CENTERS FOR DISEASE CONTROL

April 6, 1990 / Vol. 39 / No. 13

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

International Notes

World Health Day 1990

World Health Day, April 7, 1990, focuses on "Our Planet, Our Health: Think Globally, Act Locally." Cosponsors for World Health Day are the World Health Organization, the Pan American Health Organization, the American Association of World Health, and the U.S. Department of Health and Human Services.

This issue of *MMWR* focuses on international health and comprises reports on mortality in developed countries, potential eradicability of eight diseases, World No-Tobacco Day, and an outbreak investigation of acute dermatitis in Mexico.

Mortality in Developed Countries

Statistics on causes of death are reported annually to the World Health Organization (WHO) by countries with vital registration systems. These countries—primarily developed* countries—include Australia, Canada, Israel, Japan, New Zealand, Union of Soviet Socialist Republics (USSR), United States of America, all of Europe (except Albania), and certain Latin American countries. This report compares mortality data for the latest year available (ranging from 1984 through 1987) among 33 North American, European, and other selected developed countries (Table 1). These countries have a combined population of approximately 1.2 billion, or one quarter of the estimated world total in 1986. Death rates are standardized for age but not for race/ethnicity or sex.

*The United Nations refers to countries as "developed" that had a gross reproduction rate of less than two in 1963. The gross reproduction rate is "the average number of daughters that would be born per woman and would survive to the end of her reproductive period in accordance with the prevailing age-specific fertility rates" (*1*).

Mortality — Continued

TABLE 1. Life expectancy at birth, age-adjusted death rates* for all causes, and years of potential life lost before age 65 (YPLL)† — selected developed countries

Country (year§)	Mean life expectancy¶ (yrs)	Age-adjusted all-cause death rate	YPLL
Australia (1986)	76.3	774.9	4,615.1
Austria (1987)	75.1	860.0	5,103.9
Belgium (1986)	74.3	889.4	5,827.9
Bulgaria (1986)	71.5	1,170.3	6,797.9
Canada (1986)	76.5	766.3	4,547.9
Czechoslovakia (1986)	71.0	1,207.6	6,614.2
Denmark (1986)	74.9	877.3	4,910.2
Federal Republic of Germany (1987)	75.8	823.4	4,507.1
Finland (1986)	74.8	888.1	4,813.0
France (1986)	75.9	800.2	5,071.9
German Democratic Republic (1987)	73.2	1,046.1	5,391.4
Greece (1986)	76.5	783.9	4,407.4
Hungary (1987)	69.7	1,229.4	8,522.7
Iceland (1987)	77.4	715.7	4,072.3
Ireland (1986)	73.5	1,047.6	4,635.9
Israel (1986)	75.2	877.0	4,528.8
Italy (1985)	75.5	851.8	4,503.4
Japan (1987)	79.1	628.8	3,334.3
Luxembourg (1987)	74.1	957.2	5,531.1
Malta (1987)	74.8	980.2	3,746.1
Netherlands (1986)	76.5	788.2	3,976.4
New Zealand (1986)	74.2	896.0	5,718.1
Norway (1986)	76.3	784.3	4,346.0
Poland (1987)	71.0	1,145.7	7,667.1
Portugal (1987)	74.1	896.8	6,378.4
Romania (1984)	69.9	1,242.0	9,074.9
Spain (1984)	76.6	762.5	4,573.0
Sweden (1986)	77.1	752.4	3,756.7
Switzerland (1987)	77.6	704.3	4,087.9
United Kingdom (1987)	75.3	857.6	4,411.8
United States of America (1986)	75.0	828.4	5,808.9
Union of Soviet Socialist Republics (1986)	69.8	1,110.6	10,257.5
Yugoslavia (1985)	71.0	1,109.2	8,337.6
All	**73.7**	**905.2**	**6,647.1**

*Per 100,000 population. Standardized to European standard population (*2*).
†Per 100,000 population.
§The year for the most recent cause-of-death data available to the World Health Organization for reporting countries when this report was prepared.
¶Life expectancy was calculated by applying the same methodology to the mortality data for each country. These estimates may differ slightly from the estimates published by the countries themselves because of variations in method.

Mortality — Continued

In the selected countries, approximately 11 million persons died annually from 1984 through 1987, an age-standardized all-cause death rate of 905.2 per 100,000 population per year (Table 1). Mean life expectancy at birth was 73.7 years and ranged from 69.7 years in Hungary to 79.1 years in Japan (Table 1). Average life expectancy at birth was 77.2 years for females and 70.1 years for males.

Approximately 3.3 million (30%) deaths annually were due to heart disease, 2.3 million (21%) to cancer, 1.5 million (14%) to stroke, 0.9 million (8%) to chronic respiratory diseases, and 0.8 million (7%) to violent causes (i.e., intentional and unintentional injuries). An estimated 1.5 million (14%) deaths annually are attributed to cigarette smoking.

Years of potential life lost before age 65 (YPLL) (*3*) is a measure of premature mortality that considers only deaths occurring before age 65 and more heavily weights deaths at younger ages. In the selected countries, 3.4 million (31%) deaths occurred in persons <65 years of age. YPLL varied greatly among these countries, from 3334.3 per 100,000 population in Japan to 10,257.5 per 100,000 population in the USSR (Table 1). Rates of YPLL were particularly high in eastern Europe.

Adapted from: World Health Organization, Wkly Epidemiol Rec *1989;64:103–7, by Div of Surveillance and Epidemiologic Studies, Epidemiology Program Office, CDC.*

Editorial Note: Mortality in countries included in this report constitutes 22% of the estimated 50 million deaths worldwide in 1986. Although data are reported for these countries for different years, the comparison of mortality is unlikely to be affected by yearly changes in the rate and distribution of causes of death. Selection of countries for the present analysis reflects the availability of mortality information. However, reference to these countries as "developed" is based on definitions published in 1963 (*1*) and may not reflect current socioeconomic characteristics.

Comparison of mortality characteristics of different countries assists health planning and the generation and investigation of epidemiologic hypotheses. International studies, such as studies of the association of aflatoxin and primary liver cancer (*4*), can reveal a range of exposure levels and disease rates not found in individual countries. However, although death registration is virtually complete in these countries, reporting of cause of death is not uniform either among or within European countries or the United States (*5,6*). Only comparison of all-cause mortality among developed countries is likely to be accurate. Demographic heterogeneity also constrains the comparison of populations.

The estimate of 1.5 million deaths annually attributed to cigarette smoking in the selected countries is based on population-attributable fractions associated with cigarette smoking in the United States (*7*) and applied to mortality rates in other developed countries. Because cigarette smoking among adults is more prevalent in Europe than in the United States (*8,9*) (Table 2) and because European cigarettes contain more tar (*11*), this method may underestimate the proportion of deaths attributable to cigarette smoking in the developed world.

The United States ranks as 13th lowest in all-cause age-adjusted death rate per 100,000 population among these 33 countries. Although the proportion of deaths from cancers is higher in the United States than in the other 32 countries combined, trends in U.S. cancer mortality are similar to those in the other countries (*12*). Compared with other countries, the United States also has a greater proportion

Mortality — Continued

of deaths from heart disease; however, between 1973 and 1983, mortality from heart disease declined more rapidly in the United States than in any other developed country (*13*).

The United States has the highest per capita gross national product (GNP) and health-care expenditure (*10*)—each more than double the median among the other countries (Table 2). However, among these countries, the United States has the median (17th highest) life expectancy at birth and ranks 10th highest in YPLL. Further efforts should be directed toward understanding the relationship of GNP, health-care expenditures, and risk-factor prevalences to mortality outcomes in the developed world.

Further surveillance of risk factors for mortality worldwide (*14*) could provide broader insight regarding the public health importance of different risk factors in the

TABLE 2. Mortality and health care, by sex — United States and other selected developed countries,* 1984–1987

	United States		Other selected developed countries	
Category	**Male**	**Female**	**Male**	**Female**
Age-adjusted death rate†				
Selected causes				
Heart disease	381.5	214.2	338.8	206.4
Cancer	246.5	160.2	268.8	143.0
Stroke	59.3	52.8	145.1	125.1
Chronic obstructive pulmonary disease	45.6	19.7	46.8§	15.1§
Injury	91.7	31.4	100.3¶	36.4¶
Other	251.0	165.1	292.0**	198.2**
All causes	**1,075.5**	**643.5**	**1,206.7**	**726.3**
Mean life expectancy (yrs)	71.4	78.6	69.7	76.9
Mean years of potential life lost before age 65†	7,561.8	4,091.1	8,809.0	4,893.2
Current smoking prevalence (%) (*8,9*)	31	26	41	29
	Male and female		**Male and female**	
Median gross national product per capita (*10*)	$16,240		$7,882	
Median health expenditure per capita (*10*)	$ 1,926		$ 996	

*Countries and the year of latest available data are Australia, 1986; Austria, 1987; Belgium, 1986; Bulgaria, 1986; Canada, 1986; Czechoslovakia, 1986; Denmark, 1986; Federal Republic of Germany, 1987; Finland, 1986; France, 1986; German Democratic Republic (GDR), 1987; Greece, 1986; Hungary, 1987; Iceland, 1987; Ireland, 1986; Israel, 1986; Italy, 1985; Japan, 1987; Luxembourg, 1987; Malta, 1987; Netherlands, 1986; New Zealand, 1986; Norway, 1986; Poland, 1987; Portugal, 1987; Romania, 1986; Spain, 1984; Sweden, 1986; Switzerland, 1987; United Kingdom, 1987; United States of America, 1986; Union of Soviet Socialist Republics (USSR), 1986; and Yugoslavia, 1985.
†Per 100,000 population.
§Excludes USSR.
¶Excludes GDR.
**Excludes USSR and GDR.

Mortality — Continued

reduction of mortality. The range of mortality outcomes described in this report suggests that much premature mortality can be eliminated. The large number of deaths attributable to cigarette smoking indicates that reduction of this risk factor would substantially increase life expectancy in the developed world.

References

1. United Nations Department of Economic and Social Affairs. World population prospects as assessed in 1963. New York: United Nations, 1966. (Population studies, no. 41).
2. Waterhouse J, Correa P, Muir C, Powell J, eds. Cancer incidence in five continents. Vol III. Lyon, France: International Agency for Research on Cancer, 1976.
3. CDC. Premature mortality in the United States. MMWR 1986;35(no. 2S).
4. Wogan GN. Dietary factors and special epidemiological situations of liver cancer in Thailand and Africa. Cancer Res 1975;35:3499–502.
5. Kelson M, Farebrother M. The effect of inaccuracies in death certification and coding practices in the European Economic Community (EEC) on international cancer mortality statistics. Int J Epidemiol 1987;16:411–4.
6. Gittlesohn A, Senning J. Studies on the reliability of vital and health records. I. Comparison of cause of death and hospital record diagnoses. Am J Public Health 1979;69:680–9.
7. CDC. Smoking-attributable mortality and years of potential life lost—United States, 1984. MMWR 1987;36:693–7.
8. Commission of the European Communities. Survey: Europeans and the prevention of cancer. Brussels, Belgium: Commission of the European Communities, 1987.
9. NCHS. Smoking and tobacco use: United States, 1987. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, 1989; DHHS publication no. (PHS)89–1597. (Vital and health statistics; series 10, no. 169).
10. Bureau of the Census. Statistical abstract of the United States, 1989. 109th ed. Washington, DC: US Department of Commerce, Bureau of the Census, 1989.
11. International Agency for Research on Cancer. IARC monographs on the evaluation of the carcinogenic risk of chemicals to humans: tobacco smoking. IARC Monographs, 1986; 38:54–66.
12. Stanley K, Stjernsward J, Koroltchouk V. Cancers of the stomach, lung and breast: mortality trends and control strategies. World Health Stat Q 1989;41(3/4):107–14.
13. World Health Organization. World health statistics annual, 1987. Geneva: World Health Organization, 1987.
14. WHO MONICA Project Principal Investigators. The World Health Organization MONICA Project (monitoring trends and determinants in cardiovascular disease): a major international collaboration. J Clin Epidemiol 1988;41:105–14.

International Task Force for Disease Eradication

The eradication* of smallpox from the world in 1977 (*1*) proved the feasibility of infectious disease eradication. The International Task Force for Disease Eradication (ITFDE)† is assessing the potential for global eradication of other infectious diseases. This report summarizes the ITFDE's findings on the potential to eradicate eight diseases based on draft versions of criteria under development.

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*Eradication is defined as achievement of a status whereby no further cases of a disease occur anywhere, and continued control measures are unnecessary.

†The ITFDE includes five members of the Task Force for Child Survival (from World Health Organization, United Nations Children's Fund, United Nations Development Program, the World Bank, and the Rockefeller Foundation), the president of the Institute of Medicine, the director of CDC, a member of the Swedish Academy of Science, a director of the Charles A. Dana Foundation, a person from the Carnegie Corporation of New York, and a representative of the Japanese International Cooperation Agency. The principal investigator for the ITFDE is the executive director of the Carter Center of Emory University, and the project director is a senior consultant to Global 2000 of the Carter Center.

ITFDE — Continued

The ITFDE was initiated at the Carter Center of Emory University in 1988 by a grant from the Charles A. Dana Foundation. Modeled after the Task Force for Child Survival (*2*), the ITFDE's purposes are to evaluate systematically the potential eradicability of candidate diseases, identify specific barriers to their eradication that might be overcome through further research or other efforts, and encourage eradication efforts where appropriate.

In its first two meetings in April and October 1989, the ITFDE reviewed and modified draft versions of criteria used to evaluate the potential eradicability of eight diseases that are being or have been promoted for eradication by international agencies, national authorities, or others. Criteria included consideration of the epidemiologic vulnerability (e.g., lack of an animal reservoir and limited duration of infectiousness) of the disease; availability of an effective, practical intervention; impact of the disease on human well-being; existence of national and/or international commitment to attack the problem; and cost. Each disease was first presented by a technical expert, then discussed by the task force and staff. In these discussions, two diseases were judged to be eradicable and three to be candidates for elimination of transmission or of clinical symptoms; three were not considered candidates for eradication at this time (Table 1).

Guinea worm disease (dracunculiasis). Guinea worm eradication is feasible if the necessary commitment and resources can be mobilized. The ITFDE will help publicize efforts and funding needs (*3*).

Poliomyelitis. Worldwide polio eradication is deemed technically possible by the year 2000; an improved vaccine would facilitate eradication of polio. The ITFDE agreed to write to the heads of state of several nations in the Americas to solicit their support for this hemisphere's goal of eliminating polio by the end of 1990 (*4,5*).

Onchocerciasis. Elimination of blindness caused by onchocerciasis appears feasible through vector control and treatment with ivermectin. Because of the cost, duration, and difficulty of effective larviciding and the absence of a drug to kill the adult worms (*6*), eradication of the infection altogether is not now feasible.

Yaws and endemic syphilis. Eradication of yaws and endemic syphilis is not feasible under present conditions. However, elimination of the transmission of these diseases in certain areas appears feasible. Tests need to be developed that can reliably distinguish the organisms that cause yaws, endemic syphilis, and pinta from those that cause venereal syphilis (*7*).

Rabies. Rabies eradication is not feasible because of the extensive and varied animal reservoirs of the virus and the inability to eliminate those reservoirs with existing technology. However, elimination of human rabies in urban areas may be possible (*8*).

Measles. Global eradication of measles is not currently feasible because of the high communicability of measles and the suboptimal serologic responses to vaccines administered to young infants (*9*). After the ITFDE conference, WHO recommended use of high-titered Edmonsten-Zagreb vaccine beginning at 6 months of age in developing countries; however, an improved vaccine is still needed.

Tuberculosis. Global eradication of tuberculosis is not now feasible. Better tools for diagnosis, case-finding, prevention, and treatment need to be developed, and the application of current short-course therapy in developing countries needs to be greatly increased (*10*).

Leprosy. Leprosy (Hansen disease) eradication worldwide is not feasible now (*11*).

ITFDE – Continued

Reported by: J Duffy, MD, Gillis W Long Hansen's Disease Center, Carville, Louisiana. CA deQuadros, Pan American Health Organization; BOL Duke, MD, Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington, DC. RH Henderson, MD, A Meheus, MD, World Health Organization, Geneva, Switzerland. DR Hopkins, MD, Global 2000, Inc., Carter Center of Emory Univ, Atlanta, Georgia. Div of Tuberculosis Control, Center for Prevention Svcs; Office of the Director, Center for Infectious Diseases; Office of the Director, CDC.

Editorial Note: Four factors/conditions enabled the eradication of smallpox: 1) no reservoir of the virus existed except in humans; 2) nearly all persons infected with smallpox had an obvious, characteristic rash and were infectious for a relatively short period; 3) the natural infection conferred lifelong immunity; and 4) a safe, effective (even in newborns), and inexpensive vaccine was available that was also highly stable in tropical environments (*12*).

TABLE 1. Disease candidates for worldwide eradication – International Task Force for Disease Eradication, 1989

Disease	Current annual toll worldwide	Chief obstacles to eradication	Conclusion
Guinea worm	10 million persons infected; few deaths	Lack of public and political awareness; inadequate funding	Eradicable
Poliomyelitis	250,000 cases of paralytic polio; 25,000 deaths	No insurmountable technical obstacles; increased national/ international commitment needed	Eradicable
Onchocerciasis	18 million cases; 340,000 blind	High cost of vector control; no therapy to kill adult worms; restrictions in mass use of ivermectin	Could eliminate associated blindness
Yaws and endemic syphilis	2.5 million cases	Political and financial inertia	Could interrupt transmission*
Rabies	52,000 deaths	No effective way to deliver vaccine to wild animal disease carriers	Could eliminate urban rabies
Measles	2 million deaths, mostly children	Lack of suitably effective vaccine for young infants; cost; public misconception of seriousness	Not now eradicable
Tuberculosis	8–10 million new cases; 2–3 million deaths	Need for improved diagnostic tests, chemotherapy, and vaccine; wider application of current therapy	Not now eradicable
Leprosy	11–12 million cases	Need for improved diagnostic tests and chemotherapy; social stigma; potential reservoir in armadillos	Not now eradicable

*Because persons may be infected for decades and the organisms cannot be distinguished from those that cause venereal syphilis, elimination of transmission—not eradication—is the goal.

ITFDE — Continued

The 12-year-old success of the Smallpox Eradication Program (SEP) provides an impetus for eradication or elimination of other diseases. A symposium sponsored by the Fogarty International Center of the National Institutes of Health to consider post-SEP possibilities in 1980 identified yaws, measles, and polio as the most likely candidates for eradication (*13*). In 1986, the World Health Assembly resolved to "eliminate" Guinea worm disease (Resolution WHA 39.21), the first such resolution since the smallpox campaign; in 1989, the Assembly added the deadline for eradicating Guinea worm disease in "the 1990s" (Resolution 42.29). (Global 2000[§] and the African Regional Office of WHO have set the informal goal of eradicating Guinea worm disease by 1995.) In 1988, the World Health Assembly officially established the goal of eradicating polio by the year 2000 (Resolution WHA 41.28).

[§]Global 2000 is a nonprofit entity of the Carter Center of Emory University focusing on improving health and agriculture in developing countries.

(Continued on page 217)

TABLE I. Summary — cases of specified notifiable diseases, United States

Disease	13th Week Ending			Cumulative, 13th Week Ending		
	Mar. 31, 1990	Apr. 1, 1989	Median 1985-1989	Mar. 31, 1990	Apr. 1, 1989	Median 1985-1989
Acquired Immunodeficiency Syndrome (AIDS)	555	U*	362	10,549	7,954	4,778
Aseptic meningitis	58	68	76	1,049	1,020	1,026
Encephalitis: Primary (arthropod-borne & unspec)	10	10	17	149	143	208
Post-infectious	1	2	2	28	23	23
Gonorrhea: Civilian	12,714	11,700	14,582	167,309	168,627	204,754
Military	104	179	256	2,448	2,594	4,019
Hepatitis: Type A	708	593	447	7,008	8,481	6,232
Type B	346	372	484	4,731	5,073	5,999
Non A, Non B	33	32	67	458	596	746
Unspecified	66	33	47	456	639	813
Legionellosis	18	19	18	283	235	190
Leprosy	4	1	4	32	36	52
Malaria	10	21	13	241	259	170
Measles: Total[†]	298	380	210	3,940	2,321	767
Indigenous	282	363	186	3,591	2,190	667
Imported	16	18	9	349	133	94
Meningococcal infections	78	77	68	808	895	895
Mumps	135	152	119	1,350	1,500	1,326
Pertussis	42	59	38	624	500	500
Rubella (German measles)	17	14	7	138	69	73
Syphilis (Primary & Secondary): Civilian	1,508	1,024	655	12,160	10,196	8,552
Military	5	4	4	75	79	58
Toxic Shock syndrome	8	14	9	94	90	81
Tuberculosis	347	387	387	4,587	4,588	4,588
Tularemia	-	2	1	8	13	19
Typhoid Fever	6	10	10	86	99	62
Typhus fever, tick-borne (RMSF)	2	2	2	21	21	15
Rabies, animal	46	106	129	736	1,053	1,094

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1990		Cum. 1990
Anthrax	-	Leptospirosis (Hawaii 2, Md. 1)	11
Botulism: Foodborne	1	Plague	-
Infant (Md. 1)	11	Poliomyelitis, Paralytic,[§]	-
Other (Ohio 1)	2	Psittacosis (Upstate N.Y. 1, N.J. 1, Ohio 1)	43
Brucellosis	9	Rabies, human	-
Cholera	1	Tetanus (N.C. 1)	14
Congenital rubella syndrome	-	Trichinosis	11
Congenital syphilis, ages < 1 year	-		
Diphtheria (Mich. 1)	2		

*Because AIDS cases are not received weekly from all reporting areas, comparison of weekly figures may be misleading.
[†]Ten of the 298 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.
[§]One case of suspected poliomyelitis has been reported in 1990; none of 13 suspected cases in 1989 have been confirmed to date. Nine of 14 suspected cases in 1988 were confirmed and all were vaccine-associated.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 31, 1990 and April 1, 1989 (13th Week)

Reporting Area	AIDS	Aseptic Menin-gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	10,549	1,049	149	28	167,309	168,627	7,008	4,731	458	456	283	32
NEW ENGLAND	444	56	5	-	4,853	4,776	151	274	11	22	12	-
Maine	15	2	-	-	63	72	1	15	2	1	1	-
N.H.	29	4	-	-	58	53	4	15	-	2	1	-
Vt.	3	5	-	-	19	21	2	12	2	-	3	-
Mass.	238	17	1	-	1,756	1,929	107	185	5	18	4	-
R.I.	17	17	-	-	263	390	17	14	-	1	3	-
Conn.	142	11	4	-	2,694	2,311	20	33	2	-	-	-
MID. ATLANTIC	3,654	175	12	-	23,558	28,633	1,148	681	62	33	73	9
Upstate N.Y.	496	76	11	-	3,425	4,299	264	181	9	9	29	1
N.Y. City	2,243	26	1	-	10,197	12,637	99	228	10	12	8	5
N.J.	557	-	-	-	3,690	3,414	112	112	18	-	8	2
Pa.	358	73	-	-	6,246	8,283	673	160	25	12	28	1
E.N. CENTRAL	676	172	29	5	33,127	28,473	449	644	25	35	81	-
Ohio	145	52	9	2	10,023	7,430	63	134	9	4	34	-
Ind.	70	27	2	2	2,835	1,723	46	184	3	10	16	-
Ill.	289	26	8	1	10,543	8,443	149	55	5	10	-	-
Mich.	128	61	10	-	8,047	8,364	128	170	7	11	20	-
Wis.	44	6	-	-	1,679	2,513	63	101	1	-	11	-
W.N. CENTRAL	260	43	10	1	9,319	7,302	360	204	25	10	15	-
Minn.	43	4	4	1	1,123	748	59	21	9	-	-	-
Iowa	12	4	1	-	723	613	86	27	1	2	2	-
Mo.	155	18	-	-	5,353	4,400	163	131	7	6	11	-
N. Dak.	-	1	-	-	24	38	2	2	2	1	-	-
S. Dak.	1	2	2	-	50	68	12	3	1	-	-	-
Nebr.	16	8	3	-	420	441	25	13	2	-	1	-
Kans.	33	6	-	-	1,626	994	13	7	3	1	1	-
S. ATLANTIC	1,984	240	43	9	46,420	45,876	757	917	71	74	41	1
Del.	27	7	1	-	605	739	38	24	2	-	1	-
Md.	256	45	5	-	4,951	5,011	361	134	9	3	12	1
D.C.	146	1	-	-	2,540	2,917	7	7	3	-	-	-
Va.	276	50	17	2	4,687	3,973	52	60	9	59	5	-
W. Va.	17	4	3	-	341	361	6	28	2	-	-	-
N.C.	157	22	11	-	7,471	6,695	148	275	32	-	9	-
S.C.	101	3	-	-	4,017	4,151	14	166	6	6	6	-
Ga.	399	14	3	1	10,202	8,785	57	98	2	3	6	-
Fla.	605	94	3	6	11,606	13,244	74	125	6	3	2	-
E.S. CENTRAL	257	72	11	-	13,689	14,042	84	376	30	2	20	-
Ky.	51	18	2	-	1,480	1,246	22	108	12	2	7	-
Tenn.	82	16	6	-	4,144	4,549	31	210	13	-	7	-
Ala.	50	29	3	-	4,814	4,667	30	56	5	-	6	-
Miss.	74	9	-	-	3,251	3,580	1	2	-	-	-	-
W.S. CENTRAL	1013	45	6	2	15,674	17,619	575	278	28	41	15	9
Ark.	44	2	-	-	2,306	1,815	139	18	2	4	4	-
La.	192	10	3	-	3,051	3,798	33	72	-	1	3	-
Okla.	41	7	-	2	1,470	1,613	144	38	7	7	8	-
Tex.	736	26	3	-	8,847	10,393	259	150	19	29	-	9
MOUNTAIN	301	46	4	-	3,396	3,469	1,130	354	31	50	20	-
Mont.	3	1	-	-	32	51	26	27	2	3	-	-
Idaho	9	-	-	-	24	58	16	24	6	-	1	-
Wyo.	1	1	1	-	40	34	17	5	1	-	-	-
Colo.	83	16	-	-	775	729	77	63	9	17	3	-
N. Mex.	23	3	-	-	276	352	156	36	-	-	2	-
Ariz.	114	14	3	-	1,436	1,329	681	110	11	23	8	-
Utah	28	5	-	-	115	130	54	15	1	2	1	-
Nev.	40	6	-	-	698	786	103	74	1	5	5	-
PACIFIC	1,960	200	29	11	17,273	18,437	2,354	1,003	175	189	6	13
Wash.	172	-	1	1	1,472	1,654	370	146	28	8	2	1
Oreg.	80	-	-	-	658	738	272	105	10	5	-	-
Calif.	1,650	180	27	9	14,786	15,704	1,632	713	133	174	3	8
Alaska	10	2	-	-	279	231	43	20	3	-	-	-
Hawaii	48	18	1	1	78	110	37	19	1	2	1	4
Guam	-	-	-	-	41	36	2	1	-	4	-	-
P.R.	462	25	4	-	278	251	38	33	-	15	-	-
V.I.	5	-	-	-	127	157	-	4	-	-	-	-
Amer. Samoa	-	-	-	-	20	11	7	-	-	-	-	3
C.N.M.I.	-	-	-	-	47	20	2	1	-	-	-	1

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

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending March 31, 1990 and April 1, 1989 (13th Week)

Reporting Area	Malaria	Measles (Rubeola)					Meningococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	1990	Cum. 1990	Cum. 1989
UNITED STATES	241	282	3,591	16	349	2,321	808	135	1,350	42	624	500	17	138	69
NEW ENGLAND	28	-	52	-	10	74	51	2	14	6	86	13	-	2	1
Maine	-	-	-	-	-	-	6	-	-	-	1	4	-	-	-
N.H.	2	-	-	-	7	-	1	2	6	-	7	5	-	-	-
Vt.	3	-	-	-	1	1	4	-	1	-	2	1	-	-	1
Mass.	17	-	2	-	-	13	25	-	4	6	71	-	-	-	-
R.I.	2	-	20	-	2	19	3	-	3	-	-	2	-	1	-
Conn.	4	-	30	-	-	41	12	-	-	-	5	1	-	1	-
MID. ATLANTIC	55	31	345	-	112	235	130	3	78	3	147	40	-	2	2
Upstate N.Y.	12	-	126	-	101	30	43	2	30	-	117	18	-	1	1
N.Y. City	21	2	33	-	5	28	10	-	-	-	-	1	-	-	1
N.J.	9	-	8	-	-	168	27	-	19	-	7	17	-	-	-
Pa.	13	29	178	-	6	9	50	1	29	3	23	4	-	1	-
E.N. CENTRAL	11	101	1,393	4	124	199	103	6	134	-	137	68	-	7	4
Ohio	3	74	213	2§	2	97	36	-	29	-	30	1	-	-	-
Ind.	-	-	100	-	-	-	10	-	5	-	31	7	-	-	-
Ill.	2	-	539	-	1	100	26	-	27	-	29	28	-	7	3
Mich.	4	27	173	2§	121	-	20	6	54	-	28	6	-	-	-
Wis.	2	-	368	-	-	2	11	-	19	-	19	26	-	-	1
W.N. CENTRAL	3	3	86	-	1	234	33	3	47	2	14	15	-	-	1
Minn.	-	-	27	-	1	-	6	-	-	-	-	-	-	-	-
Iowa	-	-	21	-	-	-	1	-	7	1	3	6	-	-	-
Mo.	3	-	35	-	-	218	10	1	23	-	7	8	-	-	1
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-
Nebr.	-	-	-	-	-	-	5	-	1	-	1	-	-	-	-
Kans.	-	3	3	-	-	16	9	2	16	1	2	1	-	-	-
S. ATLANTIC	55	26	219	-	38	112	142	53	497	3	57	40	-	9	1
Del.	1	-	4	-	-	-	1	-	-	-	1	-	-	-	-
Md.	13	-	17	-	11	10	15	30	294	-	19	4	-	-	1
D.C.	5	2	2	-	1	2	2	1	6	-	1	-	-	-	-
Va.	13	8	17	-	2	-	16	7	19	3	7	3	-	-	-
W. Va.	1	-	6	-	-	-	6	-	32	-	5	6	-	-	-
N.C.	5	-	3	-	-	98	23	6	33	-	9	13	-	-	-
S.C.	-	-	1	-	-	-	11	-	10	-	3	-	-	-	-
Ga.	5	-	2	-	4	-	30	-	25	-	8	4	-	-	-
Fla.	12	16	167	-	20	2	38	9	78	-	4	10	-	9	-
E.S. CENTRAL	5	2	40	-	-	2	43	-	34	6	29	27	-	1	-
Ky.	1	2	2	-	-	1	12	-	-	-	-	-	-	-	-
Tenn.	3	-	18	-	-	-	14	-	14	5	13	13	-	1	-
Ala.	1	-	5	-	-	1	15	-	3	1	14	11	-	-	-
Miss.	-	-	15	-	-	-	2	-	17	-	2	3	-	-	-
W.S. CENTRAL	2	102	392	11	22	1,190	52	48	304	2	11	16	-	-	8
Ark.	-	-	-	1§	1	-	4	13	82	1	1	4	-	-	-
La.	-	-	-	-	-	1	11	1	54	-	1	4	-	-	3
Okla.	2	14	52	-	-	23	8	19	82	1	9	8	-	-	-
Tex.	-	88	340	10†	21	1,166	29	15	86	-	-	-	-	-	5
MOUNTAIN	5	16	125	1	15	20	21	3	78	10	67	213	-	6	2
Mont.	-	-	-	-	1	13	4	-	-	-	-	-	-	5	1
Idaho	2	-	-	-	-	1	-	-	30	2	6	21	-	1	-
Wyo.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Colo.	-	-	11	-	2	1	10	1	8	6	45	17	-	-	-
N. Mex.	-	13	47	1§	1	4	-	N	N	1	2	4	-	-	-
Ariz.	3	3	46	-	8	1	2	1	28	-	7	165	-	-	-
Utah	-	-	-	-	-	-	1	-	2	-	3	5	-	-	-
Nev.	-	-	21	-	3	-	4	1	8	1	4	1	-	-	1
PACIFIC	77	1	939	-	27	255	233	17	164	10	76	68	17	111	50
Wash.	5	-	6	-	13	1	25	1	17	4	24	13	-	-	-
Oreg.	4	-	-	-	-	-	26	N	N	-	3	2	2	2	-
Calif.	67	-	884	-	13	250	177	16	144	5	43	51	15	105	40
Alaska	-	1	48	-	-	-	4	-	-	-	-	-	-	-	-
Hawaii	1	-	1	-	1	4	1	-	3	1	6	2	-	4	10
Guam	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-
P.R.	-	198	299	-	-	186	5	-	3	-	4	2	-	-	2
V.I.	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending March 31, 1990 and April 1, 1989 (13th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	12,160	10,196	94	4,587	4,588	8	86	21	736
NEW ENGLAND	493	400	6	95	105	-	4	-	-
Maine	5	3	-	-	2	-	-	-	-
N.H.	28	1	1	1	4	-	-	-	-
Vt.	1	-	-	2	1	-	-	-	-
Mass.	175	129	4	41	55	-	3	-	-
R.I.	1	11	-	22	18	-	-	-	-
Conn.	283	256	1	29	25	-	1	-	-
MID. ATLANTIC	2,606	2,081	9	1,140	986	1	25	3	193
Upstate N.Y.	160	204	4	17	93	-	8	-	4
N.Y. City	1,348	828	2	753	591	-	8	-	-
N.J.	388	337	-	183	142	1	8	3	61
Pa.	710	712	3	187	160	-	1	-	128
E.N. CENTRAL	814	383	27	493	504	-	10	1	11
Ohio	128	29	11	62	96	-	3	-	2
Ind.	7	13	2	17	38	-	-	-	-
Ill.	300	158	1	244	226	-	4	-	4
Mich.	285	166	13	149	126	-	3	1	-
Wis.	94	17	-	21	18	-	-	-	5
W.N. CENTRAL	103	77	10	115	130	4	-	2	95
Minn.	32	6	-	21	28	-	-	-	46
Iowa	10	12	1	13	22	-	-	-	10
Mo.	41	35	6	49	45	3	-	2	2
N. Dak.	1	1	-	5	4	-	-	-	12
S. Dak.	-	-	-	4	7	-	-	-	13
Nebr.	3	15	2	9	6	1	-	-	-
Kans.	16	8	1	14	18	-	-	-	12
S. ATLANTIC	3,829	3,693	2	902	931	2	7	5	226
Del.	54	46	-	10	6	-	-	-	3
Md.	300	195	-	82	69	-	4	-	65
D.C.	345	234	-	28	44	-	-	-	-
Va.	182	144	-	82	86	-	-	-	48
W. Va.	4	4	-	16	23	-	-	-	5
N.C.	438	202	1	108	86	1	-	3	2
S.C.	216	181	-	116	93	1	-	2	28
Ga.	849	785	-	124	123	-	1	-	60
Fla.	1,441	1,902	1	336	401	-	2	-	15
E.S. CENTRAL	1,120	663	5	312	410	-	-	3	27
Ky.	20	17	-	98	105	-	-	-	11
Tenn.	471	253	3	70	94	-	-	3	1
Ala.	344	242	2	116	123	-	-	-	15
Miss.	285	151	-	28	88	-	-	-	-
W.S. CENTRAL	1,897	1,338	6	563	494	-	2	6	98
Ark.	118	97	-	62	64	-	-	-	6
La.	558	295	1	62	61	-	-	-	-
Okla.	52	19	5	44	27	-	-	6	20
Tex.	1,169	927	-	395	342	-	2	-	72
MOUNTAIN	245	208	12	111	129	1	6	-	23
Mont.	-	-	-	4	4	-	-	-	9
Idaho	4	-	1	1	3	-	-	-	-
Wyo.	-	-	1	-	-	-	-	-	12
Colo.	13	36	4	6	3	-	-	-	-
N. Mex.	16	7	4	28	19	1	-	-	1
Ariz.	146	59	2	51	61	-	4	-	-
Utah	2	8	-	3	21	-	-	-	-
Nev.	64	98	-	18	18	-	2	-	1
PACIFIC	1,053	1,353	17	856	899	-	32	1	63
Wash.	62	87	3	66	49	-	-	-	-
Oreg.	28	80	-	28	31	-	-	-	-
Calif.	954	1,179	13	720	764	-	31	1	48
Alaska	3	2	-	16	13	-	-	-	15
Hawaii	6	5	1	26	42	-	1	-	-
Guam	-	3	-	11	20	-	-	-	-
P.R.	228	122	-	29	52	-	-	-	7
V.I.	1	1	-	1	2	-	-	-	-
Amer. Samoa	-	-	-	3	2	-	-	-	-
C.N.M.I.	-	1	-	8	1	-	4	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending March 31, 1990 (13th Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	642	440	124	41	18	18	69
Boston, Mass.	181	103	41	18	11	7	26
Bridgeport, Conn.	44	29	11	4	-	-	5
Cambridge, Mass.	23	18	4	1	-	-	1
Fall River, Mass.	34	24	7	2	-	1	1
Hartford, Conn.	57	37	10	7	2	1	7
Lowell, Mass.	36	25	7	2	1	1	2
Lynn, Mass.	9	8	1	-	-	-	2
New Bedford, Mass.	29	22	6	1	-	-	2
New Haven, Conn.	48	29	13	2	1	3	5
Providence, R.I.	34	26	6	1	1	-	2
Somerville, Mass.	6	6	-	-	-	-	-
Springfield, Mass.	39	29	5	1	1	3	2
Waterbury, Conn.	39	30	6	2	1	-	4
Worcester, Mass.	63	54	7	-	-	2	10
MID. ATLANTIC	2,777	1,847	531	274	62	63	168
Albany, N.Y.	51	33	11	2	3	2	4
Allentown, Pa.	15	11	3	-	1	-	1
Buffalo, N.Y.	106	72	21	6	5	2	6
Camden, N.J.	39	29	3	5	1	1	-
Elizabeth, N.J.	30	21	6	3	-	-	3
Erie, Pa.†	45	34	9	1	-	1	5
Jersey City, N.J.	93	58	16	11	4	4	3
N.Y. City, N.Y.	1,535	973	301	191	37	33	74
Newark, N.J.	73	38	16	16	1	2	8
Paterson, N.J.	23	15	3	3	2	-	-
Philadelphia, Pa.	338	241	63	21	6	7	31
Pittsburgh, Pa.†	79	57	18	1	-	3	4
Reading, Pa.	41	35	6	-	-	-	8
Rochester, N.Y.	122	100	13	7	-	2	12
Schenectady, N.Y.	27	20	4	2	-	1	1
Scranton, Pa.†	25	22	3	-	-	-	-
Syracuse, N.Y.	55	35	11	4	2	3	3
Trenton, N.J.	47	33	11	1	-	2	3
Utica, N.Y.	11	9	2	-	-	-	-
Yonkers, N.Y.	22	11	11	-	-	-	2
E.N. CENTRAL	2,339	1,543	496	163	49	88	125
Akron, Ohio	50	37	9	4	-	-	-
Canton, Ohio	46	35	7	3	-	1	6
Chicago, Ill.§	564	362	125	45	10	22	16
Cincinnati, Ohio	125	79	28	9	4	5	18
Cleveland, Ohio	166	96	47	13	-	10	5
Columbus, Ohio	167	117	26	11	6	7	11
Dayton, Ohio	110	78	27	3	1	1	6
Detroit, Mich.	241	131	56	29	11	14	7
Evansville, Ind.	43	32	6	2	3	-	-
Fort Wayne, Ind.	60	45	13	2	-	-	6
Gary, Ind.	23	6	12	3	-	2	-
Grand Rapids, Mich.	56	36	16	-	1	3	10
Indianapolis, Ind.	151	104	26	10	4	7	3
Madison, Wis.	45	33	8	1	1	2	3
Milwaukee, Wis.	149	100	29	12	2	6	6
Peoria, Ill.	60	42	11	3	2	2	4
Rockford, Ill.	38	27	5	4	1	1	4
South Bend, Ind.	61	50	8	1	-	2	3
Toledo, Ohio§	103	77	17	5	2	2	7
Youngstown, Ohio	81	56	20	3	1	1	10
W.N. CENTRAL	834	589	155	55	17	18	56
Des Moines, Iowa	76	58	13	4	-	1	4
Duluth, Minn.	21	12	7	1	1	-	1
Kansas City, Kans.	23	14	8	1	-	-	-
Kansas City, Mo.	122	83	32	4	2	1	6
Lincoln, Nebr.	31	25	4	1	1	-	5
Minneapolis, Minn.	194	139	35	13	3	4	21
Omaha, Nebr.	77	60	9	4	-	4	9
St. Louis, Mo.	157	105	24	15	8	5	7
St. Paul, Minn.	60	43	12	3	1	1	1
Wichita, Kans.	73	50	11	9	1	2	2
S. ATLANTIC	1,337	845	259	147	44	42	68
Atlanta, Ga.	189	108	43	30	6	2	7
Baltimore, Md.	125	83	22	14	4	2	4
Charlotte, N.C.	92	52	25	10	3	2	11
Jacksonville, Fla.	121	73	24	14	2	8	11
Miami, Fla.	113	73	26	10	2	2	1
Norfolk, Va.	54	34	10	4	1	5	4
Richmond, Va.	90	70	8	6	1	5	6
Savannah, Ga.	54	34	8	4	5	3	4
St. Petersburg, Fla.	84	62	14	4	2	2	3
Tampa, Fla.	145	99	22	16	5	3	8
Washington, D.C.§	245	137	52	35	13	8	9
Wilmington, Del.	25	20	5	-	-	-	-
E.S. CENTRAL	804	512	162	67	16	46	56
Birmingham, Ala.	98	60	21	7	1	9	5
Chattanooga, Tenn.	77	53	11	9	3	1	9
Knoxville, Tenn.	84	53	20	7	2	2	6
Louisville, Ky.	103	60	27	11	1	4	2
Memphis, Tenn.	214	148	36	17	5	8	21
Mobile, Ala.	48	23	6	4	2	12	-
Montgomery, Ala.	52	36	10	3	-	3	3
Nashville, Tenn.	128	79	31	9	2	7	10
W.S. CENTRAL	1,768	1,091	392	184	54	46	87
Austin, Tex.	69	41	17	8	1	2	6
Baton Rouge, La.	31	20	5	5	-	1	3
Corpus Christi, Tex.	37	22	11	2	1	1	4
Dallas, Tex.	204	131	45	15	6	7	5
El Paso, Tex.	63	39	13	7	2	2	4
Fort Worth, Tex	85	54	19	4	3	5	11
Houston, Tex.§	734	436	169	89	24	16	18
Little Rock, Ark.	53	30	18	2	2	1	7
New Orleans, La.	148	79	33	21	10	4	-
San Antonio, Tex.	184	125	38	14	4	3	15
Shreveport, La.	69	54	8	5	-	2	9
Tulsa, Okla.	91	60	16	12	1	2	5
MOUNTAIN	712	474	132	46	29	29	47
Albuquerque, N. Mex.	89	51	10	6	20	2	4
Colo. Springs, Colo.	37	23	10	1	-	3	6
Denver, Colo.	129	86	20	13	3	7	9
Las Vegas, Nev.	105	67	25	6	1	4	7
Ogden, Utah	17	14	2	1	-	-	2
Phoenix, Ariz.	161	102	35	12	3	9	4
Pueblo, Colo.	28	24	4	-	-	-	1
Salt Lake City, Utah	35	17	12	2	2	2	1
Tucson, Ariz.	111	90	14	5	-	2	13
PACIFIC	2,043	1,367	387	177	61	45	153
Berkeley, Calif.	23	15	6	2	-	-	2
Fresno, Calif.	97	73	18	2	1	3	13
Glendale, Calif.	35	30	3	1	1	-	4
Honolulu, Hawaii	71	55	11	2	-	3	9
Long Beach, Calif.	62	31	16	3	6	6	4
Los Angeles Calif.	727	480	136	72	27	7	47
Oakland, Calif.	66	44	9	7	3	3	6
Pasadena, Calif.	32	20	8	-	2	2	2
Portland, Oreg.	121	90	18	7	5	1	6
Sacramento, Calif.	174	113	38	12	6	5	14
San Diego, Calif.	167	110	30	19	4	3	15
San Francisco, Calif.	158	92	33	27	4	2	8
San Jose, Calif.	172	119	33	10	2	8	11
Seattle, Wash.	45	31	10	4	-	-	5
Spokane, Wash.	45	31	10	4	-	-	5
Tacoma, Wash.	48	33	8	5	-	2	2
TOTAL	13,256††	8,708	2,638	1,154	350	395	829

*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.
§Data not available. Figures are estimates based on average of past available 4 weeks.

ITFDE – Continued

Different WHO regions have also established regional goals of eliminating polio, measles, or neonatal tetanus over the next decade, starting with the elimination of polio from the Americas by the end of this year. India and China aim to eliminate leprosy transmission within their borders by the year 2000, and the United States has set a national goal of eliminating tuberculosis by 2010 (defined as an annual case rate of less than one per million population [*14*]). Achievement of some or all of these interim milestones will increase support for global eradication of selected diseases.

The public health strategy of disease eradication offers considerable advantages over disease control when eradication is undertaken against appropriate, carefully chosen targets. The benefits of eradication are permanent and accrue after a finite cost, whereas the costs of controlling the same disease must be maintained indefinitely. For example, the United States invested $32 million in SEP over a 10-year period; this amount is equivalent to former U.S. costs and expenditures every 3 months for routine vaccination (discontinued in 1971) and management of its complications. The United States government is investing >$50 million annually to maintain its polio-free status and an estimated $25–$50 million to keep domestic measles at low levels (*15*). These figures do not reflect the cost of vaccination in the private sector or the annual occurrence of vaccine-associated polio.

A time-limited goal of eradication allows mobilization of support more readily than a control program. An important corollary requirement for global eradication is that unaffected countries will need to provide material assistance where needed, including geographic areas where small residual foci might not otherwise warrant use of scarce national resources.

References

1. Fenner F, Henderson DA, Arita I, Jezek Z, Ladnyi ID. Smallpox and its eradication. Geneva: World Health Organization, 1988.
2. The Task Force for Child Survival. Protecting the world's children: vaccines and immunization within primary health care. New York: Rockefeller Foundation, 1984.
3. CDC. Update: dracunculiasis eradication—worldwide, 1989. MMWR 1990;38:882–5.
4. CDC. Progress toward eradicating poliomyelitis from the Americas. MMWR 1989;38:532–5.
5. Hinman AR, Foege WH, de Quadros CA, Patriarca PA, Orenstein WA, Brink EW. The case for global eradication of poliomyelitis. Bull WHO 1987;65:835–40.
6. Duke BOL. Onchocerciasis—river blindness: can it be eradicated? Presented at the Symposium of the International Task Force for Disease Eradication, Atlanta, April 13–14, 1989.
7. Burke JP, Hopkins DR, Hume JC, Perine PL, St. John R, eds. International symposium on yaws and other endemic treponematoses. Rev Infect Dis 1985;7(suppl 2):S217–351.
8. Murphy FA. Rabies as a world problem. Presented at the Symposium of the International Task Force for Disease Eradication, Atlanta, April 13–14, 1989.
9. Hopkins DR, Hinman AR, Koplan JP, Lane JM. The case for global measles eradication. Lancet 1982;1:1396–8.
10. Styblo K. Overview and epidemiologic assessment of the current global tuberculosis situation with an emphasis on control in developing countries. Rev Infect Dis 1989;2 (suppl 2):S339–46.
11. Duffy JC. Hansen's disease (leprosy). Presented at the Symposium of the International Task Force for Disease Eradication, Atlanta, Georgia, April 13–14, 1989.
12. Hopkins DR. Beyond smallpox eradication. In: Mandl PE, ed. Assignment children. Geneva: United Nations Children's Fund, 1985;69/72:235–42.
13. Stuart-Harris C, Western KA, Chamberlayne EC, eds. Can infectious diseases be eradicated? A report on the international conference on the eradication of infectious diseases. Rev Infect Dis 1982;4:913–84.
14. CDC. A strategic plan for the elimination of tuberculosis in the United States. MMWR 1989;38(no. S-3).
15. Hinman AR, Bart KJ, Hopkins DR. Costs of not eradicating measles. Am J Public Health 1985;75:713–4.

World No-Tobacco Day

In 1987, the World Health Assembly of the World Health Organization (WHO) designated the 40th anniversary of WHO, April 7, 1988, as World No-Tobacco Day (*1*). The objective of World No-Tobacco Day was to encourage all persons worldwide who smoke or chew tobacco to quit for at least 24 hours. Extensive press coverage of this event stimulated and identified a range of policy and health education activities linked to the event, the specific theme of which was "Tobacco or Health: Choose Health." Illustrative activities in selected countries included bans on smoking in public places (Ethiopia), suspension of government tobacco sales (Cuba), radio and printed health messages from the government (Lebanon), poster contests (Spain), public cigarette-burning ceremonies (Nepal), and large public information campaigns (China).

The second World No-Tobacco Day, held May 31, 1989, emphasized the theme "Women and Tobacco—The Female Smoker: At Added Risk" (*2*). In preparation for this event, the WHO director-general asked all major United Nations agencies to collaborate by declaring their offices free from tobacco on World No-Tobacco Day. Press advisory kits, video tapes, and radio programs were distributed by WHO. After the event, the WHO's Tobacco or Health (TOH) Program received more than 300 newspaper articles from around the world documenting activities and press coverage related to World No-Tobacco Day. In some countries, these celebrations were led personally by the president (Bangladesh), a former prime minister (Sudan), or ministers of health (Nigeria, Fiji, Oman, and many others) (*1*).

Reported by: H Restrepo, MD, Adult Health Program, Pan American Health Organization, Washington, DC. Program Svcs Activity, Office on Smoking and Health, Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: WHO estimates that each year approximately 2.5 million premature deaths occur worldwide as a result of tobacco use (*3*). World No-Tobacco days, like the Great American Smokeout in the United States each November (*4*), focus global attention on tobacco use. In the United States in 1989, approximately one third (almost 18 million persons) of all smokers participated in the Smokeout by decreasing cigarette smoking (25.4%) or quitting for the day (10.5%) (*4*).

On May 31, 1990, WHO will celebrate the third World No-Tobacco Day; the theme for this event will be "Childhood and Youth Without Tobacco" (*2*). Additional information about the event can be obtained from the Adult Health Program, Pan American Health Organization (telephone [202] 861-3261) or CDC's Office on Smoking and Health, Center for Chronic Disease Prevention and Health Promotion (telephone [301] 443-5287).

References

1. Report of the WHO Technical Advisory Group on Tobacco or Health. TOH/TAG/89.11. Geneva: Switzerland: World Health Organization, November 3, 1989.
2. Stroot P. World No-Tobacco days. World Health Organization Tobacco Alert 1990 (January):2.
3. Mahler H. Tobacco or health: choose health. World Health Forum 1988;9:78–83.
4. Lieberman Research Inc. A study of the impact of the 1989 Great American Smokeout: summary, Gallup Organization. New York: American Cancer Society, 1989.

Moth-Associated Dermatitis — Cozumel, Mexico

On December 5, 1989, the Mexican Field Epidemiology Training Program (FETP), Directorate of Epidemiology, Secretariat of Health, was notified of an outbreak of dermatitis among employees of the 17 tourist hotels in Cozumel in October and November. Cozumel, an island located 10 miles off the coast of the Yucatan peninsula of southern Mexico, is 7 miles wide by 35 miles long. The island has 43,000 permanent residents and a daily average of 3000–5000 tourists.

The FETP initiated an investigation by interviewing a probability sample of 417 hotel employees from eight of the 17 hotels (total employees:1436). Because scabies was initially suspected, a case was defined as a person who had onset since July 1 of a rash that itched continually and lasted >1 week. Of the 417 employees, 19 (4.6%) met the case definition. However, 91 (21.8%) reported nonspecific dermatitis of <1 weeks' duration since July 1.

During the survey, several persons anecdotally suggested that onset of symptoms followed skin contact with a moth. Moths were noticeably present in Cozumel during October and November but had disappeared by December. The FETP concluded that the outbreak was not scabies and was probably moth-associated. Because all cases had resolved and the likely source was no longer present, no further action was taken.

On January 8, 1990, the FETP was notified of a second outbreak of acute dermatitis among hotel employees and in the general population of Cozumel since January 1. At approximately the same time, thousands of moths had reappeared throughout the island. Using a case definition of "anyone who had presented with erythema, pruritis, and itching between January 1 and 13," the FETP conducted a cluster survey of 10 randomly selected families from each of 30 blocks (n=923 persons); 112 (12.1%) cases were identified. In addition to erythema and pruritis, 23.1% of patients experienced warmth in the area of the rash, and 15.4% had a vesicular component to the rash. Persons most affected were children <5 years of age (19.3%), followed by children aged 5–14 years (12.6%) and persons ≥15 years (10.6%). Women (14.4%) were more likely than men (10.1%) to have had dermatitis ($p=0.04$). To examine specific potential risk factors, a case-control study was conducted using 13 patients who had had onset during the 3 days before the investigation and 18 controls (matched for age) from unaffected family members and neighbors. Nine (69.2%) of the patients and none of the controls reported skin contact with moths within 3 days before onset of symptoms ($p<0.01$; odds ratio=infinity; 95% confidence interval=5.4–infinity).

To assess the effect of direct contact exposure of skin to moths, the body and wings of a live moth were rubbed on the forearms of six volunteers from the Cozumel health center. Within 5 minutes, five of the six developed an intense pruritis, followed by an erythematous rash. Symptoms lasted 3 days. An entomologic study classified the insect as belonging to the family *Saturnidae*, genus *Hylesia*, species *alinda Druce*, which has a 3-month generational cycle.

Suggested control measures included replacing the clear light bulbs of the hotels with yellow insect-repelling bulbs, installing electric insect traps on the grounds of the hotels, and spraying insecticide around the borders of the hotels. Because a third outbreak is expected in association with the next generation of moths, community vector control is being planned. Entomologists suggest that the natural parasites of

Moth-Associated Dermatitis — Continued

this moth likely will return within a year, causing a natural decline in the population of *Hylesia* moths. Active epidemiologic and entomologic surveillance is in place.

Reported by: A Villanueva, MD, Secretariat of Health, State of Quintana Roo; C Beutelspacher, PhD, Instituto de Biología, Universidad Nacional Autónoma de México; G Fernández, MD, E Morales, MD, M Aparicio, MD, G Castro, MD, E Gil, MD, M Luna, MD, A Moreno, MD, C Ruiz, MD, Field Epidemiology Training Program, Secretariat of Health; J Sepúlveda, MD, Director, Div of Epidemiology, Secretariat of Health, Mexico. Div of Field Svcs, Epidemiology Program Office, CDC.

Editorial Note: Epidemiologic and entomologic studies indicate that the outbreaks of dermatitis in Cozumel resulted from contact with *H. alinda*. In addition, the investigation found that the *H. alinda* population exceeded the relatively small numbers usually present on the island.

Dermatitis from skin contact with certain species of moths belonging to the genus *Hylesia* was first reported in the United States in 1901 (*1*). In 1907, the mechanism of the dermatitis was attributed to a chemical substance present within the nettling hairs of the moth (*2*). Recent studies indicate that histamine participates in the production of *Hylesia*-associated dermatitis. However, because antihistamine therapy generally has not been effective, other mechanisms of pathogenesis may be involved (*3,4*).

Outbreaks of dermatitis produced by *Hylesia* moths have been reported from Venezuela and Peru (*5–7*). The first reported outbreak in Mexico followed the eruption of the Chichonal volcano in 1982, which diminished the natural parasites of *H. frigida* and resulted in a large increase in the population of this species (*8*). A similar population increase in *Hylesia* moths in Cozumel followed the passage of Hurricane Gilbert in September 1988, with a new crop of adult moths appearing every 3 months.

The epidemiologic investigation of this outbreak was conducted by the FETP in Mexico. The FETP is a national-level, in-service applied epidemiology training program similar to CDC's Epidemic Intelligence Service (*9*). FETPs are a new and growing international resource now at various stages of development in four of six World Health Organization regions.

References

1. Hill WR, Rubenstein AD, Kovacs, J Jr. Dermatitis resulting from contact with moths (genus *Hylesia*): report of cases. JAMA 1948;138:737–40.
2. Tyzzer FF. The pathology of the brown tail moth dermatitis. J M Research 1907;11:43.
3. Dinehart SM, Jorizzo JL, Soter NA, et al. Evidence for histamine in the urticating hairs of *Hylesia* moth. J Invest Dermatol 1987;88:691–3.
4. Zaias N, Ioannides G, Taplin D. Dermatitis from contact with moths (genus *Hylesia*). JAMA 1969;207:525–7.
5. Dinehart SM, Archer ME, Wolf JE Jr, et al. Caripito itch: dermatitis from contact with *Hylesia* moths. J Am Acad Dermatol 1985;13:743–7.
6. Dae L. Dermatitis causadas por mariposas del genero *Hylesia*. Derm Trop 1963;2:238–40.
7. Allard HF. Entomology—venomous moths and butterflies. J Washington Acad Sci 1958; 48:18–21.
8. Beutelspacher CR. Ciclo de vida de la Hylesia frigida Scahus (*Lepidoptera Saturnidae*), una plaga forestal en Chiapas. An Inst Biol Univ Nal Aut Mex 1985;56:465–76.
9. Music SI, Schultz MG. Field epidemiology training programs—new international health resources. JAMA (in press).

Epidemiologic Notes and Reports

Update: Filovirus Infection in Animal Handlers

Since November 1989, seven shipments of cynomolgus monkeys imported from three suppliers in the Philippines have been actively infected with filovirus (*1,2*). Transmission among monkeys in quarantine facilities has occurred; many of the animals have died. Limited laboratory experience with this filovirus suggests that it is antigenically and genetically distinguishable from the African members of the filoviridae, even though there is some cross-reactivity between this virus and Ebola virus strains.

Five animal handlers at a quarantine facility that received five shipments of infected animals had a high level of daily exposure to these animals. Four of these persons have serologic evidence of recent infection, as detected by immunofluoresence and Western blot tests, with a strain of filovirus isolated from the infected monkeys. Three of the four have seroconverted since November 1989. The fourth, for whom only one serum sample is available, has filovirus-specific IgG and IgM serum antibody. None of the four have had an unexplained febrile illness since November 1989.

Of the animal handlers who seroconverted, one cut his finger while performing a necropsy on an infected animal. Daily monitoring of this person following that exposure did not detect antigenemia (*3*). Laceration is the presumed mode of transmission for this person; a mode of transmission has not been determined for the other three.

Reported by: RK Miller, MD, Fairfax Health District; JY Baumgardner, MAS, CW Armstrong, MD, SR Jenkins, VMD, CD Woolard, MPH, GB Miller, Jr, MD, State Epidemiologist, Virginia State Dept of Health. PE Rollin, MD, PB Jahrling, PhD, TG Ksiazek, DVM, CJ Peters, MD, US Army Medical Research Institute of Infectious Diseases, Frederick, Maryland. Div of Quarantine, Center for Prevention Svcs; Div of Viral and Rickettsial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The specific biologic characteristics of this filovirus (e.g., infectivity and pathogenicity in humans) cannot be readily extrapolated from past experience with the virulent viruses isolated from human epidemics in Africa. However, the findings in this investigation demonstrate that although this filovirus can infect, it appears to have lower pathogenicity for humans than does its African counterparts. The high level of transmission to animal handlers in this single facility and the possibility of importation of other virulent viruses underscore the importance of strict adherence to quarantine measures for handling monkeys.

In collaboration with other institutions in the United States and in endemic areas, CDC will continue to study these viruses. In addition, CDC will continue to monitor and regulate the quarantine facilities that import nonhuman primates into the United States.

References

1. CDC. Ebola virus infection in imported primates—Virginia, 1989. MMWR 1989;38:831–2,837–8.
2. CDC. Update: ebola-related filovirus infection in nonhuman primates and interim guidelines for handling nonhuman primates during transit and quarantine. MMWR 1990;39:22–4,29–30.
3. Jahrling PB, Geisbert TW, Dalgard DW, et al. Preliminary report: isolation of Ebola virus from monkeys imported to USA. Lancet 1990;335:502–5.

Erratum: Vol 39, No. 9

"Figure I, Reported measles cases — United States, weeks 6–9, 1990," which appeared on page 152, was incorrect as published. The correct map appears below.

FIGURE I. Reported measles cases — United States, weeks 6–9, 1990

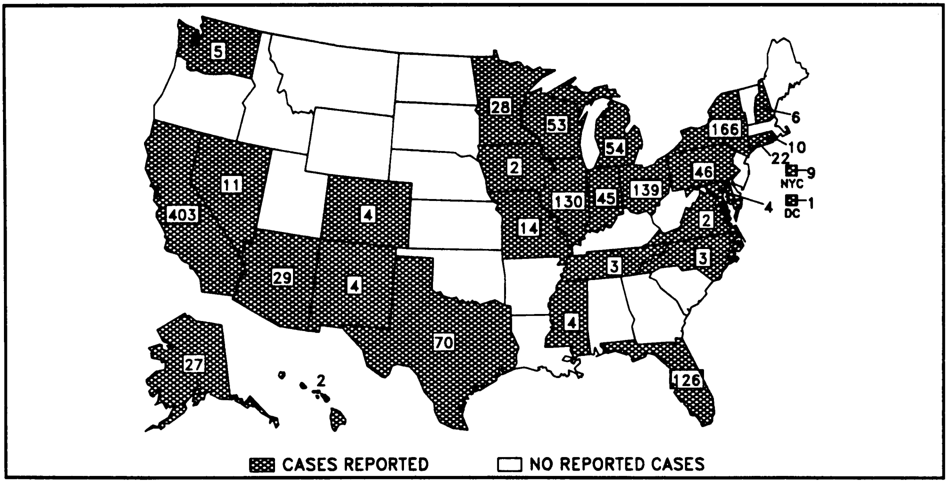
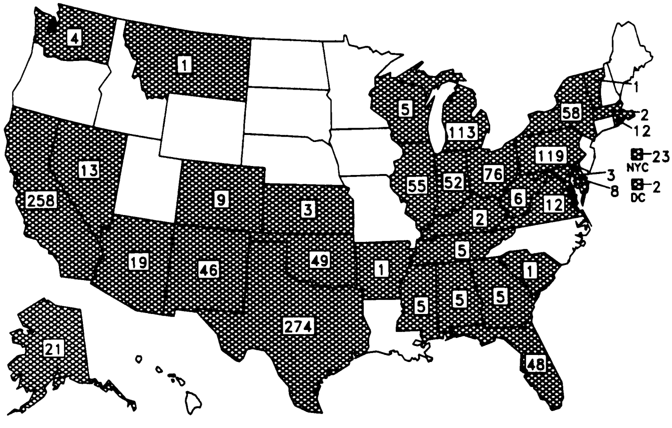


FIGURE I. Reported measles cases — United States, weeks 10–13, 1990



The ***Morbidity and Mortality Weekly Report*** is prepared by the Centers for Disease Control, Atlanta, Georgia, and available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202) 783-3238.

The data in this report 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. The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

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