	75	U	1	2
Utah	-	-	-	-	-	-	10	-	3	-	16	24	1	2	1
Nev.	-	-	-	-	-	-	7	-	12	-	-	1	-	1	1
PACIFIC	162	3	88	1	9	99	263	3	206	13	271	304	2	61	65
Wash.	17	-	-	-	-	10	43	1	9	-	22	83	-	-	6
Oreg.	3	-	-	-	-	3	21	N	N	3	6	15	1	2	1
Calif.	138	3	77	1†	4	49	178	2	176	9	232	185	1	35	38
Alaska	-	-	-	-	-	9	13	-	5	-	3	4	-	1	-
Hawaii	4	-	11	-	5	28	8	-	16	1	8	17	-	23	20
Guam	1	U	2	U	-	10	1	U	6	U	-	-	U	-	1
P.R.	-	-	224	-	-	253	6	-	2	-	2	9	-	-	-
V.I.	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
Amer. Samoa	-	U	1	U	-	-	-	U	-	U	2	6	U	-	-
C.N.M.I.	-	U	-	U	1	-	-	U	11	U	-	1	U	-	-

*For measles only, imported cases include both out-of-state and international importations.
N: Not notifiable U: Unavailable † International § Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 24, 1993, and July 18, 1992 (29th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-Shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	14,462	18,967	134	11,256	11,926	65	176	143	4,409
NEW ENGLAND	233	364	8	236	179	-	12	2	583
Maine	3	2	2	7	14	-	-	-	-
N.H.	25	26	2	4	1	-	1	-	44
Vt.	1	1	1	3	3	-	-	-	19
Mass.	86	176	2	129	74	-	7	2	95
R.I.	9	20	1	34	13	-	-	-	-
Conn.	109	139	-	59	74	-	4	-	425
MID. ATLANTIC	1,342	2,716	24	2,596	2,895	1	43	14	1,810
Upstate N.Y.	113	206	13	275	364	1	8	1	1,327
N.Y. City	681	1,514	1	1,516	1,687	-	26	-	-
N.J.	186	371	-	415	497	-	6	9	307
Pa.	362	625	10	390	347	-	3	4	176
E.N. CENTRAL	2,215	2,737	37	1,136	1,184	3	20	7	41
Ohio	659	404	16	174	181	1	5	6	4
Ind.	183	136	1	121	96	1	1	-	2
Ill.	796	1,213	5	551	591	-	9	1	5
Mich.	346	549	15	238	269	1	4	-	3
Wis.	231	435	-	52	47	-	1	-	27
W.N. CENTRAL	913	748	9	250	281	23	2	7	204
Minn.	49	47	2	31	81	-	-	1	27
Iowa	32	28	5	36	24	-	-	1	36
Mo.	736	571	-	125	119	10	2	3	6
N. Dak.	-	1	-	4	3	-	-	-	42
S. Dak.	1	-	-	10	14	9	-	2	25
Nebr.	10	20	-	13	13	1	-	-	6
Kans.	85	81	2	31	27	3	-	-	62
S. ATLANTIC	3,888	5,285	16	1,896	2,204	1	23	64	1,125
Del.	76	125	1	24	25	-	1	2	93
Md.	213	384	-	206	161	-	4	5	322
D.C.	217	245	-	93	72	-	-	-	11
Va.	348	441	4	237	164	-	2	4	204
W. Va.	5	9	-	45	46	-	-	2	48
N.C.	1,084	1,341	3	275	290	-	-	28	45
S.C.	594	699	-	244	234	-	-	6	94
Ga.	657	1,063	2	424	481	-	1	12	266
Fla.	694	978	6	348	731	1	15	5	42
E.S. CENTRAL	2,116	2,453	6	739	844	3	2	17	54
Ky.	173	82	2	207	214	-	-	5	9
Tenn.	606	694	1	144	235	2	-	9	-
Ala.	473	933	2	264	229	1	2	1	45
Miss.	864	744	1	124	166	-	-	2	-
W.S. CENTRAL	3,058	3,304	2	1,150	1,199	26	2	28	334
Ark.	482	528	-	105	100	14	-	-	18
La.	1,362	1,421	-	-	87	-	1	1	4
Okla.	231	152	2	155	82	9	-	26	50
Tex.	983	1,203	-	890	930	3	1	1	262
MOUNTAIN	130	219	8	254	312	4	6	4	66
Mont.	1	7	-	5	-	-	-	-	14
Idaho	-	1	1	6	12	-	-	-	2
Wyo.	4	1	-	2	-	2	-	4	11
Colo.	35	32	2	8	30	-	5	-	2
N. Mex.	19	24	-	35	47	1	-	-	4
Ariz.	56	107	1	126	135	-	1	-	29
Utah	3	6	3	12	45	1	-	-	-
Nev.	12	41	1	60	43	-	-	-	4
PACIFIC	567	1,141	24	2,999	2,828	4	66	-	192
Wash.	33	55	4	141	170	1	4	-	-
Oreg.	50	25	-	57	71	2	-	-	-
Calif.	478	1,052	20	2,634	2,413	1	60	-	175
Alaska	4	4	-	27	38	-	-	-	17
Hawaii	2	5	-	140	136	-	2	-	-
Guam	1	2	-	28	34	-	-	-	-
P.R.	307	176	-	131	135	-	-	-	26
V.I.	31	35	-	2	3	-	-	-	-
Amer. Samoa	-	-	-	2	-	-	-	-	-
C.N.M.I.	3	4	-	19	38	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending July 24, 1993 (29th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	546	361	87	65	21	12	42
Boston, Mass.	160	103	29	17	7	4	15
Bridgeport, Conn.	53	35	6	7	5	-	4
Cambridge, Mass.	14	10	1	3	-	-	3
Fall River, Mass.	28	23	4	1	-	-	4
Hartford, Conn.	32	19	7	4	1	1	-
Lowell, Mass.	23	16	4	1	1	1	2
Lynn, Mass.	13	8	5	-	-	-	1
New Bedford, Mass.	23	17	2	4	-	-	2
New Haven, Conn.	47	21	10	13	1	2	2
Providence, R.I.	23	18	2	3	-	-	-
Somerville, Mass.	9	8	-	1	-	-	1
Springfield, Mass.	52	37	7	4	1	3	1
Waterbury, Conn.	18	14	1	2	1	-	3
Worcester, Mass.	51	32	9	5	4	1	4
MID. ATLANTIC	2,654	1,833	562	138	62	59	124
Albany, N.Y.	41	29	6	2	2	2	4
Allentown, Pa.	28	24	4	-	-	-	1
Buffalo, N.Y.	100	71	20	5	3	1	2
Camden, N.J.	33	25	4	1	1	2	4
Elizabeth, N.J.	27	20	2	5	-	-	-
Erie, Pa.§	46	31	9	5	1	-	5
Jersey City, N.J.	72	40	19	11	-	2	4
New York City, N.Y.	1,435	1,006	326	39	35	29	56
Newark, N.J.	68	30	22	11	3	2	4
Paterson, N.J.	U	U	U	U	U	U	U
Philadelphia, Pa.	298	178	75	28	10	7	15
Pittsburgh, Pa.§	97	69	19	5	1	3	6
Reading, Pa.	12	9	-	3	-	-	-
Rochester, N.Y.	150	117	16	10	4	3	14
Schenectady, N.Y.	21	17	4	-	-	-	-
Scranton, Pa.§	27	22	2	1	1	1	1
Syracuse, N.Y.	125	98	18	3	1	5	6
Trenton, N.J.	31	17	6	6	-	2	-
Utica, N.Y.	16	12	4	-	-	-	-
Yonkers, N.Y.	27	18	6	3	-	-	2
E.N. CENTRAL	2,126	1,281	412	236	144	53	84
Akron, Ohio	55	47	6	1	-	1	-
Canton, Ohio	48	37	9	1	1	-	2
Chicago, Ill.	487	200	85	108	82	12	16
Cincinnati, Ohio	119	75	24	7	6	7	11
Cleveland, Ohio	180	114	39	13	8	6	3
Columbus, Ohio	169	95	40	19	6	9	5
Dayton, Ohio	117	80	25	9	2	1	5
Detroit, Mich.	224	136	43	25	14	6	3
Evansville, Ind.	36	26	9	1	-	-	-
Fort Wayne, Ind.	70	44	17	6	3	-	4
Gary, Ind.	12	6	5	1	-	-	2
Grand Rapids, Mich.	54	33	14	4	2	1	6
Indianapolis, Ind.	173	115	34	16	4	4	5
Madison, Wis.	24	14	5	2	2	1	2
Milwaukee, Wis.	114	80	16	12	5	1	7
Peoria, Ill.	50	33	14	1	1	1	4
Rockford, Ill.	51	37	8	2	4	-	3
South Bend, Ind.	52	41	5	4	1	1	2
Toledo, Ohio	91	68	14	4	3	2	4
Youngstown, Ohio	U	U	U	U	U	U	U
W.N. CENTRAL	704	471	130	56	26	20	34
Des Moines, Iowa	U	U	U	U	U	U	U
Duluth, Minn.	26	19	3	1	2	1	2
Kansas City, Kans.	27	18	6	2	-	1	1
Kansas City, Mo.	116	62	28	15	4	7	6
Lincoln, Nebr.	21	13	3	3	2	-	-
Minneapolis, Minn.	201	137	43	15	3	3	11
Omaha, Nebr.	74	54	10	4	5	1	4
St. Louis, Mo.	139	100	17	9	7	6	6
St. Paul, Minn.	54	38	11	3	1	1	2
Wichita, Kans.	46	30	9	4	2	-	2
S. ATLANTIC	1,306	790	260	182	41	32	49
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	309	196	58	44	7	4	14
Charlotte, N.C.	109	78	16	11	1	3	4
Jacksonville, Fla.	100	58	26	8	3	5	8
Miami, Fla.	105	51	21	24	7	2	-
Norfolk, Va.	73	40	18	8	6	1	2
Richmond, Va.	112	65	24	13	4	6	2
Savannah, Ga.	53	39	7	5	1	1	2
St. Petersburg, Fla.	62	45	10	3	3	1	1
Tampa, Fla.	168	107	35	18	5	3	11
Washington, D.C.	200	102	43	44	4	6	5
Wilmington, Del.	15	9	2	4	-	-	-
E.S. CENTRAL	824	509	193	80	26	16	51
Birmingham, Ala.	141	82	34	19	3	3	3
Chattanooga, Tenn.	64	37	18	7	2	-	3
Knoxville, Tenn.	103	69	22	4	4	4	9
Lexington, Ky.	72	46	18	5	3	-	8
Memphis, Tenn.	172	104	46	16	2	4	15
Mobile, Ala.	77	48	12	11	3	3	3
Montgomery, Ala.	59	39	11	5	4	-	2
Nashville, Tenn.	136	84	32	13	5	2	8
W.S. CENTRAL	1,362	769	301	162	84	46	69
Austin, Tex.	63	40	12	7	2	2	5
Baton Rouge, La.	68	41	15	6	5	1	3
Corpus Christi, Tex.	56	37	6	8	5	-	1
Dallas, Tex.	192	99	39	33	11	10	4
El Paso, Tex.	75	50	17	6	2	-	6
Ft. Worth, Tex.	98	57	19	11	4	7	5
Houston, Tex.	355	196	89	42	20	8	26
Little Rock, Ark.	83	51	16	6	6	4	2
New Orleans, La.	64	31	17	6	8	2	-
San Antonio, Tex.	172	70	48	31	16	7	9
Shreveport, La.	41	27	10	-	2	2	5
Tulsa, Okla.	95	70	13	6	3	3	3
MOUNTAIN	788	497	148	91	30	22	52
Albuquerque, N.M.	67	44	15	4	4	-	2
Colo. Springs, Colo.	42	22	10	7	2	1	3
Denver, Colo.	141	85	26	24	4	2	12
Las Vegas, Nev.	122	76	23	18	3	2	3
Ogden, Utah	25	15	5	1	2	2	4
Phoenix, Ariz.	145	94	25	12	9	5	9
Pueblo, Colo.	21	18	3	-	-	-	-
Salt Lake City, Utah	86	61	10	7	3	5	10
Tucson, Ariz.	139	82	31	18	3	5	9
PACIFIC	1,768	1,158	326	198	51	33	111
Berkeley, Calif.	15	8	6	1	-	-	-
Fresno, Calif.	52	41	5	2	1	3	2
Glendale, Calif.	23	16	3	2	2	-	-
Honolulu, Hawaii	68	50	11	5	1	1	8
Long Beach, Calif.	68	41	10	9	4	4	8
Los Angeles, Calif.	473	272	97	78	18	6	21
Pasadena, Calif.	33	24	6	2	-	1	4
Portland, Oreg.	139	107	21	6	3	2	8
Sacramento, Calif.	139	94	25	16	3	1	11
San Diego, Calif.	151	94	28	18	4	7	19
San Francisco, Calif.	137	86	30	20	1	-	1
San Jose, Calif.	158	101	34	12	7	4	17
Santa Cruz, Calif.	30	20	6	2	1	1	5
Seattle, Wash.	149	101	24	17	5	2	2
Spokane, Wash.	59	47	8	3	1	-	3
Tacoma, Wash.	74	56	12	5	-	1	2
TOTAL	12,078¶	7,669	2,419	1,208	485	293	616

*Mortality data in this table are voluntarily reported from 121 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.

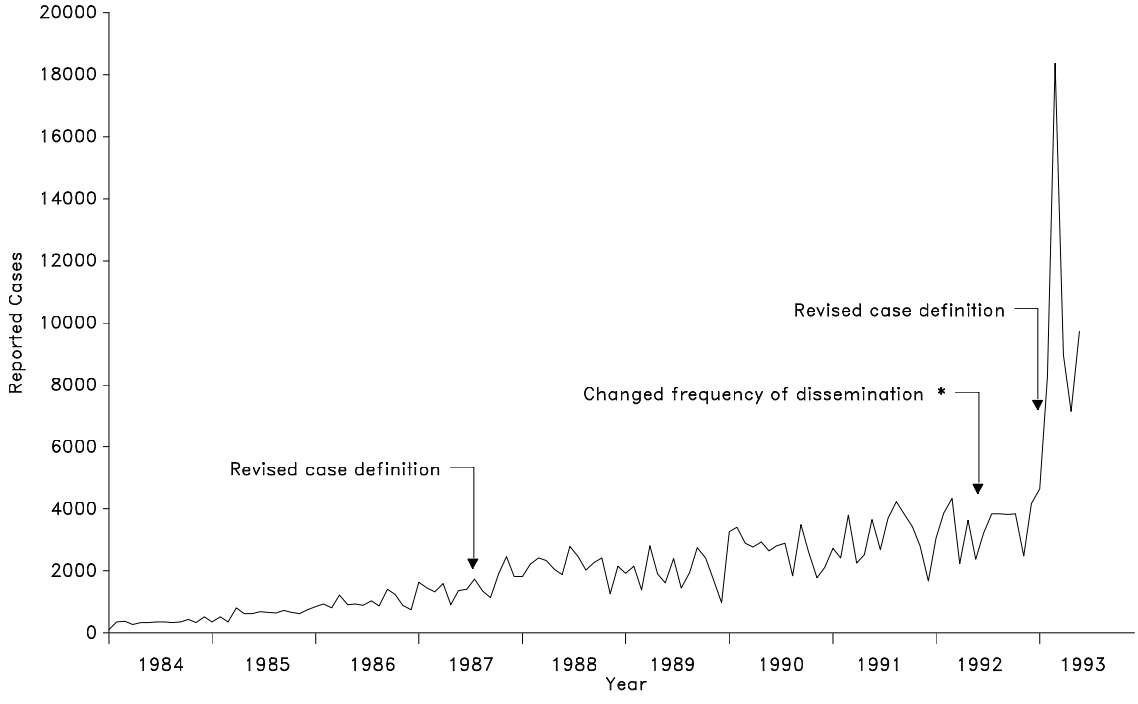
†Pneumonia and influenza.

§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

U: Unavailable.

FIGURE II. Acquired immunodeficiency syndrome cases, by 4-week period of report — United States, 1984–1993



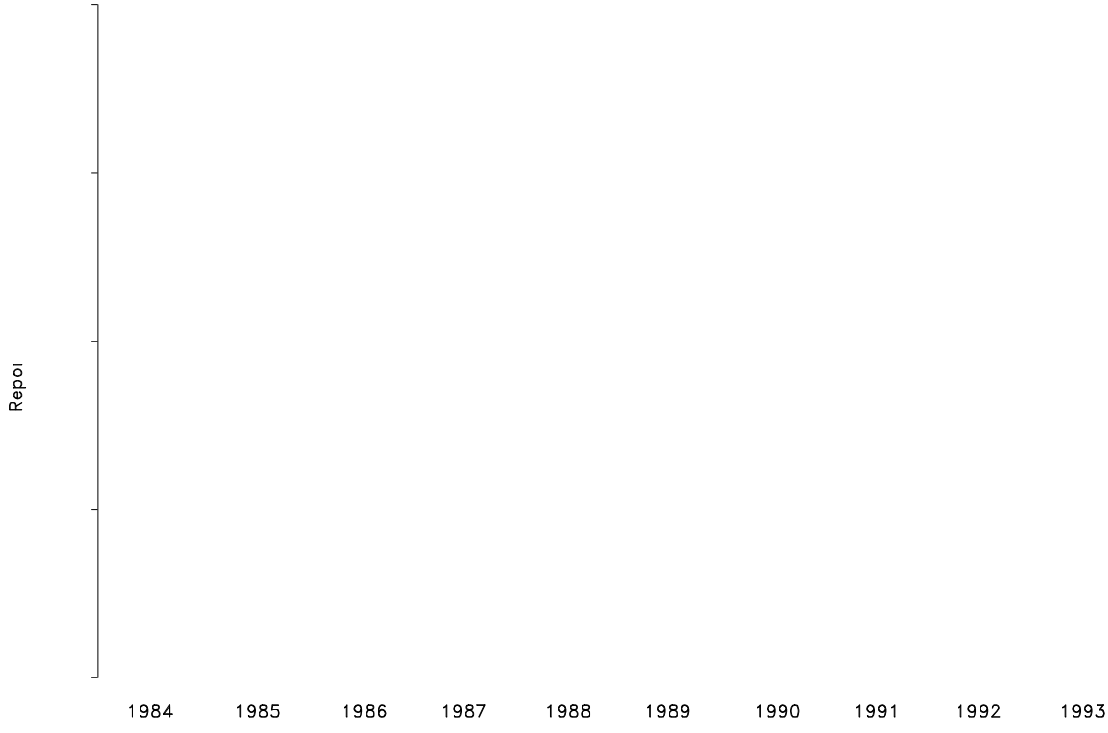


FIGURE IV. Gonorrhea cases, by 4-week period of report — United States, 1984–1993

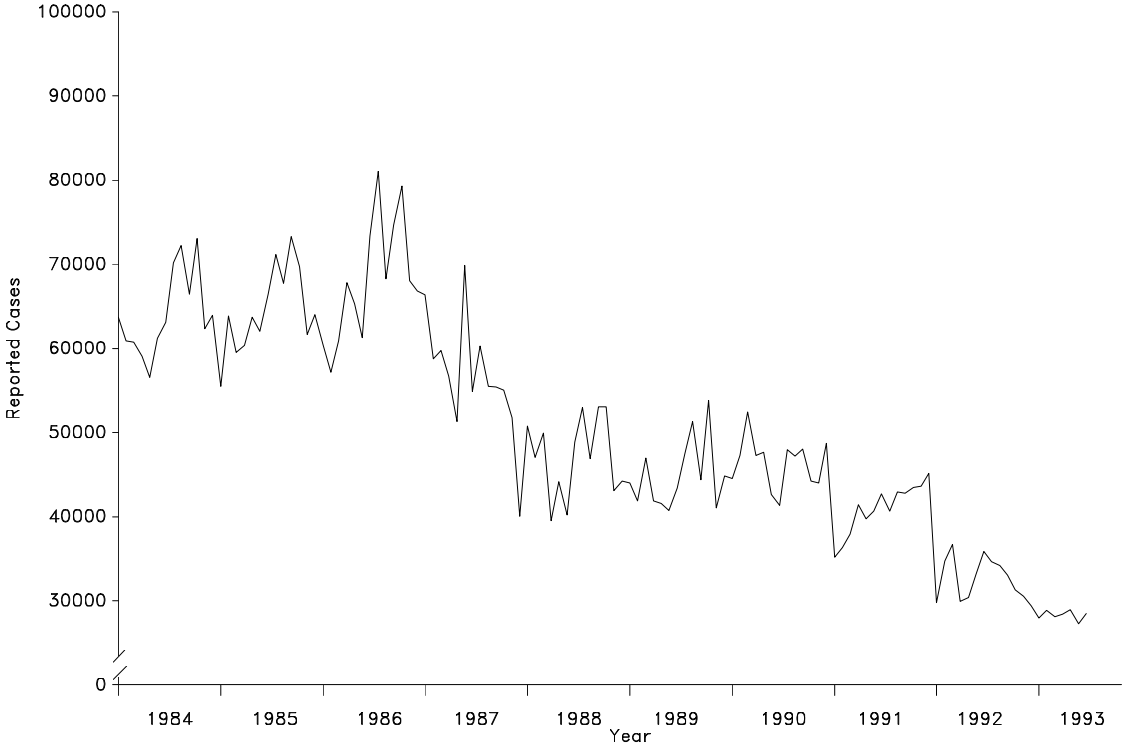
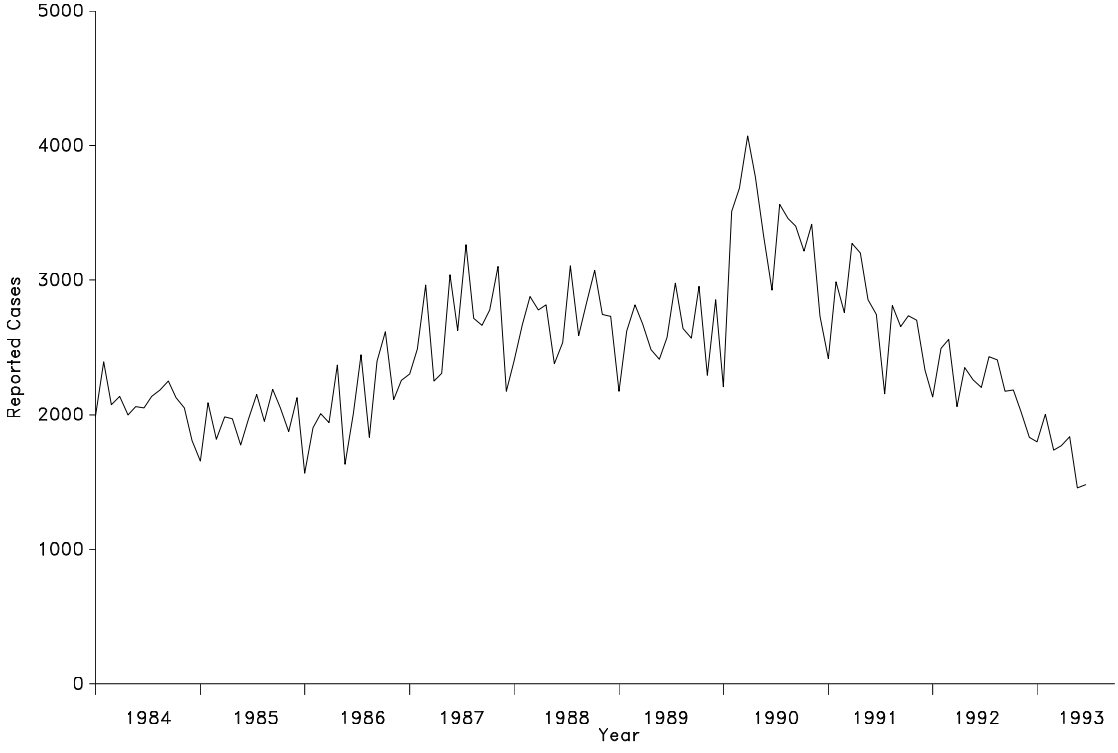


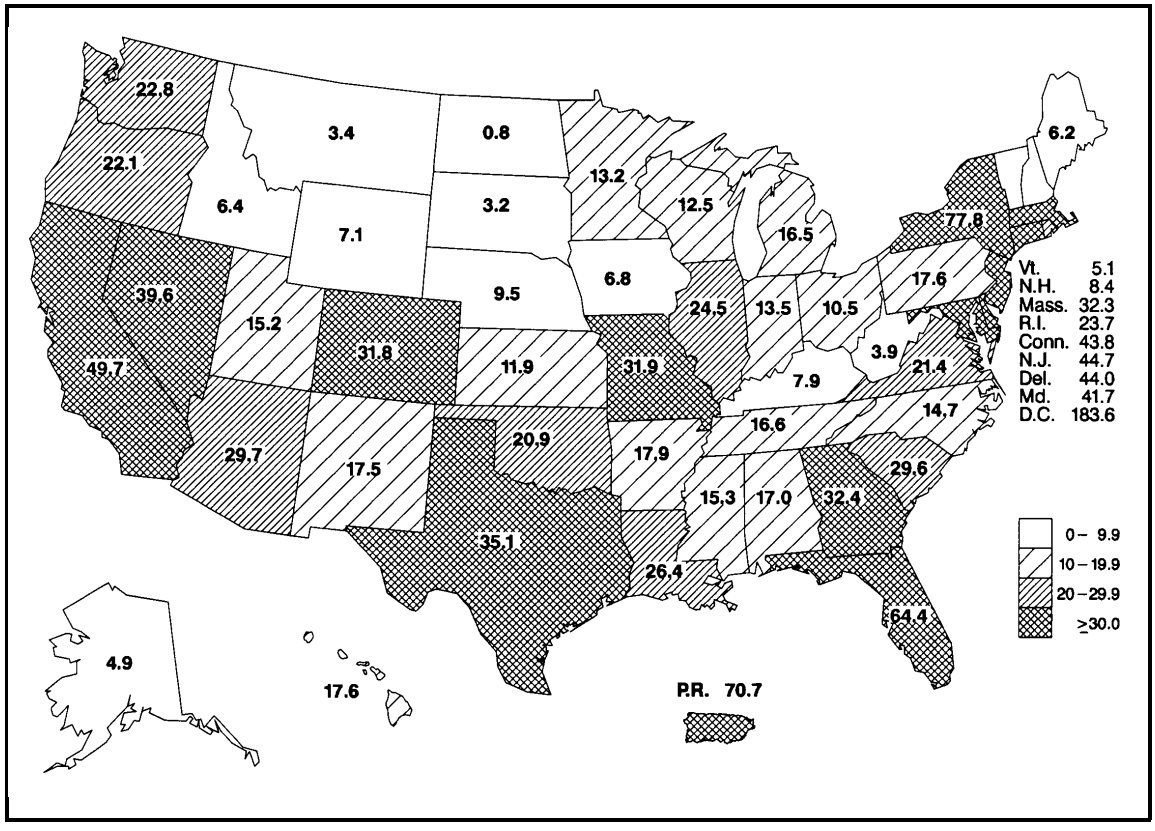
FIGURE V. Syphilis cases, by 4-week period of report — United States, 1984–1993



Quarterly AIDS Map

The following map provides information on the reported number of acquired immunodeficiency syndrome (AIDS) cases per 100,000 population by state of residence for July 1992 through June 1993. The map appears quarterly in *MMWR*. More detailed information on AIDS cases is provided in the quarterly *HIV/AIDS Surveillance Report*, single copies of which are available free from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231.

AIDS cases per 100,000 population — United States, July 1992–June 1993



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The 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 succeeding Friday. Inquiries about the *MMWR* Series, including material to be considered for publication, should be directed to: Editor, *MMWR* Series, Mailstop C-08, Centers for Disease Control and Prevention, Atlanta, GA 30333; telephone (404) 332-4555.

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