CENTERS FOR DISEASE CONTROL AND PREVENTION

April 30, 1993 / Vol. 42 / No. 16

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Clean Air Week — May 1993

The American Lung Association (ALA) sponsors Clean Air Week in May each year to educate the public about the importance of clean air to lung health. The theme for this year's campaign is "Clean Air Is Up to You!", emphasizing the role for each person in achieving clean air. Through local Clean Air Week activities during 1993, the ALA will educate the public about practical methods to promote clean air through actions such as decreasing driving and other forms of energy conservation, improving indoor air quality at home and the workplace, and supporting clean air regulations and enforcement in the community.

Local lung associations designate the week for their respective communities to observe as Clean Air Week and will disseminate messages through environmental and health fairs, school presentations, other community events, and the media. Nearly 50 locations in the United States also will participate in the Clean Air Challenge (a pledge-based bicycling event), to raise funds for local clean air programs and other efforts to prevent lung disease. In addition, local lung associations will observe a Clean Commute Day and request that motorists use alternative forms of transportation (e.g., carpools, mass transit, or bicycles).

Additional information about Clean Air Week and related activities is available from local offices of the ALA, which are listed in the white pages of the telephone directory. The address of the national office of the ALA is 1740 Broadway, New York, NY 10019-4374; telephone (212) 315-8700.

Health Objectives for the Nation

Populations at Risk from Air Pollution — United States, 1991

The Clean Air Act of 1970 required the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQSs) for six of the most widespread air pollutants in the outdoor environment: particulate matter with a diameter $\leq$10 μm, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, and lead.

Air Pollution — Continued

Congress directed EPA to establish these national air quality standards with an adequate margin of safety to account for limitations in scientific information on the health effects of these pollutants, with particular concern for those populations at potentially higher risk for adverse outcomes from exposure to these pollutants. This report provides estimates of the number of persons who may have been at risk for exposure to unhealthy levels of these pollutants during 1991.

For this report, a population at risk was defined as having a "significantly higher probability of developing a condition, illness, or other abnormal status," as described by EPA (*1*). For example, elderly persons may not be particularly sensitive to the effects of sulfur dioxide pollution but are considered to be at risk because lowered respiratory function may reduce their ability to withstand the additional reduction in respiratory function caused by exposure to sulfur dioxide. When developing the NAAQSs, EPA identified specific at-risk population subgroups for each pollutant (Table 1). Communities that fail to meet the NAAQS for one or more of these six pollutants are considered nonattainment areas.

A projection of the prevalence of populations at risk was derived by the synthetic estimation technique developed by the Bureau of the Census (*2*). Age-specific national prevalence rates for the medical conditions under study were obtained from CDC's National Health Interview Survey (NHIS) (*3*). These prevalence figures were multiplied by the 1990 U.S. census population figures, enumerated for each nonattainment community on an age-specific basis (*4*). Expected estimates of the local

TABLE 1. Estimated populations at risk* residing in communities that have not attained one or more National Ambient Air Quality Standard† — United States, 1991§

		At-risk population living in nonattainment areas	
Population subgroup at risk	**Pollutant¶**	**No.**	**(%)****
Preadolescent children (aged ≤13 yrs)	PM-10, SO_2, O_3, NO_2	31,528,939	(63)
Elderly (aged ≥65 yrs)	PM-10, SO_2, O_3	18,846,666	(60)
Persons with pediatric asthma††	PM-10, SO_2, O_3, NO_2	2,285,061	(61)
Adults (aged ≥18 yrs) with asthma	PM-10, SO_2, O_3, NO_2	4,279,413	(65)
Persons with chronic obstructive pulmonary disease§§	PM-10, SO_2, O_3, NO_2	8,831,970	(64)
Persons with coronary heart disease¶¶	CO	3,493,847	(33)
Pregnant women***	CO, Pb	1,602,045	(38)
Children aged ≤5 yrs	Pb	74,312	(3)

*Populations-at-risk estimates should be quoted individually and not added to form totals. These categories are not mutually exclusive.
†Only a portion of some communities are designated as nonattainment areas for some pollutants. The totals in this document are based on entire county populations and may, therefore, reflect an overrepresentation of the true populations at risk.
§Estimated total U.S. population living in the 514 counties and 20 cities designated as nonattainment areas=164 million (66% of the U.S. population).
¶PM-10=particulate matter with a diameter ≤10 µm; SO_2=sulfur dioxide; O_3=ozone; NO_2=nitrogen dioxide; CO=carbon monoxide; and Pb=lead.
**The proportion of each population subgroup at risk of the total population in the category.
††Asthma in persons aged <18 years.
§§Includes chronic bronchitis and emphysema.
¶¶Includes ischemic and cerebrovascular heart disease.
***The estimated number of pregnant women in each county is derived from the number of live births. Fetal losses and multiple births may have an impact on the accuracy of these estimates.

Air Pollution — Continued

prevalence of chronic diseases reported in the NHIS were scaled in direct proportion to the base population of the area and its age distribution and then used to compute the national figures. No adjustments were made for other factors that might affect local prevalence because such data are rarely available on a county level. Estimates of populations at risk should be quoted individually and should not be added together, because the populations at risk are not mutually exclusive (e.g., persons may be aged ≥65 years and have chronic obstructive pulmonary disease).

During 1991, a total of 514 counties and 20 cities were designated as nonattainment areas (*5* ; EPA, unpublished data, 1991), representing an estimated 164 million persons (66% of the resident U.S. population) (*6*). Persons residing in nonattainment counties included 63% (approximately 31 million) of preadolescent (aged ≤13 years) children, 60% (approximately 19 million) of persons aged ≥65 years, and 64% (approximately 9 million) of persons with chronic obstructive pulmonary disease (Table 1).

Reported by: P Paris, S Rappaport, MPH, K Lieber, MPH, Epidemiology and Statistics Unit, R White, MST, American Lung Association, New York. Air Pollution and Respiratory Health Br, Div of Environmental Hazards and Health Effects, National Center for Environmental Health, CDC.

Editorial Note: The findings in this report assist in quantifying the potential public health impact of air pollution, particularly among persons at increased risk. This risk is greatest for persons residing in nonattainment areas, including more than 60% of U.S. children and adults with asthma and persons with chronic bronchitis and emphysema. In addition, this risk is higher for more than one third of pregnant women and persons with coronary heart disease.

This report does not include estimates for healthy persons who exercise, an important group at risk for the health effects of ozone. Although numerous clinical studies indicate that persons who exercise vigorously are at increased risk for acute effects from exposure to ozone at levels above the national ambient standard (*7*), the population in this report determined to be at risk from ozone was limited to groups with inherent physiologic risk factors. Thus, the estimates of at-risk populations in ozone nonattainment areas may substantially underestimate the number of persons potentially exposed to unhealthy ozone levels.

A national health objective for the year 2000 is to increase the proportion of persons who live in counties that have not exceeded any air quality standard during the previous 12 months from 49.7% in 1988 to 85.0% (objective 11.5) (*8*). The description and estimates of high-risk populations presented in this report underscore the importance of improved air quality for disease prevention and health promotion. In addition, because an estimated 61% of children with asthma and 65% of adults with asthma reside in communities with potentially unhealthy air quality, efforts to improve air quality should assist in achieving the national health objective for reducing morbidity associated with asthma.

Estimates of populations at risk presented in this report were derived by applying national prevalence estimates to county-specific population figures. These estimates could be refined through the collection and analysis of data for at-risk populations by state and local health agencies. In addition, a recent survey of air pollution information activities at state and local air pollution control agencies (*9*) indicated the need for additional education methods for air pollution control and improved coordination between health and environmental agencies.

Air Pollution – Continued

On May 4, the ALA will release a new report, *Breath in Danger II* (*6*), that estimates the populations at risk from air pollution exposure in the United States, as well as the results of a survey of U.S. attitudes on air pollution. These reports are available from the American Lung Association, 1740 Broadway, New York, NY 10019-4374; telephone (212) 315-8700.

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International Notes

Nutrition and Mortality Assessment — Southern Sudan, March 1993

During the last 5 years of Sudan's decade-long civil war, increased fighting and food shortages in southern Sudan have led to displacement of large numbers of persons. In late 1992, the United Nations (UN), the government of Sudan, and factions of the Sudanese People's Liberation Army negotiated increased access for delivery of relief aid to civilians in southern Sudan. To assist in the targeting of food and other relief aid, CDC and the U.S. Agency for International Development's Office of Foreign Disaster Assistance conducted rapid assessments of nutritional status (children aged <5 years) and mortality (persons of all ages) during March 7–19, 1993, at four sites in three states: Ame (Eastern Equatoria), Ayod and Kongor (Upper Nile), and Akon (Bahr el Ghazal) (Figure 1). This report summarizes findings of the assessments.

Ame, Ayod, and Kongor were selected as assessment sites because of known food shortages. Ame camp, established in early 1992, had an estimated 47,000 displaced persons; however, reliable census data were not available for any of the four assessment sites. Ayod and Kongor are in the current epicenter of famine in southern Sudan. Airlifts of food to airstrips in Ayod and near Kongor began in late December 1992 but

Sudan — Continued

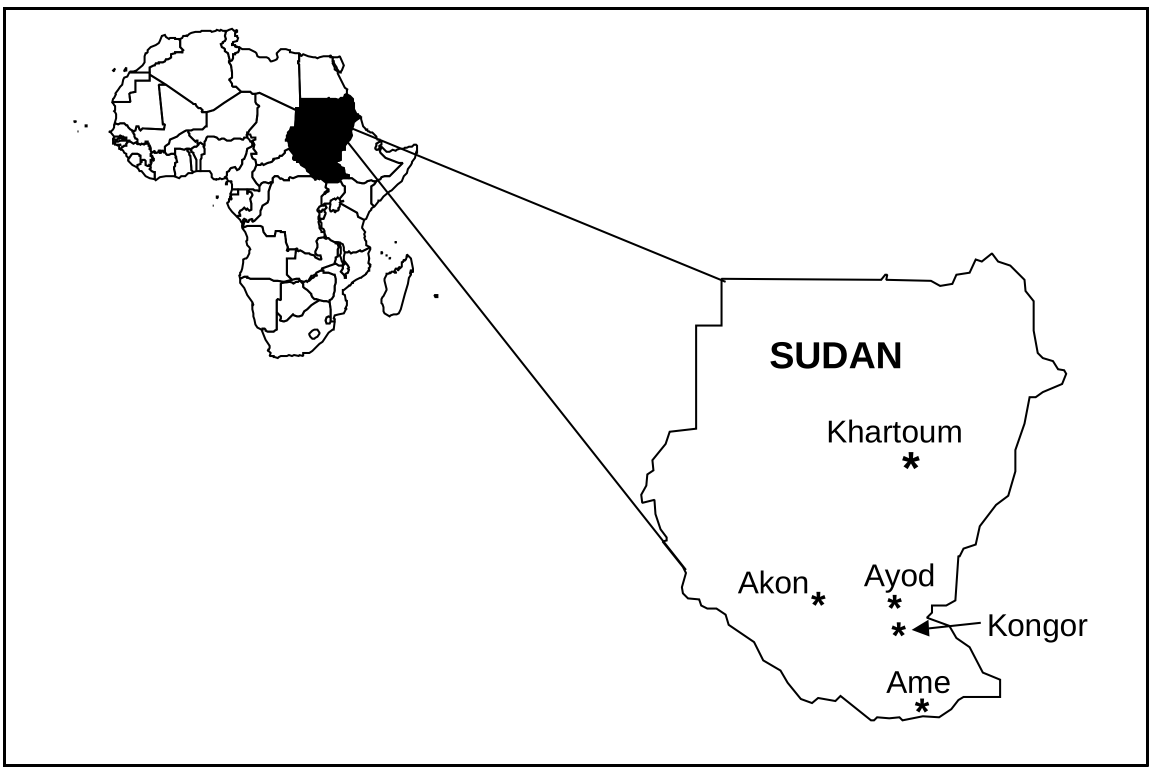
subsequently were sporadic because of security and logistical constraints. The sizes of the populations around these airstrips have fluctuated in relation to delivery of food. The Akon area suffered a famine in 1988 and heavy flooding with crop destruction in 1991 and 1992, increasing the potential for another famine.

Modified cluster-sample surveys were conducted in Ame and Ayod and in the countryside around Akon. Every fifth household (Ame and Ayod) or consecutive households (Akon) were selected within three to six clusters to produce sample sizes of 43–58 households. In Ame and Ayod, the samples were drawn from the presumed total population; the representativeness of the clusters and households selected in the Akon area was unknown. In Kongor, the sample consisted of children who gathered at the UN compound in response to messages from local and relief officials and, therefore, might not have been representative of all children in the area aged <5 years.

In each sample, assessment teams measured the height, weight, and mid-upper arm circumference (MUAC) of children 65–110 cm tall (proxy for 6–59 months of age). Two indicators of severe undernutrition were used: low weight-for-height (WFH) or wasting (WFH <2 standard deviations below the National Center for Health Statistics/CDC/World Health Organization reference median [*1,2*]; Z-score <–2) and low MUAC (<12.5 cm) (*3,4*). In Ame, Ayod, and Akon, household interviews were conducted with survivors to assess mortality and apparent causes of death.

A total of 371 children were measured at the four sites; 23 other potentially eligible children were unavailable or too sick. The prevalence of wasting (Z-score <–2) was high at all sites, particularly in the areas known to have food shortages (75%–84% in Ame, Ayod, and Kongor) (Table 1). At these three sites, 40%–44% of the children were critically undernourished (Z-score <–3), the mean Z-score ranged from –2.8 to –3.0,

FIGURE 1. Locations of health assessments — southern Sudan, March 1993



Sudan — Continued

and the mean MUAC ranged from 11.4 to 11.8 cm. At all four sites, the prevalence of low MUAC was lower than that of low WFH (Table 1). Based on stratified analysis, the prevalence of low MUAC (using a fixed cutoff of 12.5 cm, regardless of age) decreased as height (age) increased, whereas the prevalence of low WFH (a height-adjusted and therefore age-adjusted indicator) was relatively stable.

Based on household interviews in Ame, Ayod, and Akon, crude mortality rates (CMRs) for the preceding 12 months were 234, 276, and 164 deaths per 1000 persons, respectively (Table 2). In Ayod, the average daily CMR was higher during the preceding 40 days (at least 20 deaths per 10,000 population in February and March 1993) than during the rest of the year (six deaths per 10,000 population during March 1992–January 1993). At all three sites, half (48%–50%) the deaths were attributed to starvation. In Ame and Ayod, diarrheal disease was the second most commonly specified cause of death. In the three sites, one death was attributed to measles and three to homicide.

Priority recommendations for food aid emphasized the provision of basic rations and supplementary feeding for vulnerable groups and the need for stockpiling maximum amounts of food before the spring rains impede food delivery. Other priorities included strengthening surveillance for undernutrition and mortality, providing measles vaccine for children aged 6 months–12 years, and establishing oral rehydration units for appropriate case management of diarrheal disease.

Reported by: Office of Foreign Disaster Assistance, US Agency for International Development, Washington, DC. US Agency for International Development, Sudan. Div of Field Epidemiology, Epidemiology Program Office; Div of Nutrition, National Center for Chronic Disease Prevention and Health Promotion; Div of Technical Support, International Health Program Office; Div of Parasitic Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: The prevalence rates of severe undernutrition in Ame, Ayod, and Kongor are among the highest ever documented (*3*). In comparison, rates in central and southern Somalia during 1991 and 1992 ranged from 50% to 81% and 32% to 75%, respectively (CDC, unpublished data); reported prevalences of low WFH during non-

TABLE 1. Nutritional status of children 65–110 cm in height*, by geographic area — southern Sudan, March 1993

	Geographic area							
	Ame (n=69)		Ayod (n=77)		Kongor (n=164)†		Akon (n=61)§	
Characteristic	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
Weight-for-height, Z-score								
<–2 through –3	26	(38)	24	(31)	71	(43)	16	(27)
<–3	30	(44)	34	(44)	66	(40)	3	(5)
Total <–2	**56**	**(81)**	**58**	**(75)**	**137**	**(84)**	**19**	**(32)**
(95% CI¶)	***(71%–89%)***		***(65%–84%)***		***(77%–89%)***		***(21%–44%)***	
Mid-upper arm circumference								
<12.5 cm	42	(61)	51	(66)	130	(80)	9	(15)
(95% CI¶)	*(49%–72%)*		*(55%–76%)*		*(73%–85%)*		*(7%–25%)*	

* N=371.
† n=163 for mid-upper arm circumference data.
§ n=60 for weight-for-height data.
¶ Confidence interval.

Sudan — Continued

crisis periods in Africa and elsewhere generally have been <5% (*3,5,6*). In general, prevalences ≥5% have been associated with increased mortality (*3,7*). Therefore, the data in this report indicate that nutritional emergencies exist in all four survey sites, including Akon, a famine-prone area in which the next harvest is not expected until August.

In general, the prevalence of undernutrition in a random sample of children aged <5 years can be used as an indicator of this condition in the population (*3*). The primary indicator of nutritional status in these assessments was WFH. Although persons of Nilotic tribes in southern Sudan are among the tallest in the world, this genetic characteristic should not substantially influence WFH (in contrast to height-for-age). In addition, WFH Z-scores <–2 represent a degree of thinness that typically is associated only with protein energy malnutrition or severe disease. The consistency of low WFH across height strata supports the conclusion that severe undernutrition in Sudan has affected other groups in addition to very young children (i.e., aged <2 years); older children and adults were probably similarly affected.

In these assessments, the high prevalences of severe undernutrition were associated with substantial excess mortality. The annual CMRs in Ame, Ayod, and Akon were markedly higher than those reported for the Horn of Africa during nonfamine times (20–24 deaths per 1000 persons) (*8*). In addition, the average daily CMR in Ayod during February–March 1993 was similar to that in Baidoa, Somalia, during November–December 1992 (23.4 deaths per 10,000 population) (*9*). The recent increase in the CMR in Ayod reflects, in part, the suspension of food airlifts during an 18-day period in February. Although no outbreaks of measles had been reported recently at any of the survey sites, the potential for such outbreaks is high because of the high prevalences of severe undernutrition and the low vaccination coverage rates.

The recently negotiated increased access to southern Sudan provided this opportunity to assess problems of long duration. Although the generalizability of the findings in this report can be addressed only by similar assessments elsewhere in Sudan, famine of this magnitude usually is geographically widespread. The high malnutrition and

TABLE 2. Characteristics of survey populations, by geographic area — southern Sudan, March 1993

	Geographic area		
Category	**Ame**	**Ayod**	**Akon**
Demographic			
No. households surveyed	48	43	58
Total no. persons living at time of survey	442	465	497
No. persons aged <5 yrs*	78	88	88
% Survey population aged <5 yrs*	18%	19%	18%
Mortality			
Total no. deaths during preceding 12 months	117	149	89
No. deaths that occurred among children aged <5 yrs	51	37†	22
% Total deaths among children aged <5 yrs	44%	25%	25%
Annual crude mortality rate§	234	276	164
(95% Confidence interval)	*(191–276)*	*(232–320)*	*(130–198)*

*Not limited to children who were at least 65 cm in height or to children who wereavailable to be measured.
† An additional three of the 149 deaths may have occurred among children aged <5 years.
§ Per 1000 persons (all ages).

Sudan — Continued

mortality rates documented in these assessments underscore the association between civil strife and famine and the need for prompt action to ensure availability of sufficient and appropriate food and medical supplies.

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Current Trends

Impact of the Expanded AIDS Surveillance Case Definition on AIDS Case Reporting — United States, First Quarter, 1993

On January 1, 1993, the acquired immunodeficiency syndrome (AIDS) surveillance case definition for adolescents and adults was expanded beyond the surveillance definition published in 1987 (*1*) to include all human immunodeficiency virus (HIV)-infected persons with severe immunosuppression (<200 CD4+ T-lymphocytes/µL or a CD4+ T-lymphocyte percentage of total lymphocytes of <14), pulmonary tuberculosis (TB), recurrent pneumonia, or invasive cervical cancer. This report reviews AIDS surveillance reports CDC received from local, state, and territorial health departments during the first quarter of 1993 and summarizes the impact of the changes in the AIDS surveillance case definition.

From January 1 through March 31, a total of 35,779 AIDS cases—13% of the cumulative total of 284,840 AIDS cases reported since 1981—were reported to CDC, representing a 204% increase over the number reported for the same period in 1992 (11,770 cases) (Figure 1). Forty-eight states and Puerto Rico reported cases based on the criteria added to the surveillance definition in 1993.

Of the 35,779 AIDS cases, 21,582 (60%) were reported based on the conditions added in 1993, and 14,197 (40%) were reported based on pre-1993-defined conditions—a 21% increase in reporting of pre-1993-defined cases over the number reported for the same period in 1992. Of the cases reported with only 1993-added con-

AIDS Surveillance Case Definition — Continued

ditions, 19,284 persons (89%) had severe HIV-related immunosuppression only; 2021 (9%) had pulmonary TB; 245 (1%), recurrent pneumonia; and 41 (<1%), invasive cervical cancer.*

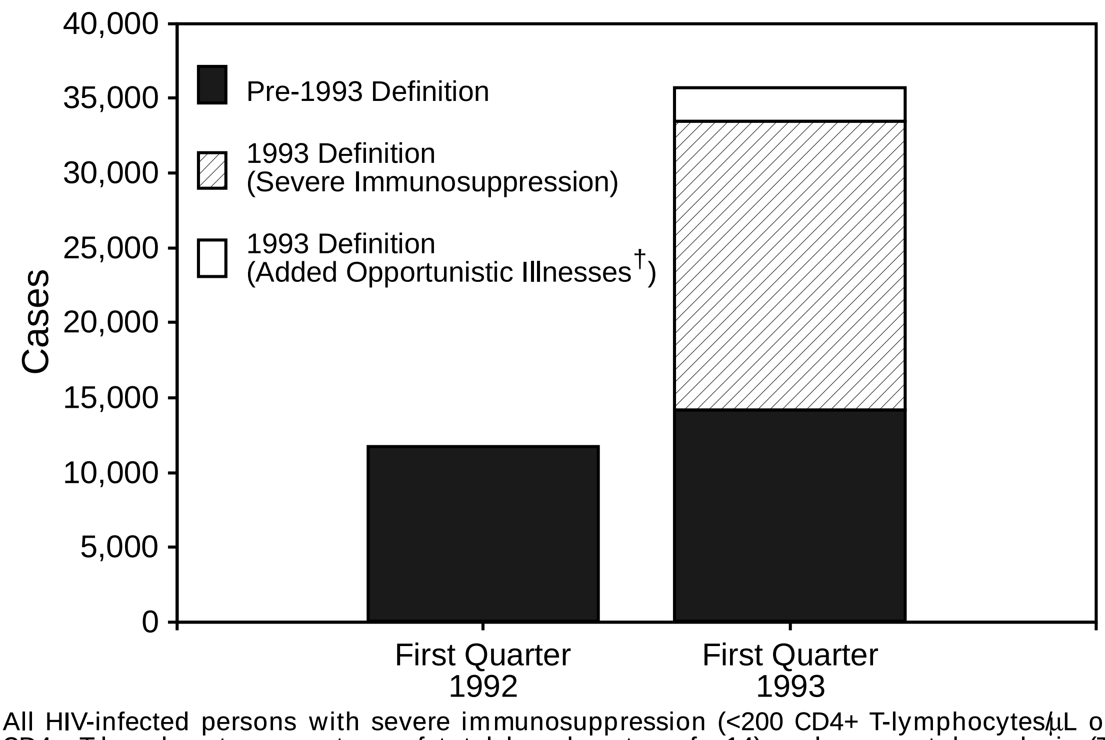
Implementation of the expanded surveillance definition has been associated with an increase in the median interval between date of diagnosis and date of report of AIDS cases; in preceding years, this interval had been 3 months. In contrast, persons with conditions added in 1993 had a median interval between date of diagnosis and date of report of 9 months, and persons with pre-1993 conditions reported in the first quarter of 1993, 5 months.

Reported by: Local, state, and territorial health depts. Div of HIV/AIDS, National Center for Infectious Diseases, CDC.

Editorial Note: The findings in this report indicate that an immediate impact of the revised AIDS surveillance case definition on case reporting has been a substantial increase in the number of reported AIDS cases. The increase in the first quarter of 1993 is not expected to be sustained because the increase in cases reported during this period reflects predominantly the reporting of the accumulated number of persons

*The total number of diagnosed 1993-added conditions (i.e., pulmonary TB, recurrent pneumonia, and invasive cervical cancer) is greater than the total number of persons with these conditions because nine persons were reported with more than one condition.

FIGURE 1. Reported AIDS cases among adolescents and adults following expansion of the AIDS surveillance case definition* — United States, first quarter, 1992 and 1993



*All HIV-infected persons with severe immunosuppression (<200 CD4+ T-lymphocytes/µL or a CD4+ T-lymphocyte percentage of total lymphocytes of <14), pulmonary tuberculosis (TB), recurrent pneumonia, or invasive cervical cancer in addition to the clinical conditions included in the AIDS surveillance case definition published in 1987.

† Pulmonary TB, recurrent pneumonia, and invasive cervical cancer.

AIDS Surveillance Case Definition — Continued

with previously diagnosed conditions added to the surveillance definition in 1993 who could not be reported as AIDS cases until January 1, 1993. The interval between date of diagnosis and date of report for persons with 1993-added conditions indicates that AIDS cases in these persons were diagnosed earlier than in other persons reported with AIDS.

CDC has estimated that the number of AIDS cases reported during 1993 will increase approximately 75% as a result of the expanded reporting criteria (*2*). The increase in the number of persons reported with pre-1993 conditions during this quarter probably reflects changes in surveillance procedures associated with implementation of the 1993 surveillance definition. CDC will continue to report on the ongoing evaluation of surveillance findings and the impact of the expanded AIDS surveillance case definition.

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International Notes

Update: Dracunculiasis Eradication — Nigeria, 1992

The reported incidence of dracunculiasis (i.e., Guinea worm disease) in Nigeria declined substantially during 1992—the fourth consecutive year in which reports of known cases declined. This report summarizes dracunculiasis surveillance data for Nigeria and describes progress toward eradication of this disease.

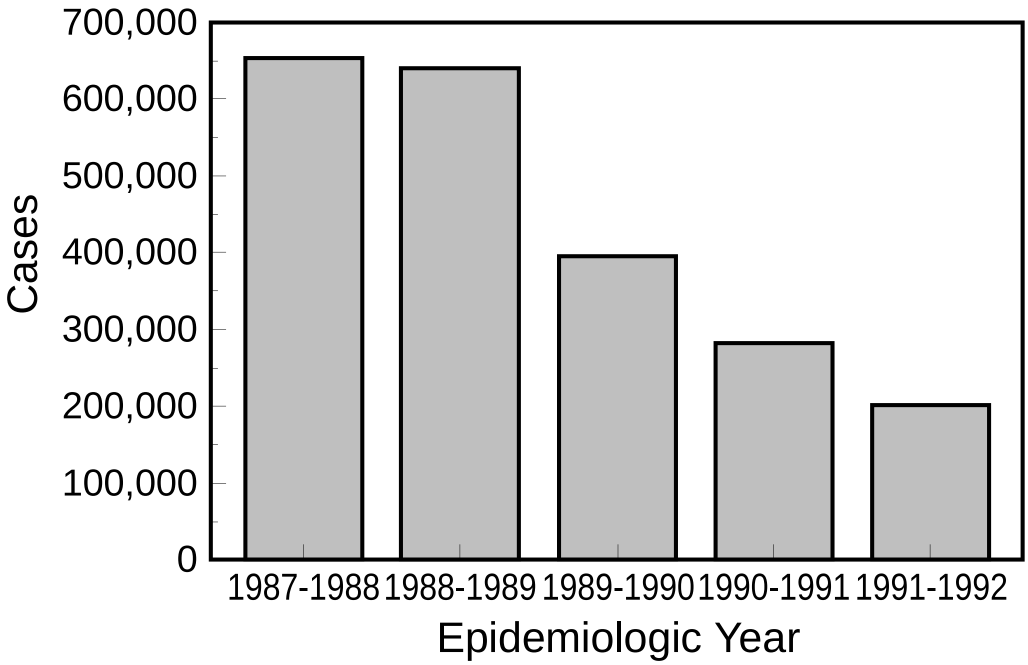
During the 1991–1992 epidemiologic year (i.e., July 1991–June 1992), 201,453 cases of dracunculiasis were reported in 4576 villages where the disease is endemic, a 25% reduction from the number of cases reported during 1990–1991 (Figure 1). Since 1988–1989, the number of reported cases has decreased 68.5%, and the number of villages where the disease is endemic has decreased 22.9% (from 640,008 cases in 5932 villages) (*1*).

Nigeria's Guinea Worm Eradication Program (NIGEP) intensified all major control measures during 1992, including extending health education and community mobilization to all villages with endemic dracunculiasis, promoting education about the disease in schools in areas with endemic dracunculiasis, distributing cloth filters to more than 70% of the villages, and targeting at least 30% of the affected villages for provision of safe drinking water. In addition, during 1992, Nigeria completed its transition from annual retrospective surveys to monthly reporting of cases by trained village-based health workers in each of the villages with endemic dracunculiasis. During 1993, NIGEP will introduce use of temephos (Abate®*) to treat unsafe sources of drinking water in selected villages in which the disease is endemic.

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

Dracunculiasis Eradication — Continued

FIGURE 1. Reported cases of dracunculiasis, by epidemiologic year* — Nigeria, 1987–1992



*July 1–June 30.

Reported by: Federal Ministry of Health and Social Svcs, Nigeria. Global 2000, Inc, The Carter Center, Atlanta. WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, Div of Parasitic Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: The number of dracunculiasis cases reported in Nigeria (1992 population: approximately 90 million) in 1992 is similar to that reported in Ghana (1992 population: approximately 15 million) in 1989. The annual rate of decline in reported cases has decreased from 31% from 1989–1990 to 1990–1991, to 25% from 1990–1991 to 1991–1992. Although Nigeria is expected to complete its eradication of dracunculiasis by the end of 1995, control measures must be intensified during 1993–1995 to reach this goal.

Reference

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Current Trends

Linking Multiple Data Sources in Fetal Alcohol Syndrome Surveillance — Alaska

Although fetal alcohol syndrome (FAS) is a major preventable cause of mental retardation in the United States (*1*), surveillance for this problem is subject to at least five constraints: difficulty in identifying the syndrome at birth (*2*); the subjective nature of the diagnosis; variability in the severity and type of conditions associated with FAS; age-specific variations in the expression of the phenotype; and the lack of specificity in the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) code for FAS. Previous studies have documented high rates of FAS among American Indians and Alaskan Natives (ANs) (*3,4*). To better ascertain cases of FAS in Alaska and to determine the prevalence of this problem among ANs, the Alaska Department of Health and Social Services (ADHSS), the Indian Health Service (IHS), and CDC linked and analyzed data from state sources (i.e., birth and death certificates and Medicaid claims), an IHS case file, and a private pediatric practice case file. This report summarizes the findings from this analysis and presents a preliminary minimum FAS prevalence rate for ANs.

Potential cases were identified in the state data sources using an FAS check box on birth certificates filed from 1989 through 1990, from Medicaid claims filed from 1989 through 1990 using ICD-9-CM code 760.71 (alcohol affecting fetus or newborn via placenta or breast milk), and from death certificates issued during 1977–1990 using ICD-9 code 760.7 (noxious influences affecting fetus or newborn via placenta or breast milk). The IHS case file consisted of patients in whom FAS was diagnosed or who were designated as having fetal alcohol effects (FAE) by a physician during 1985–1992. The pediatric case file consisted of patients examined from 1990 through 1992 by a large pediatric practice, which maintains a computerized case file of children exposed to alcohol in utero or who had been evaluated for FAS or FAE. A case of FAS was defined as a patient meeting five criteria: 1) prenatal alcohol exposure or a maternal history of alcohol abuse, 2) FAS noted by a physician, 3) one or more characteristic FAS facial features, 4) growth deficiency (i.e., prenatal or postnatal height or weight ≤10th percentile for age), and 5) central nervous system (CNS) impairment (*5*).

A total of 348 persons were identified; medical records were available for 323, of whom 83 met all five criteria and were considered to have FAS (Table 1). Twelve (14%) persons were identified by more than one data source. The average age (as of December 1992) of persons with FAS was 8 years (range: 0–19 years); 46 (55%) were male. The average age at the time of diagnosis was 3 years; 47 (57%) case-patients had a chart mention of FAS as early as the first year of life. For 49 (59%) case-patients, FAS was diagnosed by a dysmorphologist. Fifty-four (65%) were either adopted or in foster care. Seventy-five (90%) of the case-patients were ANs.

The most prevalent facial features were short palpebral fissures (80%), long and flat philtrum (69%), thin upper lip (51%), and hypoplastic midface (45%). Two or more facial features were noted in 92% of the cases. The most prevalent CNS impairments included developmental delay (69%), microcephaly (41%), speech or language delay (35%), and short attention span (28%). Most (68%) had low birthweights (<2500 g), but

Fetal Alcohol Syndrome Surveillance — Continued

because of the high percentage of preterm deliveries (54%), only 46% were small for gestational age (i.e., ≤10th percentile).

Based on these preliminary data, the minimum FAS prevalence rate for ANs was 2.1 per 1000 live births during 1978–1991 (Table 2). Prevalence estimates were calculated only for ANs because ascertainment was considered incomplete for other racial/ethnic groups.

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TABLE 1. Medical chart verification of identified fetal alcohol syndrome (FAS) cases, by source of data — Alaska, 1977–1992

Source of data	No. potential cases identified	No. charts abstracted	Alcohol exposure*		FAS noted†		No. charts verified using five criteria§	
			No.	(%)¶	No.	(%)¶	No.	(%)¶
State								
Birth certificates	20	16	13	(81)	4	(25)	2	(13)
Death certificates	3	1	1	(100)	1	(100)	1	(100)
Medicaid claims	46	37	31	(84)	21	(57)	12	(32)
Total**	**68**	**53**	**44**	**(83)**	**25**	**(47)**	**14**	**(26)**
Indian Health Service								
FAS/Fetal alcohol exposure case file	189	178	152	(85)	96	(54)	65	(36)
Private sector								
Pediatric practice	116	116	92	(79)	25	(22)	16	(14)
Total case-patients**	**348**	**323**	**265**		**129**		**83**	

*Any notation in chart of prenatal alcohol exposure or of a mother with a history of alcohol abuse.
†Suspected or diagnosed.
§Prenatal alcohol exposure or a maternal history of alcohol abuse; suspected or diagnosed FAS by a physician; mention of dysmorphic facial features; growth deficiency (i.e., prenatal or postnatal height or weight ≤10th percentile for age); and central nervous system impairment.
¶Percentage of abstracted charts.
**Unduplicated count.

TABLE 2. Observed rates of chart-verified cases of fetal alcohol syndrome identified by all sources* for Alaskan Natives, by birth year of case-patient — Alaska, 1978–1991

Birth years	Total live births	Observed cases	Rate†
1978–1982	9,642	19	2.0
1983–1987	12,311	36	2.9
1988–1991	10,979	15	1.4
Total§	**32,932**	**70**	**2.1**

*State, Indian Health Service, and private pediatric practice.
† Per 1000 live births.

Fetal Alcohol Syndrome Surveillance — Continued

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Editorial Note: The findings in this report indicate that multiple data sources are required to ascertain cases of FAS. For example, in Alaska, the state data sources contained only three (19%) of the 16 cases identified within the pediatric practice and birth certificates identified only two (15%) of the 13 case-patients born with FAS in 1989 and 1990. Although the FAS Study Group of the Research Society on Alcoholism does not require evidence of alcohol exposure in the diagnosis of FAS (*5*), a history of maternal alcohol abuse or prenatal alcohol exposure was used in the case definition of this report to further ensure that the persons identified had FAS.

The lower rate of FAS for the most recent birth years may reflect incomplete case ascertainment in those birth cohorts rather than an actual temporal decline in the rate of FAS among ANs. In addition, although the true number of prevalent FAS cases in Alaska is unknown, the count presented in this report probably underestimates the total number. Cases were underascertained for at least three reasons. First, the presence of conditions associated with FAS (i.e., facial features and maternal alcohol use) are generally underreported in medical charts (*2*). Second, medical charts were not always available directly from the source of the Medicaid billing. Third, because of limited resources, data from only one pediatric practice were included.

The large proportions of FAS cases in the IHS case-file and diagnosed by a dysmorphologist reflect the efforts of IHS to ascertain and treat children who have been affected by prenatal alcohol exposure.

Approaches to improve surveillance and increase ascertainment of FAS cases in Alaska include identifying FAS cases from additional private physician practices and patient-care information systems in additional hospitals throughout the state. These efforts should produce a more accurate estimate of the prevalence of FAS, which is essential for evaluating activities to prevent FAS in Alaska.

References

1. Abel E, Sokol RJ. Incidence of fetal alcohol syndrome and economic impact of FAS-related anomalies. Drug Alcohol Depend 1987;19:51–70.
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4. Chávez GF, Cordero JF, Becerra JE. Leading major congenital malformations among minority groups in the United States, 1981–1986. In: CDC surveillance summaries (July). MMWR 1988; 37(no. SS-3):17–24.
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Notice to Readers

Publication of NIOSH Alerts: Requests for Assistance in Preventing Silicosis and Deaths from Silicosis

CDC's National Institute for Occupational Safety and Health (NIOSH) periodically issues alerts on workplace hazards that have caused death, serious injury, or illness to workers. Two such alerts were recently released and are available to the public*: *Request for Assistance in Preventing Silicosis and Deaths from Sandblasting* (*1*) and *Request for Assistance in Preventing Silicosis and Deaths in Rock Drillers* (*2*).

Request for Assistance in Preventing Silicosis and Deaths from Sandblasting

This alert describes 99 cases of silicosis—a serious and potentially fatal respiratory disease characterized by fibrotic nodules and scarring in the lungs—from exposure to crystalline silica during sandblasting. Of these 99 workers, 14 have died from the disease. This alert provides recommendations to reduce crystalline silica exposures in the workplace and to prevent silicosis and silicosis-related deaths.

This publication also informs sandblasters and their coworkers and employers about the respiratory hazards associated with sandblasting. More than 1 million U.S. workers are estimated to be at risk for developing silicosis. More than 100,000 workers at risk are employed as sandblasters. Approximately 59,000 of the 1 million workers exposed to crystalline silica will eventually develop silicosis.

Request for Assistance in Preventing Silicosis and Deaths in Rock Drillers

This alert describes 23 workers who developed silicosis from exposure to crystalline silica during rock drilling. Two of these workers have died from the disease. This report reviews exposure limits for crystalline silica at surface and underground mines and provides recommendations to reduce crystalline silica exposures in the workplace and to prevent silicosis and silicosis-related deaths.

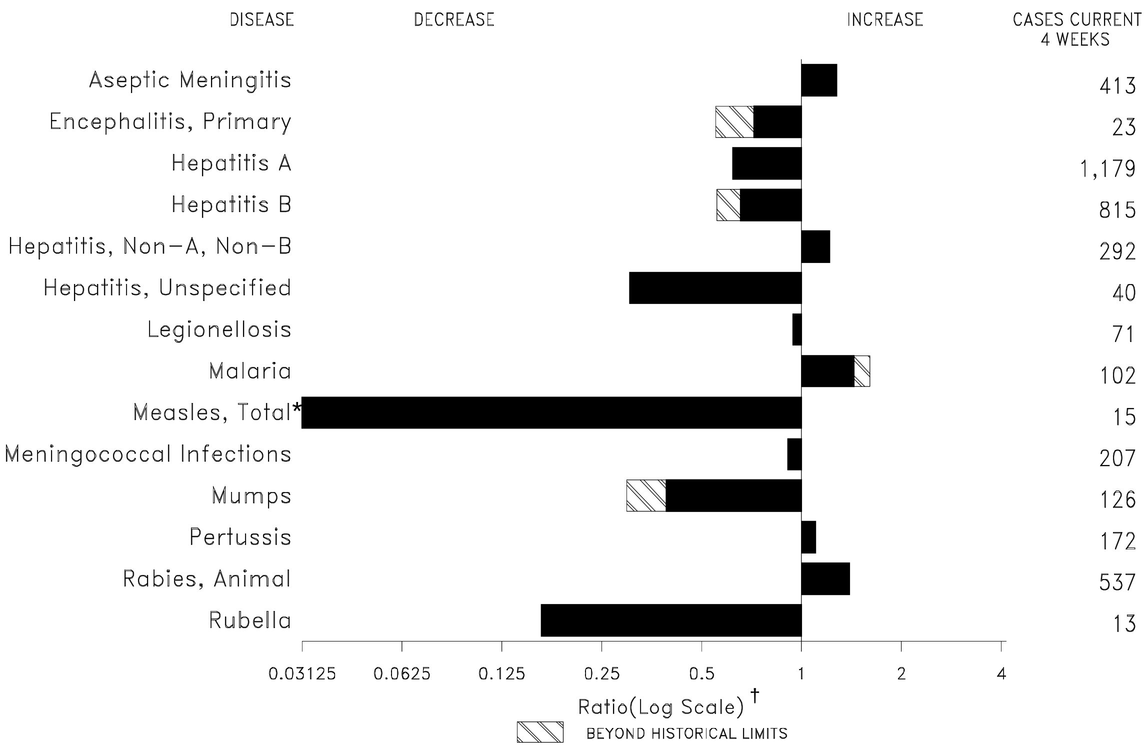
Exposure to crystalline silica during rock drilling can cause silicosis. Silicosis has been recognized in rock drillers employed in caisson construction, metal mining, slate quarries, tunnel construction, highway and dam construction, rock quarries, and underground coal mines (e.g., roof bolters). In addition, surface coal mine drilling presents a serious respiratory hazard to drillers and driller helpers; most of the recent case reports on silicosis in rock drillers involve surface coal mine drillers.

References

1. NIOSH. NIOSH alert: request for assistance in preventing silicosis and deaths from sandblasting. Cincinnati: US Department of Health and Human Services, Public Health Service, CDC, NIOSH, 1992; DHHS publication no. (NIOSH)92-102.
2. NIOSH. NIOSH alert: request for assistance in preventing silicosis and deaths in rock drillers. Cincinnati: US Department of Health and Human Services, Public Health Service, CDC, NIOSH, 1992; DHHS publication no. (NIOSH)92-107.

*Single copies of these documents are available without charge from the Information Dissemination Section, Division of Standards Development and Technology Transfer, NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226; telephone (513) 533-8287 (1:00–4:30 p.m., Eastern time); fax (513) 533-8573.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending April 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 sixteen is 0.01829).

† 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 April 24, 1993 (16th Week)

	Cum. 1993		Cum. 1993
AIDS*	37,227	Measles: imported	13
Anthrax	-	indigenous	73
Botulism: Foodborne	5	Plague	1
Infant	12	Poliomyelitis, Paralytic§	-
Other	1	Psittacosis	16
Brucellosis	21	Rabies, human	-
Cholera	8	Syphilis, primary & secondary	7,900
Congenital rubella syndrome	4	Syphilis, congenital, age < 1 year	-
Diphtheria	-	Tetanus	6
Encephalitis, post-infectious	53	Toxic shock syndrome	79
Gonorrhea	110,234	Trichinosis	7
Haemophilus influenzae (invasive disease)†	400	Tuberculosis	5,119
Hansen Disease	45	Tularemia	16
Leptospirosis	12	Typhoid fever	86
Lyme Disease	827	Typhus fever, tickborne (RMSF)	24

*Updated monthly; last update April 17, 1993.
†Of 367 cases of known age, 130 (35%) were reported among children less than 5 years of age.
§No cases of suspected poliomyelitis have been reported in 1993; 4 cases of suspected poliomyelitis were reported in 1992; 6 of the 9 suspected cases with onset in 1991 were confirmed; all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending April 24, 1993, and April 18, 1992 (16th 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	37,227	1,888	152	53	110,234	150,106	6,278	3,221	1,306	168	330	827
NEW ENGLAND	1,651	46	4	3	2,346	3,187	179	131	6	4	12	80
Maine	51	6	1	-	31	33	8	5	-	-	2	-
N.H.	50	4	-	-	15	41	4	13	-	-	-	7
Vt.	8	5	-	-	9	7	3	2	1	-	-	-
Mass.	819	25	3	3	908	1,206	103	100	2	4	8	30
R.I.	80	6	-	-	113	250	40	11	3	-	2	19
Conn.	643	-	-	-	1,270	1,650	21	-	-	-	-	24
MID. ATLANTIC	6,434	155	5	4	11,967	15,798	300	374	92	3	70	595
Upstate N.Y.	1,414	83	-	1	2,483	2,409	118	122	46	1	17	419
N.Y. City	2,774	10	-	-	3,355	6,327	17	11	-	-	1	-
N.J.	1,570	-	-	-	2,290	2,462	105	114	31	-	10	51
Pa.	676	62	5	3	3,839	4,600	60	127	15	2	42	125
E.N. CENTRAL	2,709	290	50	12	22,433	27,512	695	353	246	3	87	8
Ohio	497	91	16	2	6,645	8,445	113	80	24	-	49	8
Ind.	433	44	4	5	2,370	2,689	347	58	4	1	12	-
Ill.	858	58	9	-	7,241	8,632	159	56	6	1	1	-
Mich.	839	89	18	5	4,708	6,557	73	156	203	1	19	-
Wis.	82	8	3	-	1,469	1,189	3	3	9	-	6	-
W.N. CENTRAL	1,941	106	6	-	5,453	8,239	917	242	57	3	14	20
Minn.	322	24	3	-	320	1,028	132	18	1	2	-	2
Iowa	120	29	-	-	602	522	12	9	2	1	1	1
Mo.	1,188	23	-	-	3,096	4,533	610	195	42	-	4	3
N. Dak.	-	2	2	-	10	30	21	-	-	-	-	-
S. Dak.	18	4	1	-	62	65	9	-	-	-	-	-
Nebr.	88	1	-	-	141	511	97	5	6	-	7	-
Kans.	205	23	-	-	1,222	1,550	36	15	6	-	2	14
S. ATLANTIC	7,778	483	28	22	32,677	48,820	369	511	180	24	61	79
Del.	158	2	1	-	415	519	2	44	57	-	6	51
Md.	591	43	7	-	5,390	4,844	59	91	5	3	16	7
D.C.	354	14	-	-	1,864	2,589	2	11	-	-	8	1
Va.	566	57	8	3	3,213	6,225	52	49	13	10	2	5
W. Va.	19	5	6	-	192	279	-	10	9	-	-	2
N.C.	254	40	5	-	7,358	6,378	14	51	18	-	5	6
S.C.	590	2	-	-	2,815	3,179	5	10	-	1	1	-
Ga.	1,345	29	1	-	4,128	16,486	35	26	20	-	12	-
Fla.	3,901	291	-	19	7,302	8,321	200	219	58	10	11	7
E.S. CENTRAL	989	101	7	3	13,302	14,191	91	352	339	-	19	4
Ky.	79	45	2	3	1,426	1,499	51	31	4	-	7	-
Tenn.	393	23	4	-	4,012	4,733	18	284	331	-	10	2
Ala.	350	26	1	-	4,833	4,551	18	34	2	-	-	2
Miss.	167	7	-	-	3,031	3,408	4	3	2	-	2	-
W.S. CENTRAL	4,497	106	10	-	13,666	14,047	444	369	54	36	8	9
Ark.	181	9	-	-	1,889	2,690	16	16	2	-	-	1
La.	595	4	-	-	3,385	1,874	24	36	18	-	2	-
Okla.	421	-	3	-	1,048	1,444	30	73	17	5	6	5
Tex.	3,300	93	7	-	7,344	8,039	374	244	17	31	-	3
MOUNTAIN	2,252	112	8	3	3,276	3,511	1,339	202	93	35	31	3
Mont.	10	-	-	1	13	23	45	4	-	-	4	-
Idaho	33	3	-	-	38	41	75	15	-	1	1	-
Wyo.	28	-	-	-	24	16	7	7	23	-	3	2
Colo.	729	27	3	-	1,013	1,436	319	21	12	17	1	-
N. Mex.	186	13	2	2	304	276	100	95	31	1	1	-
Ariz.	799	49	2	-	1,231	1,061	477	30	9	7	7	-
Utah	161	4	1	-	84	68	296	8	14	9	3	1
Nev.	306	16	-	-	569	590	20	22	4	-	11	-
PACIFIC	8,976	489	34	6	5,114	14,801	1,944	687	239	60	28	29
Wash.	139	-	-	-	1,102	1,265	206	58	53	6	2	-
Oreg.	459	-	-	-	471	426	39	17	4	-	-	-
Calif.	8,360	461	31	6	3,243	12,736	1,432	600	179	53	23	28
Alaska	7	4	2	-	142	225	239	4	1	-	-	-
Hawaii	11	24	1	-	156	149	28	8	2	1	3	1
Guam	-	-	-	-	14	30	1	1	-	1	-	-
P.R.	953	16	-	-	152	15	16	64	13	-	-	-
V.I.	33	-	-	-	25	36	-	2	-	-	-	-
Amer. Samoa	-	-	-	-	7	10	6	-	-	-	-	-
C.N.M.I.	1	2	-	-	22	13	-	-	-	1	-	-

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

*Updated monthly; last update April 17, 1993.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 24, 1993, and April 18, 1992 (16th 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	282	1	73	-	13	563	865	32	508	64	772	356	3	49	45
NEW ENGLAND	23	1	42	-	4	8	53	-	4	2	195	35	-	1	4
Maine	-	-	-	-	-	-	3	-	-	-	5	2	-	1	-
N.H.	2	-	-	-	-	1	7	-	-	1	120	14	-	-	-
Vt.	1	1	27	-	1	-	4	-	-	-	33	-	-	-	-
Mass.	10	-	7	-	2	5	30	-	1	-	27	16	-	-	-
R.I.	1	-	-	-	1	-	1	-	2	-	2	-	-	-	4
Conn.	9	-	8	-	-	2	8	-	1	1	8	3	-	-	-
MID. ATLANTIC	41	-	5	-	1	98	108	-	47	9	137	60	-	7	6
Upstate N.Y.	20	-	1	-	-	29	49	-	13	4	52	20	-	1	4
N.Y. City	7	-	-	-	-	27	7	-	-	-	-	5	-	-	-
N.J.	8	-	4	-	1	39	13	-	6	-	20	16	-	5	2
Pa.	6	-	-	-	-	3	39	-	28	5	65	19	-	1	-
E.N. CENTRAL	18	-	-	-	-	18	125	8	91	9	115	33	1	1	6
Ohio	5	-	-	-	-	3	39	6	44	7	80	6	1	1	-
Ind.	3	-	-	-	-	9	21	-	-	1	12	9	-	-	-
Ill.	8	-	-	-	-	5	39	-	22	1	9	5	-	-	6
Mich.	2	-	-	-	-	-	25	2	25	-	12	1	-	-	-
Wis.	-	-	-	-	-	1	1	-	-	-	2	12	-	-	-
W.N. CENTRAL	6	-	-	-	1	3	52	-	15	22	50	26	-	1	2
Minn.	2	-	-	-	-	3	2	-	-	20	20	9	-	-	-
Iowa	1	-	-	-	-	-	8	-	4	-	1	1	-	-	-
Mo.	2	-	-	-	-	-	21	-	6	2	14	9	-	1	-
N. Dak.	-	-	-	-	-	-	1	-	4	-	1	4	-	-	-
S. Dak.	1	-	-	-	-	-	2	-	-	-	1	1	-	-	-
Nebr.	-	-	-	-	-	-	3	-	1	-	4	2	-	-	-
Kans.	-	-	-	-	1	-	15	-	-	-	9	-	-	-	2
S. ATLANTIC	95	-	12	-	2	64	173	11	133	12	65	39	-	5	2
Del.	1	-	-	-	-	2	9	-	3	-	-	-	-	1	-
Md.	6	-	-	-	1	5	17	3	26	5	28	11	-	1	-
D.C.	5	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Va.	6	-	-	-	1	6	15	-	13	1	6	4	-	-	-
W. Va.	2	-	-	-	-	-	5	1	4	1	2	2	-	-	-
N.C.	57	-	-	-	-	19	31	3	60	2	10	6	-	-	-
S.C.	-	-	-	-	-	-	14	1	13	-	5	7	-	-	-
Ga.	2	U	-	-	-	-	42	U	-	U	3	2	U	-	-
Fla.	16	-	12	-	-	32	36	3	14	3	11	7	-	3	2
E.S. CENTRAL	5	-	-	-	-	252	57	4	22	3	30	4	-	-	-
Ky.	-	-	-	-	-	235	10	-	-	-	3	-	-	-	-
Tenn.	1	-	-	-	-	-	14	1	9	2	18	2	-	-	-
Ala.	2	-	-	-	-	-	18	3	9	1	9	2	-	-	-
Miss.	2	-	-	-	-	17	15	-	4	-	-	-	-	-	-
W.S. CENTRAL	7	-	1	-	-	62	68	4	79	-	15	10	-	8	-
Ark.	1	-	-	-	-	-	6	-	3	-	1	4	-	-	-
La.	-	-	1	-	-	-	17	1	6	-	4	-	-	-	-
Okla.	3	-	-	-	-	-	6	-	2	-	10	6	-	1	-
Tex.	3	-	-	-	-	62	39	3	68	-	-	-	-	7	-
MOUNTAIN	7	-	2	-	-	4	78	-	24	2	56	49	-	2	1
Mont.	1	-	-	-	-	-	5	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	3	-	3	-	10	13	-	1	1
Wyo.	-	-	-	-	-	1	2	-	2	-	1	-	-	-	-
Colo.	4	-	2	-	-	3	9	-	4	-	20	19	-	-	-
N. Mex.	2	-	-	-	-	-	3	N	N	1	14	11	-	-	-
Ariz.	-	-	-	-	-	-	47	-	6	1	7	-	-	-	-
Utah	-	-	-	-	-	3	-	3	-	4	5	-	1	-	-
Nev.	-	-	-	-	-	-	6	-	6	-	-	1	-	-	-
PACIFIC	80	-	11	-	5	54	151	5	93	5	109	100	2	24	24
Wash.	5	-	-	-	-	7	20	1	7	-	7	29	-	-	-
Oreg.	2	-	-	-	-	1	16	N	N	-	-	8	-	1	-
Calif.	71	-	5	-	-	37	105	4	76	3	95	61	1	15	24
Alaska	-	-	-	-	-	9	5	-	4	-	1	-	-	1	-
Hawaii	2	-	6	-	5	-	5	-	6	2	6	2	1	7	-
Guam	1	U	-	U	-	4	1	U	4	U	-	-	U	-	-
P.R.	-	20	107	-	-	35	5	-	-	-	-	8	-	-	-
V.I.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Amer. Samoa	-	U	1	U	-	-	-	U	-	U	2	6	U	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	9	-	-	1	-	-	-

*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 April 24, 1993, and April 18, 1992 (16th 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	7,900	10,593	79	5,119	5,781	16	86	24	2,160
NEW ENGLAND	136	215	8	89	79	-	8	2	396
Maine	2	-	1	7	3	-	-	-	-
N.H.	4	16	2	1	-	-	-	-	17
Vt.	-	1	-	1	-	-	-	-	9
Mass.	67	95	4	32	52	-	6	2	129
R.I.	3	12	1	16	-	-	-	-	-
Conn.	60	91	-	32	24	-	2	-	241
MID. ATLANTIC	690	1,474	17	1,182	1,365	-	14	2	697
Upstate N.Y.	68	106	9	82	181	-	5	-	514
N.Y. City	448	796	-	735	768	-	4	-	-
N.J.	113	219	-	167	211	-	3	2	105
Pa.	61	353	8	198	205	-	2	-	78
E.N. CENTRAL	1,239	1,432	26	603	590	2	10	-	13
Ohio	349	213	13	86	92	-	4	-	2
Ind.	124	63	1	60	55	1	1	-	-
Ill.	446	609	1	310	301	-	3	-	-
Mich.	198	297	11	124	121	1	2	-	-
Wis.	122	250	-	23	21	-	-	-	11
W.N. CENTRAL	529	413	6	119	123	2	1	1	104
Minn.	14	32	2	26	33	-	-	-	19
Iowa	32	10	3	7	8	-	-	-	16
Mo.	411	290	-	60	48	1	1	1	1
N. Dak.	-	1	-	1	3	-	-	-	23
S. Dak.	-	-	-	6	8	-	-	-	10
Nebr.	7	15	-	5	5	-	-	-	1
Kans.	65	65	1	14	18	1	-	-	34
S. ATLANTIC	2,260	2,987	8	807	1,146	-	12	5	562
Del.	41	69	-	9	16	-	-	-	48
Md.	114	237	-	127	84	-	3	-	162
D.C.	147	153	-	50	47	-	-	-	4
Va.	190	249	1	141	100	-	1	-	103
W. Va.	1	3	-	24	20	-	-	-	29
N.C.	610	707	3	124	165	-	-	4	16
S.C.	363	350	-	116	114	-	-	-	46
Ga.	376	664	-	216	236	-	1	1	134
Fla.	418	555	4	-	364	-	7	-	20
E.S. CENTRAL	1,032	1,480	4	376	327	3	1	3	32
Ky.	79	44	1	96	107	-	-	2	4
Tenn.	251	345	2	83	-	2	-	-	-
Ala.	262	693	1	133	126	1	1	-	28
Miss.	440	398	-	64	94	-	-	1	-
W.S. CENTRAL	1,855	1,735	1	458	484	6	1	11	162
Ark.	283	250	-	46	39	3	-	-	8
La.	754	787	-	-	26	-	1	-	-
Okla.	117	73	1	34	36	2	-	11	33
Tex.	701	625	-	378	383	1	-	-	121
MOUNTAIN	70	139	2	149	151	-	3	-	27
Mont.	-	2	-	5	-	-	-	-	3
Idaho	-	1	-	3	8	-	-	-	-
Wyo.	2	1	-	1	-	-	-	-	5
Colo.	22	22	1	8	17	-	2	-	-
N. Mex.	12	16	-	18	20	-	-	-	2
Ariz.	33	60	-	70	65	-	1	-	17
Utah	1	-	1	9	19	-	-	-	-
Nev.	-	37	-	35	22	-	-	-	-
PACIFIC	89	718	7	1,336	1,516	3	36	-	167
Wash.	18	38	-	79	80	1	2	-	-
Oreg.	44	17	-	27	28	-	-	-	-
Calif.	20	657	7	1,135	1,312	2	32	-	153
Alaska	2	2	-	9	24	-	-	-	14
Hawaii	5	4	-	86	72	-	2	-	-
Guam	-	1	-	18	34	-	-	-	-
P.R.	173	63	-	44	40	-	-	-	17
V.I.	16	19	-	2	2	-	-	-	-
Amer. Samoa	-	-	-	1	-	-	-	-	-
C.N.M.I.	-	3	-	7	10	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending April 24, 1993 (16th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	644	462	111	52	12	6	57
Boston, Mass.	161	106	25	17	8	4	25
Bridgeport, Conn.	48	38	8	2	-	-	4
Cambridge, Mass.	33	21	6	6	-	-	3
Fall River, Mass.	35	27	4	3	-	1	-
Hartford, Conn.	52	42	5	5	-	-	2
Lowell, Mass.	26	21	4	1	-	-	2
Lynn, Mass.	17	12	5	-	-	-	-
New Bedford, Mass.	24	20	4	-	-	-	1
New Haven, Conn.	46	28	10	4	4	-	2
Providence, R.I.	45	32	9	4	-	-	2
Somerville, Mass.	7	4	1	2	-	-	1
Springfield, Mass.	48	33	11	3	-	1	2
Waterbury, Conn.	38	25	11	2	-	-	2
Worcester, Mass.	64	53	8	3	-	-	11
MID. ATLANTIC	2,806	1,873	523	297	58	54	169
Albany, N.Y.	51	38	5	6	-	2	2
Allentown, Pa.	18	10	6	2	-	-	1
Buffalo, N.Y.	110	81	20	7	-	2	1
Camden, N.J.	38	27	6	3	2	-	3
Elizabeth, N.J.	25	15	3	5	2	-	3
Erie, Pa.§	41	29	8	2	2	-	4
Jersey City, N.J.	73	48	17	6	1	1	2
New York City, N.Y.	1,482	947	280	198	28	29	70
Newark, N.J.	64	29	15	16	2	2	4
Paterson, N.J.	21	11	5	4	1	-	1
Philadelphia, Pa.	417	294	80	25	10	7	45
Pittsburgh, Pa.§	86	63	13	3	3	4	3
Reading, Pa.	16	11	3	-	2	-	2
Rochester, N.Y.	126	98	19	7	-	2	10
Schenectady, N.Y.	32	21	8	2	1	-	3
Scranton, Pa.§	29	22	5	1	1	-	1
Syracuse, N.Y.	114	90	15	4	1	4	8
Trenton, N.J.	39	19	12	6	1	1	4
Utica, N.Y.	24	20	3	-	1	-	2
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,472	1,589	449	225	124	85	174
Akron, Ohio	52	42	4	5	1	-	-
Canton, Ohio	41	33	7	1	-	-	5
Chicago, Ill.	564	258	107	96	77	26	36
Cincinnati, Ohio	152	110	27	7	3	5	14
Cleveland, Ohio	196	125	43	17	4	7	4
Columbus, Ohio	202	139	38	14	4	7	16
Dayton, Ohio	136	99	19	9	6	3	14
Detroit, Mich.	233	131	55	26	10	11	12
Evansville, Ind.	33	23	10	-	-	-	1
Fort Wayne, Ind.	69	49	12	5	2	1	-
Gary, Ind.	23	19	2	1	1	-	1
Grand Rapids, Mich.	49	35	8	3	2	1	8
Indianapolis, Ind.	203	131	37	15	9	11	17
Madison, Wis.	47	32	9	4	-	2	2
Milwaukee, Wis.	163	127	25	5	2	4	22
Peoria, Ill.	41	30	7	4	-	-	5
Rockford, Ill.	47	33	6	6	-	2	7
South Bend, Ind.	43	32	8	2	-	1	3
Toledo, Ohio	101	76	19	4	1	1	6
Youngstown, Ohio	77	65	6	1	2	3	1
W.N. CENTRAL	801	578	126	50	28	19	82
Des Moines, Iowa	74	49	15	4	2	4	5
Duluth, Minn.	20	18	1	-	1	-	3
Kansas City, Kans.	48	39	4	2	3	-	2
Kansas City, Mo.	112	69	26	9	6	2	9
Lincoln, Nebr.	30	20	5	3	2	-	1
Minneapolis, Minn.	199	149	30	9	5	6	18
Omaha, Nebr.	80	59	13	5	2	1	4
St. Louis, Mo.	113	82	15	8	4	4	28
St. Paul, Minn.	69	56	9	2	1	1	11
Wichita, Kans.	56	37	8	8	2	1	1

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,589	1,022	305	182	37	41	108
Atlanta, Ga.	231	155	42	20	4	10	11
Baltimore, Md.	274	166	52	43	7	6	28
Charlotte, N.C.	111	79	21	9	1	1	7
Jacksonville, Fla.	135	100	22	9	1	2	6
Miami, Fla.	103	59	24	17	2	1	1
Norfolk, Va.	52	29	8	6	2	7	3
Richmond, Va.	85	53	23	5	-	4	9
Savannah, Ga.	55	39	10	3	1	2	4
St. Petersburg, Fla.	65	50	7	7	1	-	4
Tampa, Fla.	185	131	34	14	3	2	20
Washington, D.C.	272	147	59	45	15	6	15
Wilmington, Del.	21	14	3	4	-	-	-
E.S. CENTRAL	891	587	169	74	37	24	74
Birmingham, Ala.	138	90	23	11	7	7	5
Chattanooga, Tenn.	47	33	11	3	-	-	9
Knoxville, Tenn.	111	75	27	5	3	1	14
Lexington, Ky.	68	49	11	5	2	1	6
Memphis, Tenn.	229	143	45	21	12	8	20
Mobile, Ala.	97	64	14	13	4	2	6
Montgomery, Ala.	50	35	10	1	4	-	1
Nashville, Tenn.	151	98	28	15	5	5	13
W.S. CENTRAL	1,398	895	262	162	47	32	73
Austin, Tex.	74	48	9	14	2	1	6
Baton Rouge, La.	76	52	11	11	2	-	1
Corpus Christi, Tex.	49	30	13	5	1	-	1
Dallas, Tex.	218	121	52	28	12	5	3
El Paso, Tex.	77	52	12	7	2	4	10
Ft. Worth, Tex.	116	81	14	10	3	8	6
Houston, Tex.	363	217	71	53	16	6	23
Little Rock, Ark.	52	37	8	6	1	-	4
New Orleans, La.	140	91	27	14	4	4	-
San Antonio, Tex.	118	80	26	7	3	2	3
Shreveport, La.	12	10	1	-	1	-	2
Tulsa, Okla.	103	76	18	7	-	2	14
MOUNTAIN	813	554	134	77	23	25	56
Albuquerque, N.M.	115	81	18	8	5	3	3
Colo. Springs, Colo.	45	24	7	9	2	3	5
Denver, Colo.	120	80	19	13	3	5	6
Las Vegas, Nev.	174	124	31	16	2	1	12
Ogden, Utah	33	22	3	5	2	1	2
Phoenix, Ariz.	196	132	33	18	5	8	18
Pueblo, Colo.	26	21	5	-	-	-	2
Salt Lake City, Utah	104	70	18	8	4	4	8
Tucson, Ariz.	U	U	U	U	U	U	U
PACIFIC	1,854	1,210	334	202	64	41	137
Berkeley, Calif.	U	U	U	U	U	U	U
Fresno, Calif.	133	90	24	11	4	4	10
Glendale, Calif.	22	16	3	2	1	-	1
Honolulu, Hawaii	91	61	19	5	1	5	4
Long Beach, Calif.	65	46	6	9	2	2	6
Los Angeles, Calif.	438	256	85	65	26	4	15
Pasadena, Calif.	22	20	1	-	-	1	1
Portland, Oreg.	139	100	24	9	5	1	12
Sacramento, Calif.	164	106	29	19	6	4	15
San Diego, Calif.	160	105	23	20	6	5	20
San Francisco, Calif.	153	83	34	29	4	3	1
San Jose, Calif.	170	121	30	12	3	4	28
Santa Cruz, Calif.	33	23	7	2	1	-	4
Seattle, Wash.	132	84	29	12	2	5	8
Spokane, Wash.	47	29	13	2	1	2	5
Tacoma, Wash.	85	70	7	5	2	1	7
TOTAL	13,268¶	8,770	2,413	1,321	430	327	930

*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.

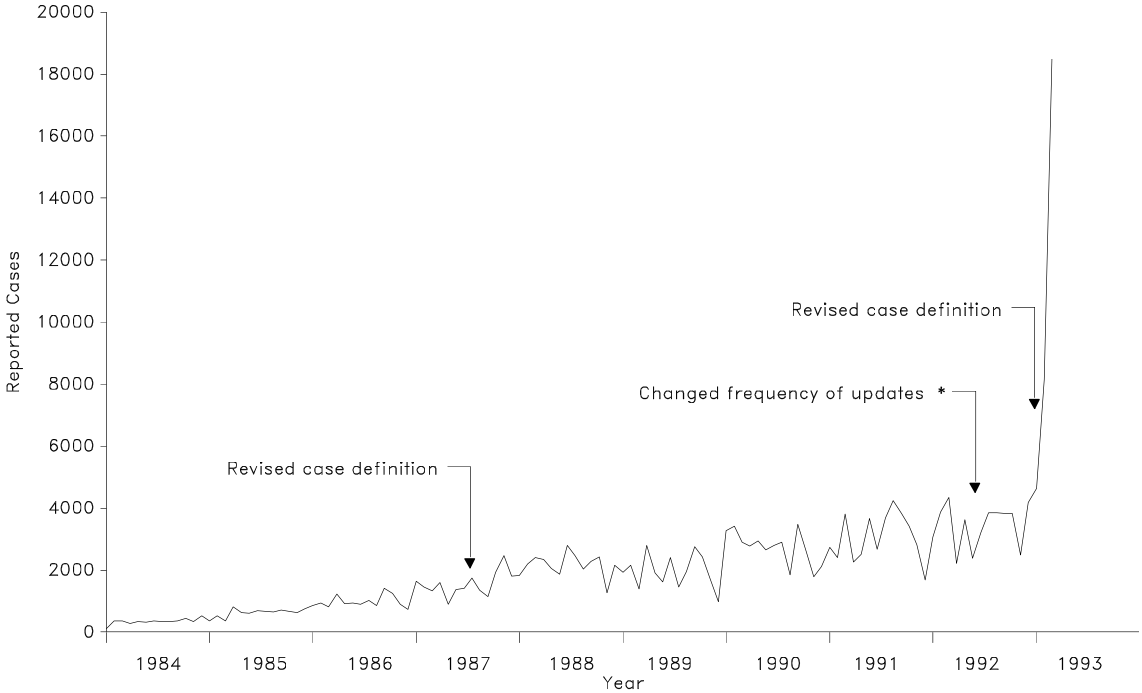
†Pneumonia and influenza.

§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



*Change to reflect Notice to Readers, Vol. 41, No. 18, p. 325.

FIGURE III. Tuberculosis cases, by 4–week period of report — United States, 1984–1993

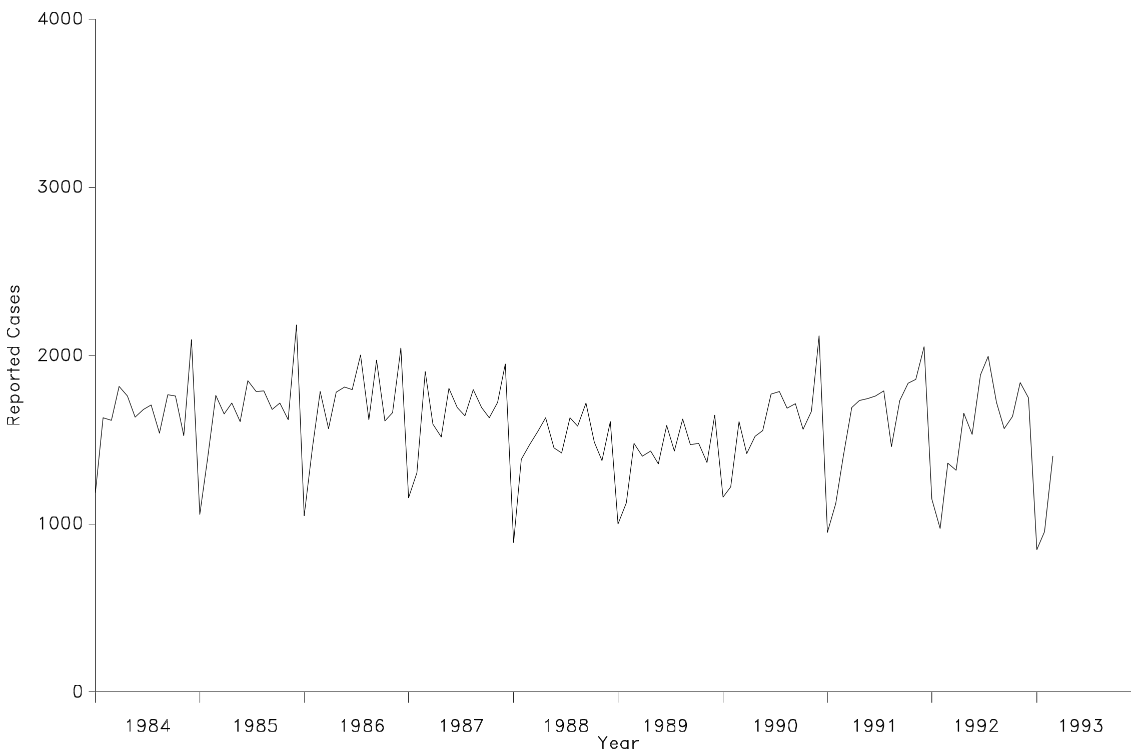


FIGURE IV. Gonorrhea cases, by 4–week period of report — United States, 1984–1993

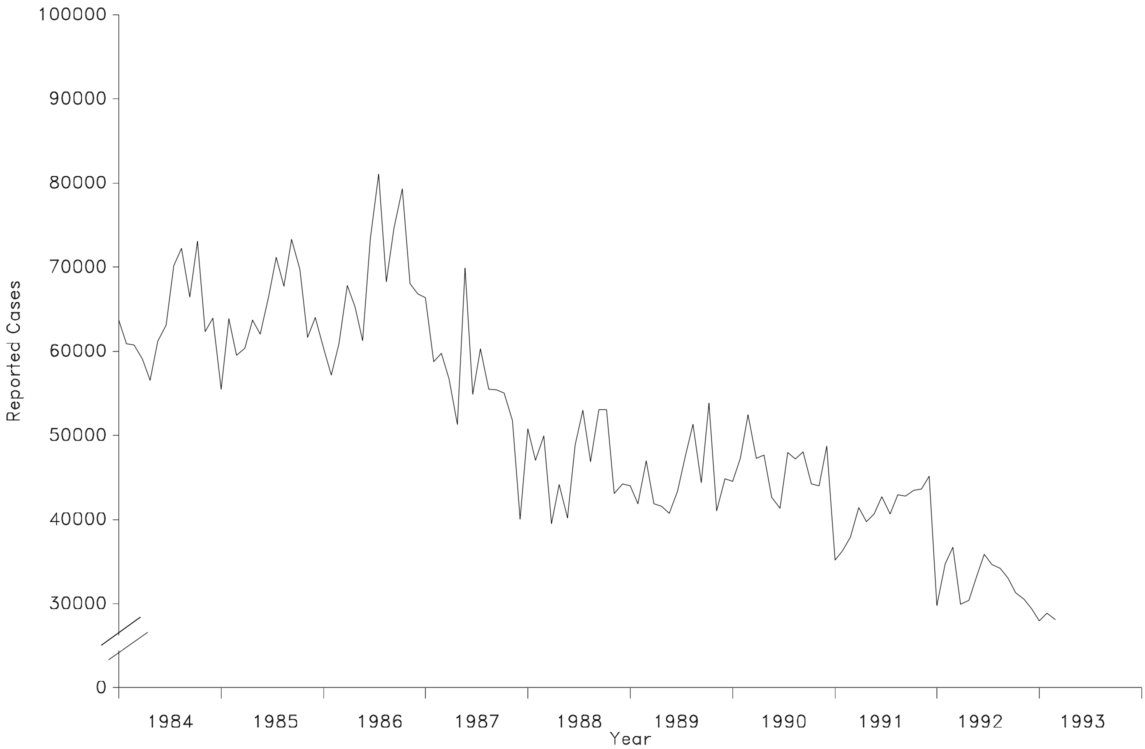
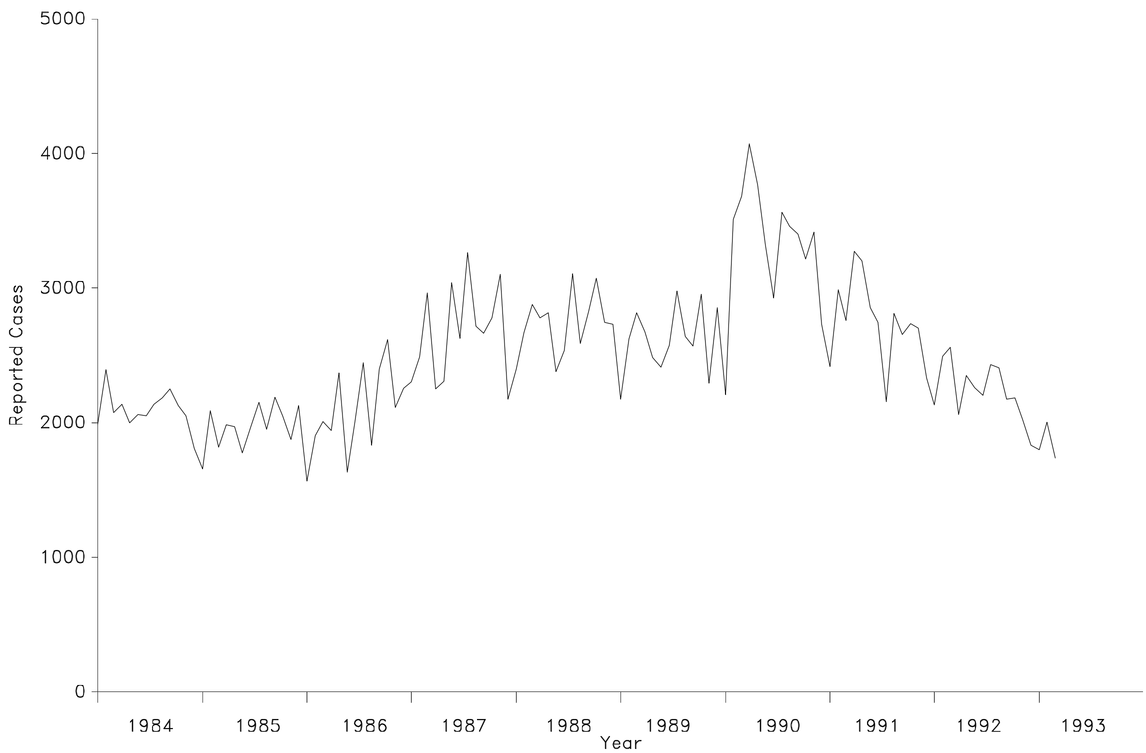


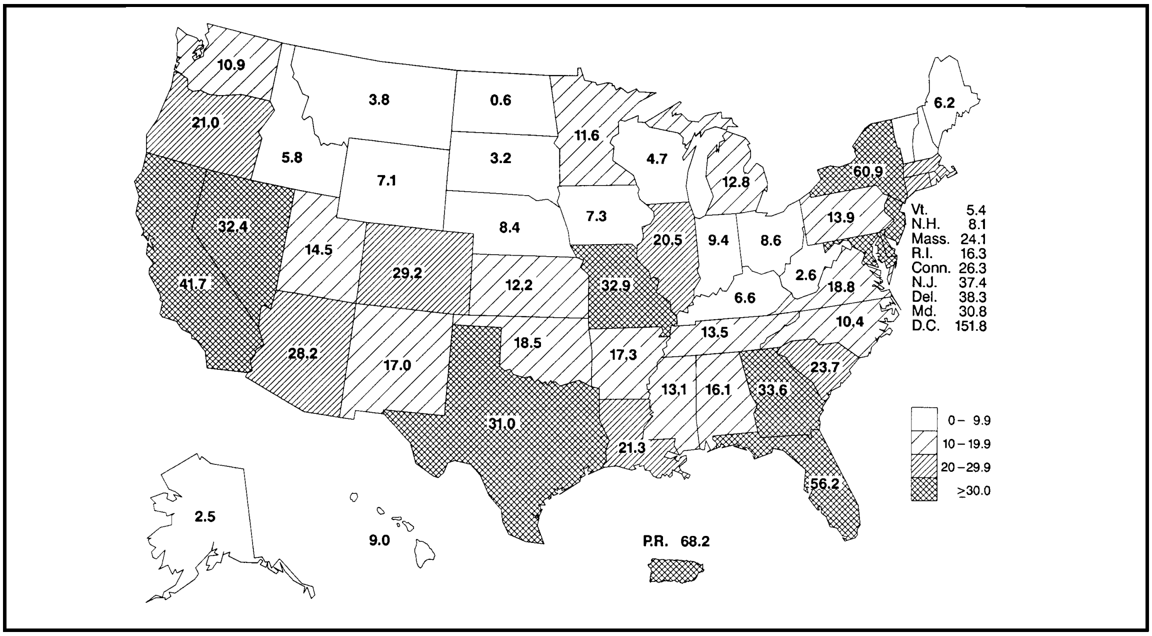
FIGURE V. Syphillis cases, by 4–week period of report — United States, 1984–1993



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 April 1992 through March 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, April 1992–March 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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