



MORBIDITY AND MORTALITY WEEKLY REPORT

- 433 Syphilis—United States, 1983
- 441 Investigating Problems with Respirators
- 442 Experimental Infection of Chimpanzees with Lymphadenopathy-Associated Virus
- 444 International Conference on Acquired Immunodeficiency Syndrome

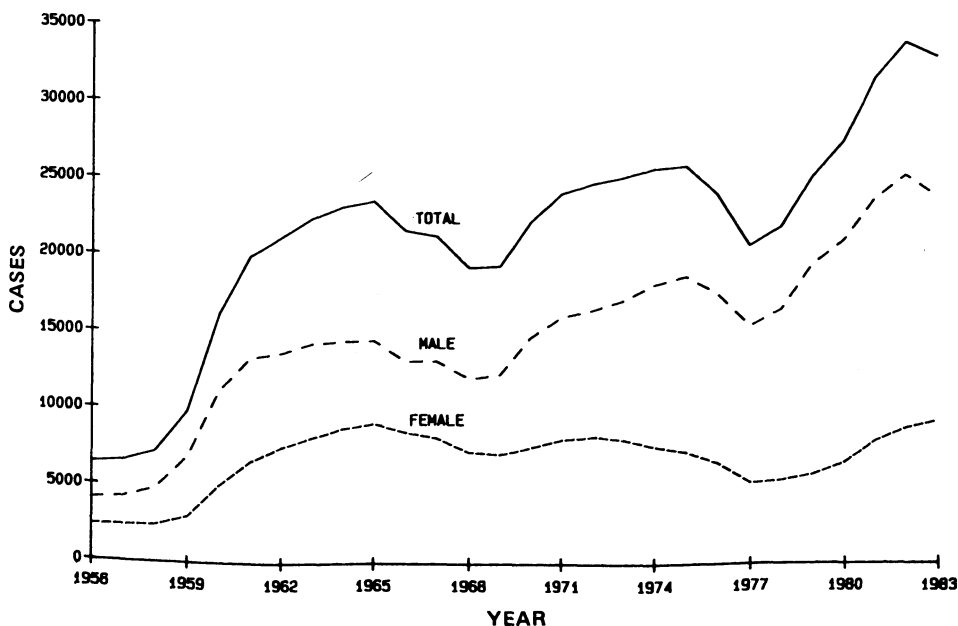
Syphilis — United States, 1983

Although the incidence of primary and secondary syphilis in the United States steadily increased from a low of 9.4 cases per 100,000 population in 1977 to 14.6/100,000 in 1982, the reported national incidence decreased to 14.1/100,000 in 1983 (Figure 1). Reported primary and secondary syphilis cases totaled 32,698 in 1983, a 3% decrease from the 33,613 cases reported in 1982.

The changes in the number and rate of primary and secondary syphilis cases varied with sex and sexual preference. Among women, the number and rate of reported cases increased in 1983; however, among men, reported cases and the rate decreased (Table 1). Thus, the decrease in the 1983 national incidence was attributable to the decrease in the rate of reported cases occurring among men. During 1981-1983, the rate of cases per 100,000 population reported in men decreased 0.9% but increased 15% among women. The sex ratio (males: females) among primary and secondary syphilis cases increased from 1.5:1 in 1967 to 3.2:1 in 1980 but declined during 1981-1983 from 3.0:1 in 1981 to 2.6:1 in 1983.

The proportion of men with primary and secondary syphilis who named other men as sex partners increased from 23% in 1969 to 42% in 1982 but decreased to 40% in 1983. The

FIGURE 1. Reported primary and secondary syphilis cases, by sex — United States, 1956-1983



Syphilis—Continued

total number of men with early infectious syphilis who named other men as sexual contacts decreased by 13% from 1982 to 1983 (Table 2).

In 1982, 24,833 early syphilis cases were reported from public clinics, compared with 8,780 cases reported from private sources. In 1983, primary and secondary syphilis cases reported from public clinics decreased to 23,949; cases reported from private sources decreased to 8,749.

Thirty-four states reported rates of primary and secondary syphilis that were lower in 1983 than in 1982. Rates varied greatly geographically from a low of 0.3/100,000 population in North Dakota to highs of 39.5/100,000 in Florida and 40.2/100,000 in Texas.

Primary and secondary syphilis rates continue to be higher in large urban areas than in less populated ones. In 1983, 63 cities with populations of 200,000 or more, comprising 26% of the U.S. population, accounted for nearly 60% of reported cases (Table 3). Cities reporting the highest rates per 100,000 population in 1983 were San Francisco, California (158.5), New Orleans, Louisiana (106.4), and Atlanta, Georgia (106.4). Cities reporting the lowest rates in 1983 were Omaha, Nebraska (0.8), Pittsburgh, Pennsylvania (1.7), and Des Moines, Iowa (1.9).

TABLE 1. Number and rate of primary and secondary syphilis cases* per 100,000 population, by sex — United States, 1980-1983

Year	Cases			Change from previous year (%)			Rates†		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1980	20,767	6,437	27,204	+8.3	+13.1	+9.4	18.9	5.5	12.1
1981	23,436	7,830	31,266	+12.9	+21.6	+14.9	21.3	6.6	13.7
1982	24,988	8,625	33,613	+6.6	+10.2	+7.5	22.5	7.3	14.6
1983	23,616	9,082	32,698	-5.5	+5.3	-2.7	21.1	7.6	14.1

*Source: Form CDC 73.688 (Division of Sexually Transmitted Diseases).

†Rates are based on 1983 population estimates of the Bureau of the Census.

TABLE 2. Primary and secondary syphilis among men* — United States, 1980-1983

	1980	1981	1982	1983
Partner of same sex				
No. cases	6,808	6,767	7,049	6,113
Change from previous year (%)†	-3.9	-0.6	+4.2	-13.3
Heterosexual partner only				
No. cases	8,053	9,210	9,582	9,364
Change from previous year (%)	+11.4	+14.4	+4.0	-2.3
Sex of partner unknown				
No. cases	5,697	6,995	7,976	7,579
Change from previous year (%)	+17.4	+22.7	+14.0	-5.0

*Source: Form CDC 73.54 (Division of Sexually Transmitted Diseases).

†Rates are not provided, because data on the total populations from which these cases were reported are not available. These populations are assumed not to have changed significantly in 1980-1983. Therefore, the number of cases reported may reflect trends in the rates.

Syphilis — Continued

Early congenital syphilis (CS) among children under 1 year of age still contributes to neonatal morbidity. The number of cases of early CS decreased from 422 in 1971 to 104 in 1978. In 1981, reported cases increased to 160; in 1982 and 1983, 159 and 158 cases of CS were reported, respectively. Fifteen states reported no early CS in 1982 or 1983. Four states accounted for most (62%) of the cases of early CS reported in 1983: Texas (26%), Florida (15%), California (11%), and New York (9%). Though the rate of primary and secondary syphilis cases occurring among women increased 15% between 1981 and 1983, the number of cases detected through prenatal testing increased to a lesser degree.

Reported by Operational Research Br, Evaluation and Statistical Svcs Br, Div of Sexually Transmitted Diseases, Center for Prevention Svcs, CDC.

Editorial Note: The distribution of syphilis cases underwent several key changes between 1967 and 1979. The most important of these included (1) a twofold increase in the ratio of reported cases among men to reported cases among women; (2) an increase in cases among men reported by public clinics—from 32% to 56% of the total cases; and (3) an increase in the percentage of white men with early syphilis who reported at least one male sex partner from 38% in 1969 to 70% in 1979 (1). Most of these trends have continued since 1980. In addition, the percentage of total cases reported from public clinics (about 74% since 1980) and the percentage of cases among men reported from public clinics (about 55% since 1979) have been fairly constant. The ratio of cases reported among men to cases among women has declined between 1980 and 1983. The percentage of late and late latent syphilis cases reported has also declined from 59% in 1969 to 24% in 1983.

The decrease in the national incidence of reported syphilis cases may represent, in part, a response to public health recommendations to decrease risks of sexually transmitted diseases (2). With the media attention given acquired immunodeficiency syndrome (AIDS) and herpes, syphilis rates may be affected indirectly, as gonorrhea rates have been in certain localities (3,4).

The continued occurrence of a fairly constant number of cases of CS between 1981 and 1983 may reflect the increase in the incidence of early infectious syphilis among women, a lack of availability of prenatal care, or a failure of the prenatal-care system to provide timely screening, serologic testing, and prompt follow-up (5,6). Eighty percent of women with primary and secondary syphilis are in their reproductive years (15-34 years of age).

TABLE 3. Rates of primary and secondary syphilis* in selected cities per 100,000 population — United States, 1981-1983

Cities	Rates per year		
	1981	1982	1983
San Francisco, Cal.	178.7	180.5	158.5
New Orleans, La.	123.2	134.3	106.4
Atlanta, Ga. [†]	129.0	132.4	106.4
Newark, N.J.	62.0	68.1	96.9
Charlotte, N.C.	33.6	52.2	90.0
Dallas, Tex. [†]	84.9	89.6	87.0
Miami, Fla. [†]	39.4	70.6	80.8
Houston, Tex. [†]	80.7	95.8	80.5
Washington, D.C.	103.2	74.0	64.3
Tampa, Fla. [†]	63.1	88.0	55.4
New York, N.Y.	36.7	37.1	35.6
Los Angeles, Cal. [†]	24.9	25.1	24.6
Denver, Colo.	34.0	34.5	21.7

*Source: CDC 73.688 (Division of Sexually Transmitted Diseases).

[†]Reported data includes information from surrounding counties: Atlanta (Fulton County); Dallas (Dallas County); Miami (Dade County); Houston (Harris County); Tampa (Hillsborough County); Los Angeles (Los Angeles County).

Syphilis — Continued

Most states require prenatal screening in the first trimester but not in the third trimester; thus, infections acquired later in pregnancy may not be detected and may cause infections in infants. States, such as Texas and Florida, where the incidence of CS is high, have established serologic screening of all cord bloods. These states have increased their chances of detecting and reporting asymptomatic cases in newborns. In states where newborns are not screened, cases of CS are not recognized until the signs become fully manifested.

Increasing the availability of prenatal care—including (1) serologic screening in the first trimester; (2) appropriate third-trimester serologic evaluation of groups at high risk (7); and (3) prompt treatment and adequate follow-up of maternal cases identified—as well as reducing the incidence of infectious syphilis among women of childbearing age may eventually prevent more cases of congenital syphilis.

References

1. Fichtner RR, Aral SO, Blount JH, Zaidi AA, Reynolds GH, Darrow WW. Syphilis in the United States: 1967-1979. *Sex Transm Dis* 1983;10:77-80.
2. Brown WJ, Donohue JF, Axnick NW, Blount JH, Ewen NH, Jones OG. Venereal disease casefinding and control measures in the twentieth century. In: *Syphilis and other venereal diseases*. Vital and Health Statistics Monographs. American Public Health Association. Cambridge: Harvard University Press 1970:36-57.

(Continued on page 441)

TABLE 1. Summary—cases specified notifiable diseases, United States

Disease	30th Week Ending			Cumulative, 30th Week Ending		
	July 28, 1984	July 30, 1983	Median 1979-1983	July 28, 1984	July 30, 1983	Median 1979-1983
Acquired Immunodeficiency Syndrome (AIDS)	108	N	N	2,313	N	N
Aseptic meningitis	168	372	264	2,724	3,550	3,201
Encephalitis: Primary (arthropod-borne & unsp.)	25	46	34	496	613	570
Post-infectious	1	-	1	63	57	57
Gonorrhea: Civilian	16,682	18,668	20,049	462,317	506,178	550,842
Military	446	411	451	11,846	13,591	15,490
Hepatitis: Type A	412	391	483	11,843	11,951	14,586
Type B	477	467	411	14,143	13,393	11,516
Non A, Non B	73	68	N	2,098	1,958	N
Unspecified	97	147	176	3,342	4,111	5,740
Legionellosis	5	13	N	323	394	N
Leprosy	2	1	3	126	146	121
Malaria	24	23	29	473	429	584
Measles: Total*	32	24	43	2,051	1,159	2,413
Indigenous	29	19	N	1,848	967	N
Imported	3	5	N	203	192	N
Meningococcal infections: Total	36	24	38	1,802	1,836	1,836
Civilian	36	24	38	1,798	1,820	1,820
Military	-	-	-	4	16	12
Mumps	22	27	42	2,018	2,266	4,053
Pertussis	26	70	44	1,093	1,198	734
Rubella (German measles)	23	7	38	485	716	1,839
Syphilis (Primary & Secondary): Civilian	614	552	557	15,881	18,339	17,153
Military	15	8	10	201	242	227
Toxic Shock syndrome	6	14	N	243	273	N
Tuberculosis	432	511	511	12,156	13,210	15,304
Tularemia	26	12	7	150	154	127
Typhoid fever	11	9	9	173	210	242
Typhus fever, tick-borne (RMSF)	48	92	60	436	643	632
Rabies, animal	83	126	126	2,852	3,730	3,730

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1984		Cum. 1984
Anthrax	1	Plague (Utah 1)	15
Botulism: Foodborne	6	Polioomyelitis: Total	2
Infant (Wash. 1, Calif. 2)	57	Paralytic	2
Other	4	Psittacosis (Vt. 1)	47
Brucellosis (Mo. 1, Ark. 1, Okla. 2, Tex. 3)	60	Rabies, human	-
Cholera	-	Tetanus (Pa. 1, Mo. 1, Fla. 1, Ala. 1, Calif. 1)	31
Congenital rubella syndrome	3	Trichinosis (Tex. 12)	56
Diphtheria	1	Typhus fever, flea-borne (endemic, murine)	10
Leptospirosis	10		

*One of the 32 reported cases for this week was imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

**TABLE III. Cases of specified notifiable diseases, United States, weeks ending
July 28, 1984 and July 30, 1983 (30th Week)**

Reporting Area	AIDS	Aseptic Meningi- tis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral, by type)				Legionel- losis	Leprosy
			Primary	Post-in- fectious			A	B	NA,NB	Unspeci- fied		
	Cum. 1984	1984	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1983	1984	1984	1984	1984	1984	Cum. 1984
UNITED STATES	2,313	168	496	63	462,317	506,178	412	477	73	97	5	126
NEW ENGLAND	72	15	32	1	13,275	12,657	12	23	1	7	-	6
Maine	1	1	-	-	527	658	-	1	-	-	-	-
N.H.	1	5	4	-	373	392	2	4	1	-	-	-
Vt.	-	-	3	-	217	243	-	-	-	-	-	-
Mass.	37	4	17	-	5,332	5,401	7	10	-	7	-	4
R.I.	4	2	-	-	893	688	-	2	-	-	-	2
Conn.	29	3	8	1	5,933	5,275	3	6	-	-	-	-
MID ATLANTIC	1,059	19	60	6	63,329	64,534	35	91	2	12	-	24
Upstate N.Y.	97	7	22	5	9,405	10,285	7	14	1	3	-	2
N.Y. City	762	8	4	-	26,636	26,290	15	48	-	5	-	22
N.J.	151	-	16	-	10,612	11,914	10	21	-	3	-	-
Pa.	49	4	18	1	16,676	16,045	3	8	1	1	-	-
E.N. CENTRAL	105	25	111	16	64,023	72,464	15	23	4	5	1	6
Ohio	14	11	38	8	18,638	18,908	3	6	2	1	1	2
Ind.	16	4	21	-	7,566	7,328	1	4	2	1	-	-
Ill.	54	2	14	6	14,312	20,521	4	1	-	1	-	2
Mich.	15	8	28	-	18,309	19,447	7	12	-	2	-	2
Wis.	6	-	10	2	7,198	6,260	-	-	-	-	-	-
W.N. CENTRAL	21	5	22	1	22,264	23,651	7	10	2	-	-	1
Minn.	5	-	8	-	3,296	3,312	1	4	-	-	-	-
Iowa	1	-	9	-	2,448	2,567	-	2	1	-	-	1
Mo.	10	1	1	-	10,737	11,610	2	1	1	-	-	-
N. Dak.	-	-	-	-	223	248	-	-	-	-	-	-
S. Dak.	-	-	-	1	553	641	4	1	-	-	-	-
Nebr.	2	U	1	-	1,516	1,485	U	U	U	U	U	-
Kans.	3	4	3	-	3,491	3,788	-	2	-	-	-	-
S. ATLANTIC	312	50	88	14	117,654	130,424	23	103	16	12	1	5
Del.	4	-	1	-	2,078	2,364	-	1	-	-	-	-
Md.	23	5	21	-	13,427	16,562	2	9	5	1	-	-
D.C.	44	-	-	-	8,431	8,855	-	2	-	-	-	1
Va.	18	11	22	5	11,133	11,403	3	17	3	1	1	3
W. Va.	4	1	5	-	1,417	1,367	-	1	1	-	-	-
N.C.	7	14	18	7	18,775	19,247	1	9	-	-	-	-
S.C.	6	9	3	-	11,548	12,396	-	9	-	-	-	-
Ga.	30	3	2	1	22,337	26,629	4	24	1	1	-	-
Fla.	176	7	16	1	28,508	31,601	13	31	6	9	-	1
E.S. CENTRAL	15	11	25	7	39,605	42,510	8	21	3	-	-	-
Ky.	7	1	4	-	4,884	4,891	3	1	1	-	-	-
Tenn.	4	6	7	1	16,552	17,565	4	15	2	-	-	-
Ala.	3	-	12	6	12,375	13,152	-	-	-	-	-	-
Miss.	1	4	2	-	5,794	6,902	1	5	-	-	-	-
W.S. CENTRAL	149	18	37	4	62,858	71,555	53	35	4	26	-	8
Ark.	1	-	-	2	5,454	5,514	2	1	1	3	-	-
La.	18	2	4	-	14,283	12,908	5	7	1	-	-	-
Okl.	4	4	13	1	6,849	8,441	9	5	1	4	-	-
Tex.	126	12	20	1	36,272	44,692	37	22	1	19	-	8
MOUNTAIN	35	6	19	7	14,832	15,749	70	27	12	6	2	7
Mont.	-	1	-	-	635	682	12	1	-	-	-	-
Idaho	-	-	-	-	740	702	-	1	-	-	-	-
Wyo.	1	-	-	-	420	417	-	1	-	-	-	-
Colo.	19	4	7	-	4,242	4,440	16	3	-	1	-	-
N. Mex.	-	-	-	-	1,697	1,949	10	4	3	-	-	-
Ariz.	8	1	6	3	4,016	4,362	22	10	5	4	2	5
Utah	3	-	6	4	725	778	4	-	-	-	-	1
Nev.	4	-	-	-	2,357	2,419	5	7	4	1	-	-
PACIFIC	545	19	102	7	64,477	72,634	189	144	29	29	1	69
Wash.	25	1	3	-	4,405	5,681	2	6	1	2	1	3
Oreg.	3	-	-	-	3,816	3,812	21	4	2	1	-	1
Calif.	509	18	97	7	53,596	59,828	163	129	26	26	-	50
Alaska	-	-	-	-	1,574	1,805	-	-	-	-	-	-
Hawaii	8	-	2	-	1,086	1,508	3	5	-	-	-	15
Guam	-	U	-	-	95	98	U	U	U	U	U	-
P.R.	33	-	-	1	1,944	1,622	1	6	-	2	-	1
V.I.	-	-	-	-	256	166	-	-	-	-	-	-
Pac. Trust Terr.	-	U	-	-	-	-	U	U	U	U	U	-

N: Not notifiable

U: Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending
July 28, 1984 and July 30, 1983 (30th Week)

Reporting Area	Malaria	Measles (Rubeola)					Meningococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	1984	Cum. 1984	Cum. 1983
UNITED STATES	473	29	1,848	3	203	1,159	1,802	22	2,018	26	1,093	1,198	23	485	716
NEW ENGLAND	29	-	99	-	9	15	108	3	67	2	25	40	1	29	11
Maine	-	-	-	-	-	-	1	-	18	1	1	4	-	1	-
N.H.	-	-	34	-	3	3	6	-	15	-	5	6	1	1	3
Vt.	2	-	3	-	3	-	26	2	5	-	14	7	-	-	3
Mass.	16	-	52	-	-	4	36	-	14	1	3	19	-	27	5
R.I.	4	-	-	-	-	-	11	1	6	-	1	4	-	-	-
Conn.	7	-	10	-	3	8	28	-	9	-	1	-	-	-	-
MID ATLANTIC	74	9	105	1	26	82	300	4	235	5	100	254	11	164	125
Upstate N.Y.	19	1	21	1§	10	7	104	-	55	-	57	81	-	98	22
N.Y. City	16	8	80	-	10	45	60	3	15	-	3	40	11	51	86
N.J.	22	-	4	-	2	27	59	1	127	-	6	15	-	11	3
Pa.	17	-	-	-	4	3	77	-	38	5	34	118	-	4	14
E.N. CENTRAL	34	3	571	-	67	629	289	2	827	2	292	292	2	71	109
Ohio	7	1	3	-	5	85	100	-	422	-	52	80	-	2	1
Ind.	-	-	2	-	1	398	36	-	42	-	195	28	-	2	22
Ill.	10	-	160	-	1	140	56	1	158	-	16	115	2	42	45
Mich.	7	2	396	-	54	5	59	1	154	2	17	16	-	18	15
Wis.	10	-	10	-	6	1	38	-	51	-	12	53	-	7	26
W.N. CENTRAL	15	-	2	-	3	1	113	-	81	2	84	72	-	28	30
Minn.	3	-	-	-	3	1	21	-	4	-	9	29	-	2	6
Iowa	1	-	-	-	-	-	19	-	17	1	5	5	-	1	-
Mo.	7	-	2	-	-	-	34	-	7	-	13	13	-	-	-
N. Dak.	1	-	-	-	-	-	1	-	1	-	-	1	-	3	-
S. Dak.	1	-	-	-	-	-	6	-	-	1	6	3	-	-	-
Nebr.	1	U	-	U	-	-	9	U	3	U	2	-	U	-	-
Kans.	2	-	-	-	-	-	23	-	49	-	49	21	-	22	24
S. ATLANTIC	82	3	14	1	20	181	373	3	144	4	85	169	-	21	87
Del.	4	-	-	-	-	-	3	-	2	-	2	2	-	-	-
Md.	19	3	8	1§	8	6	30	-	27	-	4	25	-	1	1
D.C.	1	-	-	-	5	-	5	-	-	-	-	-	-	-	-
Va.	21	-	1	-	1	23	43	1	15	-	12	45	-	-	1
W. Va.	1	-	-	-	-	-	5	1	28	1	8	5	-	-	-
N.C.	6	-	-	-	-	1	53	1	18	-	17	18	-	-	10
S.C.	1	-	-	-	-	4	36	-	2	-	1	13	-	-	1
Ga.	6	-	-	-	-	8	74	-	17	-	6	40	-	2	11
Fla.	23	-	5	-	6	139	124	-	35	3	35	21	-	18	63
E.S. CENTRAL	6	-	1	-	2	6	99	1	39	-	6	16	2	9	10
Ky.	-	-	1	-	-	1	38	-	8	-	1	5	-	3	9
Tenn.	2	-	-	-	2	-	24	-	12	-	2	4	-	-	-
Ala.	4	-	-	-	-	5	25	-	5	-	-	3	2	3	1
Miss.	-	-	-	-	-	-	12	1	14	-	3	4	-	3	-
W.S. CENTRAL	38	3	463	-	22	73	197	2	108	-	233	181	-	13	93
Ark.	-	-	-	-	-	12	27	-	5	-	12	15	-	3	-
La.	5	-	-	-	-	25	43	-	-	-	4	5	-	-	9
Okla.	6	3	3	-	7	1	24	N	N	-	206	131	-	-	-
Tex.	27	-	460	-	15	35	103	2	103	-	11	30	-	10	84
MOUNTAIN	17	-	91	-	11	3	62	2	197	4	79	122	2	15	27
Mont.	1	-	-	-	-	-	2	-	4	-	17	1	-	-	3
Idaho	2	-	-	-	-	-	6	-	9	-	3	3	-	1	8
Wyo.	-	-	-	-	-	-	2	-	1	-	3	5	-	2	2
Colo.	1	-	-	-	1	2	23	1	14	2	28	80	-	2	-
N. Mex.	1	-	68	-	8	-	7	N	N	-	5	9	-	1	-
Ariz.	9	-	-	-	-	1	14	1	163	2	15	14	-	-	6
Utah	3	-	23	-	2	-	5	-	5	-	6	10	-	6	7
Nev.	-	-	-	-	-	-	3	-	1	-	2	-	2	3	1
PACIFIC	178	11	502	1	43	169	261	5	320	7	189	52	5	135	224
Wash.	6	-	110	-	13	4	40	-	34	4	40	8	-	1	9
Oreg.	8	-	-	-	-	7	39	N	N	-	11	6	1	1	13
Calif.	161	11	260	1†	27	157	174	4	265	3	69	37	4	129	201
Alaska	-	-	-	-	-	-	7	-	5	-	-	-	-	1	1
Hawaii	3	-	132	-	3	1	1	1	16	-	69	1	-	3	-
Guam	1	U	83	U	2	2	1	U	5	U	-	-	U	2	-
P.R.	4	-	-	-	-	81	3	1	98	-	-	8	-	6	3
V.I.	-	-	-	-	-	5	-	-	3	-	-	-	-	-	2
Pac. Trust Terr.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*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
July 28, 1984 and July 30, 1983 (30th Week)**

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1984	Cum. 1983	1984	Cum. 1984	Cum. 1983	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1984
UNITED STATES	15,881	18,339	6	12,156	13,210	150	173	436	2,852
NEW ENGLAND	307	402	-	343	387	4	9	1	24
Maine	3	10	-	18	23	-	-	-	10
N.H.	9	16	-	23	27	-	-	-	6
Vt.	1	1	-	7	5	-	-	-	-
Mass.	179	252	-	181	198	4	7	1	5
R.I.	11	13	-	28	31	-	-	-	-
Conn.	104	110	-	86	103	-	2	-	3
MID ATLANTIC	2,152	2,332	1	2,228	2,356	-	25	8	193
Upstate N.Y.	147	193	-	381	360	-	9	3	24
N.Y. City	1,344	1,384	-	901	956	-	6	1	-
N.J.	394	440	1	483	506	-	6	3	5
Pa.	267	315	-	463	534	-	4	1	164
E.N. CENTRAL	727	992	-	1,633	1,719	2	23	23	125
Ohio	143	256	-	307	268	-	4	19	14
Ind.	83	74	-	178	169	-	2	2	13
Ill.	239	496	-	690	752	2	8	-	51
Mich.	217	121	-	356	441	-	3	2	14
Wis.	45	45	-	102	89	-	6	-	33
W.N. CENTRAL	232	221	1	352	430	50	6	27	479
Minn.	69	91	-	59	82	-	2	-	50
Iowa	10	10	-	40	42	-	-	1	95
Mo.	113	81	-	173	225	26	3	5	40
N. Dak.	6	1	-	8	5	-	-	-	103
S. Dak.	2	9	1	13	30	24	-	4	116
Nebr.	11	11	U	16	16	-	-	2	32
Kans.	21	18	-	43	30	-	1	15	43
S. ATLANTIC	4,747	4,808	-	2,538	2,640	4	20	211	804
Del.	24	20	-	32	24	-	-	-	4
Md.	288	311	-	271	206	-	-	22	438
D.C.	183	210	-	95	104	-	6	-	-
Va.	240	339	-	251	268	-	5	29	137
W. Va.	11	17	-	79	85	-	-	6	27
N.C.	473	445	-	391	383	1	1	81	13
S.C.	433	303	-	307	242	-	1	48	30
Ga.	807	875	-	356	474	3	1	23	100
Fla.	2,288	2,288	-	756	854	-	6	2	55
E.S. CENTRAL	1,078	1,252	-	1,105	1,211	3	5	40 ⁺	143
Ky.	61	85	-	260	291	-	2	5	39
Tenn.	294	350	-	355	365	3	2	22	59
Ala.	331	498	-	334	315	-	1	7	45
Miss.	392	319	-	156	240	-	-	6	-
W.S. CENTRAL	3,868	4,808	2	1,388	1,572	66	10	114	601
Ark.	103	117	-	149	181	45	-	18	64
La.	699	970	-	182	271	6	1	1	28
Okla.	134	130	2	142	126	14	2	76	71
Tex.	2,932	3,591	-	915	994	1	7	19	438
MOUNTAIN	364	396	1	303	371	15	10	10	142
Mont.	2	5	-	14	34	-	1	8	73
Idaho	14	6	-	19	20	4	-	1	1
Wyo.	4	7	-	-	8	-	-	1	3
Colo.	83	90	-	27	47	5	2	-	23
N. Mex.	50	121	-	58	77	1	3	-	9
Ariz.	137	91	1	142	142	2	3	-	25
Utah	12	13	-	27	25	2	-	-	1
Nev.	62	63	-	16	18	1	1	-	7
PACIFIC	2,406	3,128	1	2,266	2,524	6	65	2	341
Wash.	72	113	-	111	129	-	2	-	1
Oreg.	70	70	-	93	111	2	1	1	1
Calif.	2,214	2,898	1	1,905	2,102	4	58	-	333
Alaska	3	7	-	33	36	-	1	1	6
Hawaii	47	40	-	124	146	-	3	-	-
Guam	-	-	U	5	4	-	-	-	-
P.R.	482	598	-	242	263	-	3	-	34
V.I.	8	11	-	2	1	-	3	-	-
Pac. Trust Terr.	-	-	U	-	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending
July 28, 1984 (30th Week Ending)

Reporting Area	All Causes, By Age (Years)						P&I** Total	Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	592	398	130	37	10	17	38	S. ATLANTIC	1,332	802	299	135	55	41	65
Boston, Mass.	171	107	45	12	2	5	19	Atlanta, Ga.	117	72	26	11	5	3	8
Bridgeport, Conn.	34	23	6	2	-	3	1	Baltimore, Md.	264	167	63	20	6	8	8
Cambridge, Mass.	26	23	3	-	-	-	3	Charlotte, N.C.	62	38	12	7	4	1	4
Fall River, Mass.	27	20	3	3	1	-	-	Jacksonville, Fla.	109	65	32	3	7	2	12
Hartford, Conn.	46	23	15	5	2	1	-	Miami, Fla.	104	61	21	9	8	5	2
Lowell, Mass.	25	14	6	3	1	1	1	Norfolk, Va.	45	31	8	2	2	2	3
Lynn, Mass.	16	12	4	-	-	-	-	Richmond, Va.	92	60	23	6	1	2	13
New Bedford, Mass.	27	19	6	1	1	-	-	Savannah, Ga.	54	40	9	3	1	1	4
New Haven, Conn.	38	30	4	2	1	1	2	St. Petersburg, Fla.	103	85	13	1	1	3	8
Providence, R.I.	56	34	10	5	2	5	2	Tampa, Fla.	63	39	16	3	1	4	5
Somerville, Mass.	7	6	1	-	-	-	-	Washington, D.C.	272	116	64	68	17	7	3
Springfield, Mass.	39	28	8	3	-	-	4	Wilmington, Del.	47	28	12	2	2	3	2
Waterbury, Conn.	26	20	5	-	-	1	2								
Worcester, Mass.	54	39	14	1	-	-	3								
MID. ATLANTIC	2,367	1,565	489	191	50	72	86	E.S. CENTRAL	657	395	166	56	23	17	32
Albany, N.Y.	42	35	4	2	-	1	4	Birmingham, Ala.	130	80	31	12	2	5	3
Allentown, Pa.	20	15	5	-	-	-	-	Chattanooga, Tenn.	53	34	10	5	4	-	3
Buffalo, N.Y.	114	79	22	7	3	3	10	Knoxville, Tenn.	82	53	19	5	1	4	9
Camden, N.J.	38	26	8	1	-	3	1	Louisville, Ky.	84	47	18	11	4	4	5
Elizabeth, N.J.	22	11	6	5	-	-	-	Memphis, Tenn.	112	68	30	8	5	1	6
Erie, Pa.	27	20	5	-	-	2	2	Mobile, Ala.	35	23	8	3	1	-	-
Jersey City, N.J.	62	37	16	4	1	4	-	Montgomery, Ala.	45	29	12	2	-	2	1
N.Y. City, N.Y.	1,348	861	273	136	32	46	41	Nashville, Tenn.	116	61	38	10	6	1	5
Newark, N.J.	93	49	21	13	5	5	5								
Paterson, N.J.	22	13	7	1	-	1	1	W.S. CENTRAL	1,341	785	296	113	69	78	47
Philadelphia, Pa.	105	71	26	5	1	2	2	Austin, Tex.	57	39	8	7	3	-	6
Pittsburgh, Pa.	93	61	26	4	-	2	2	Baton Rouge, La.	38	23	6	3	3	3	2
Reading, Pa.	32	25	5	1	-	-	-	Corpus Christi, Tex.	34	22	5	2	2	3	-
Rochester, N.Y.	114	89	20	3	2	-	7	Dallas, Tex.	188	102	46	15	15	10	5
Schenectady, N.Y.	24	19	3	1	1	-	1	El Paso, Tex.	73	36	24	7	4	2	2
Scranton, Pa.	22	19	3	-	-	-	-	Fort Worth, Tex.	117	70	23	9	3	12	6
Syracuse, N.Y.	94	65	20	4	3	2	1	Houston, Tex.	288	150	72	28	19	19	4
Trenton, N.J.	39	24	10	3	2	-	1	Little Rock, Ark.	83	47	14	10	5	7	4
Utica, N.Y.	24	18	5	1	-	-	5	New Orleans, La.	130	72	34	7	3	14	-
Yonkers, N.Y.	32	28	4	-	-	-	3	San Antonio, Tex.	173	113	37	13	4	6	12
								Shreveport, La.	69	50	11	6	1	1	2
								Tulsa, Okla.	91	61	16	6	7	1	4
E.N. CENTRAL	2,066	1,311	470	155	68	62	75	MOUNTAIN	623	385	142	43	28	25	23
Akron, Ohio	81	54	17	4	2	4	1	Albuquerque, N.Mex.	63	36	12	10	4	1	-
Canton, Ohio	24	13	5	6	-	-	-	Colo. Springs, Colo.	38	20	13	1	1	3	5
Chicago, Ill.	402	245	97	39	12	9	8	Denver, Colo.	114	74	26	7	4	3	1
Cincinnati, Ohio	119	83	24	8	1	3	12	Las Vegas, Nev.	66	37	18	5	4	2	6
Cleveland, Ohio	164	96	43	7	9	9	9	Ogden, Utah	19	12	4	1	2	-	-
Columbus, Ohio	129	84	30	8	6	1	11	Phoenix, Ariz.	142	94	31	7	5	5	2
Dayton, Ohio	92	59	27	4	1	1	2	Pueblo, Colo.	27	21	5	-	-	1	4
Detroit, Mich.	213	116	54	22	8	13	4	Salt Lake City, Utah	58	33	12	5	2	6	-
Evansville, Ind.	49	39	6	1	2	1	5	Tucson, Ariz.	96	58	21	7	6	4	5
Fort Wayne, Ind.	48	33	13	1	-	-	1								
Gary, Ind.	10	2	3	4	1	-	-	PACIFIC	1,794	1,272	294	100	68	49	84
Grand Rapids, Mich.	88	64	13	6	4	1	9	Berkeley, Calif.	19	14	4	1	-	-	-
Indianapolis, Ind.	183	112	43	15	7	6	3	Fresno, Calif.	72	37	14	14	4	3	3
Madison, Wis.	40	20	9	5	3	3	1	Glendale, Calif. §	23	23	-	-	-	-	1
Milwaukee, Wis.	114	78	22	7	3	4	3	Honolulu, Hawaii	58	40	11	2	2	3	3
Peoria, Ill.	48	32	9	4	1	2	5	Long Beach, Calif. §	50	63	19	3	3	2	4
Rockford, Ill.	40	25	11	2	1	1	-	Los Angeles, Calif. §	446	402	6	3	15	9	11
South Bend, Ind.	47	37	7	1	2	-	2	Oakland, Calif.	83	53	20	4	2	4	5
Toledo, Ohio	106	78	18	4	3	3	4	Pasadena, Calif.	21	12	7	1	1	-	1
Youngstown, Ohio	69	41	19	7	1	1	1	Portland, Ore.	126	88	27	4	4	3	4
								Sacramento, Calif.	112	69	27	10	6	-	5
W.N. CENTRAL	660	426	143	45	24	22	26	San Diego, Calif.	140	87	27	10	11	5	16
Des Moines, Iowa	62	44	12	3	1	2	5	San Francisco, Calif.	174	108	40	17	5	4	7
Duluth, Minn.	21	16	3	1	-	1	-	San Jose, Calif.	168	108	29	17	8	6	16
Kansas City, Kans.	28	14	5	5	3	1	1	Seattle, Wash.	137	85	35	9	4	4	2
Kansas City, Mo.	99	54	31	7	3	4	2	Spokane, Wash.	59	39	13	4	2	1	5
Lincoln, Nebr.	28	26	1	-	-	1	1	Tacoma, Wash.	66	44	15	1	1	5	1
Minneapolis, Minn.	65	43	13	6	2	1	-								
Omaha, Nebr.	85	56	17	7	1	4	5								
St. Louis, Mo.	136	83	36	7	7	3	1	TOTAL	11,432††	7,339	2,429	875	395	383	476
St. Paul, Minn.	75	48	16	5	4	2	-								
Wichita, Kans.	61	42	9	4	3	3	11								

* 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 4 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 4 weeks.

Syphilis — Continued

3. Judson FN. Fear of AIDS and gonorrhea rates in homosexual men. *Lancet* 1983;II:159-60.
4. CDC. Declining rates of rectal and pharyngeal gonorrhea among males—New York City. *MMWR* 1984;33:295-7.
5. Rathbun KC. Congenital syphilis. *Sex Transm Dis* 1983;10:93-9.
6. Mascola L, Pelosi R, Blount JH, Binkin NJ, Alexander CE, Cates W Jr. Congenital syphilis—why is it still occurring? *JAMA* (in press).
7. Ingall D, Musher D. Syphilis. In: Remington JS, Klein JO, eds. *Infectious diseases of the fetus and newborn infant*. Philadelphia: WB Saunders, 1983:335-74.

Investigating Problems with Respirators

From July 1, 1983, through June 30, 1984, the National Institute for Occupational Safety and Health (NIOSH) received 35 reports of problems with respirators* (Table 4). Investigations of each report revealed that 21 (60%) of the problems involved self-contained breathing apparatus; nine of these were classified as causing or likely to cause immediate death or illness of or injury to the user. A report of one investigation follows.

On July 15, 1983, a manufacturer of compressed-gas cylinders notified NIOSH of reported cracks in some of its cylinders. These cylinders were used in various breathing apparatus that had been approved by NIOSH and the Mine Safety and Health Administration (MSHA), U.S. Department of Labor, in their joint program for respirator approval. Company officials indicated that one of the cracked cylinders had ruptured; at least one other cracked cylinder was later reported to have ruptured. Since all defective cylinders were discovered in storage or during maintenance, no adverse effects occurred to workers; however, the defects were classified as potentially life-threatening.

Several respirators, previously approved by NIOSH, incorporated the potentially defective cylinders produced by the company. All manufacturers of these respirators were contacted, and although each stocked this company's cylinders, only two had sold units containing cylinders with serial numbers specified by the company. Approximately 7,000 cylinders were potentially defective, and about 2,000 of these were estimated to be in the hands of users. On July 21, 1983, NIOSH issued a Warning to Users, describing the problem, identifying the serial numbers, and recommending that the potentially defective cylinders be emptied and not used. The U.S. Department of Transportation (DOT), which regulates the interstate shipment of compressed-gas cylinders, then issued a notice to recall the cylinders. After further ruptures occurred, DOT, in February 1984, reduced the allowable pressure for these cylinders from 4,500 to 4,000 pounds per square inch. NIOSH issued a Notice to Users on February 29, 1984, advising owners of more than 75,000 cylinders manufactured by this company

TABLE 4. Problems associated with respirators and reported to NIOSH — July 1, 1983-June 30, 1984

Problem	Number reported
Loss of breathing gas*	4
Failure to operate*	2
Damage by fire*	1
Mechanical defects*	2
Rejection by user†	14
Other mechanical defects‡	12
Total	35

*Potentially life-threatening.

†For example: short life, high breathing resistance, facepiece irritation, chemical damage, failure to filter dust from breathing zone.

‡For example: improper seals, pinholes and tears, dents in threads, overfilled cartridge.

Respirators – Continued

of this requirement for reduced pressure and of the reduced service time that results from the required reduction in pressure. No further ruptures have occurred in cylinders with reduced pressure, and as cracked cylinders are found during the ongoing schedule of physical examinations, they are removed from service.

Reported by Certification Br, Div of Safety Research, National Institute for Occupational Safety and Health, CDC.

Editorial Note: The joint NIOSH/MSHA program for approving respirators is mandated by the Mine Safety and Health Amendments Act of 1977. It is conducted in accordance with requirements published in the Code of Federal Regulations, Title 30, Part 11. The Occupational Safety and Health Administration and several other federal regulatory agencies require the use of NIOSH/MSHA-approved respirators wherever such devices are needed to protect workers.

NIOSH receives reports of problems identified in approved respirators from respirator users and from investigations carried out by manufacturers. Problems include deficiencies in the design and performance of respirators and difficulties with their use. NIOSH classifies reported problems according to their potential for causing adverse health effects. Problems classified "A" have resulted in or are likely to result in immediate death or illness of or injury to the user. Those classified "B" may result in future illness of the user. Those classified "C" will probably lead to a worker either rejecting or refusing to wear a respirator. Problems classified "D" have no apparent immediate or future effect on the health and safety of the user. NIOSH notifies the respirator manufacturer of the reported problems and requests an investigation and corrective action, if needed. This information is also used in research to improve the design and performance of respirators. NIOSH may request that defective respirators be recalled, retrofitted, or replaced. Sale of the respirator as a NIOSH/MSHA-approved apparatus may also be stopped. When necessary, users of respirators are alerted to deficiencies or difficulties that could affect their health and safety. If the manufacturer cannot identify and notify purchasers of the defective respirators, NIOSH issues a warning to more than 9,000 users of respirators and other interested persons.

Users of NIOSH/MSHA-approved respirators who find defects in or notice inadequate performance of approved respirators are asked to report these findings to: Respirator Problem Coordinator, Certification Branch, Division of Safety Research, NIOSH, 944 Chestnut Ridge Road, Morgantown, West Virginia 26505; phone: (304) 291-4595 or FTS 923-4595.

*Any device designed to provide the wearer with respiratory protection against inhalation of a hazardous atmosphere.

Experimental Infection of Chimpanzees with Lymphadenopathy-Associated Virus

Evidence from two investigations indicates that the retrovirus etiologically linked to acquired immunodeficiency syndrome (AIDS) may infect chimpanzees (*Pan troglodytes*). In the first study, investigators from CDC and Emory University's Yerkes Regional Primate Research Center, Atlanta, Georgia, inoculated two chimpanzees with lymphadenopathy-associated virus (LAV) (1), one of two prototype retrovirus isolates etiologically associated with AIDS (2). Both animals were virologically and serologically negative before inoculation; both were injected simultaneously with concentrated virus and autologous lymphocytes that had been infected in vitro with LAV. Both animals were immunostimulated concomitantly by inoculation of diphtheria-tetanus toxoid and pneumococcal vaccine. One animal received human lymphocytes as an additional immunostimulant.

Six days after inoculation, a retrovirus identified as LAV by reverse transcriptase assay, direct immunofluorescence, p25 competitive radioimmunoprecipitation, and electron micros-

LAV – Continued

copy was identified from peripheral lymphocytes of both animals. The virus was isolated from both animals from six consecutive lymphocyte specimens obtained every 2-4 weeks. The most recent specimens were obtained more than 4 months after inoculation. Antibody to the major core protein (p25) of LAV was first detected 3 months after inoculation and was again present at 4 months. In both animals, five consecutive postinoculation T_4/T_8 ratio determinations have shown an apparent downward trend, although values are significantly below normal in only one. No clinical illness has been detected in the animals, and physical examinations have remained normal.

In the second study, investigators at the National Institutes of Health (NIH) and Southwest Foundation for Biomedical Research have found evidence of transmission of HTLV-III to two chimpanzees receiving human plasma from an individual with the lymphadenopathy syndrome. Evidence for infection includes anti-HTLV-III seroconversion, depression of T_4/T_8 ratios, and, in one animal, the development of severe, prolonged lymphadenopathy coincident with seroconversion.

Reported by H McClure, DVM, B Swenson, DVM, F King, PhD, Yerkes Regional Primate Research Center, Emory University, Atlanta, Georgia; J-C Chermann, PhD, F Barre-Sinoussi, PhD, L Montagnier, MD, Institut Pasteur, Paris, France; J Eichberg, Southwest Foundation for Biomedical Research, San Antonio, Texas; C Saxinger, R Gallo, National Cancer Institute; H Alter, H Masur, A Macher, Clinical Center, C Lane, A Fauci, National Institute of Allergy and Infectious Diseases, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, Maryland; Div of Viral Diseases, Div of Host Factors, Center for Infectious Diseases, CDC.

Editorial Note: Primate transmission experiments have been under way at CDC and NIH for some time. LAV and HTLV-III, as well as human AIDS tissue, have been inoculated into several species of primates, including marmosets, rhesus monkeys, and chimpanzees. Except for some lymphocyte changes (3), no disease or infection has been previously reported. The studies reported here indicate that LAV/HTLV-III can be transmitted to chimpanzees both by inoculating virus isolates and human plasma. In some instances, immunologic abnormalities and prolonged lymphadenopathy have followed inoculation, but opportunistic infections or tumors characteristic of AIDS have not developed. Transmission of HTLV-III from lymphocyte-poor human plasma is consistent with reports of AIDS among recipients of plasma or anti-hemophilic concentrates made from pooled plasma (4,5).

The virus isolated from the LAV-inoculated chimpanzees was morphologically and immunologically identical to LAV. Virus particles were morphologically distinct from the Type D retrovirus etiologically implicated in "simian AIDS," a transmissible syndrome of macaques (6,7).

Long-term follow-up of the LAV and HTLV-III-infected chimpanzees, as well as other primates, is continuing. Careful examination of the interaction between infection and host response in primates could clarify the pathogenesis of AIDS in humans.

References

1. Barre-Sinoussi F, Chermann JC, Rey F, et al. Isolation of a T-lymphotropic retrovirus from a patient at risk for acquired immune deficiency syndrome (AIDS). *Science* 1983;220:868-71.
2. Gallo RC, Salahuddin SZ, Popovic M, et al. Frequent detection and isolation of cytopathic retroviruses (HTLV-III) from patients with AIDS and at risk for AIDS. *Science* 1984;224:500-3.
3. Gajdusek DC, Amyx HL, Gibbs CJ, et al. Transmission experiments with human T-lymphotropic retroviruses and human AIDS tissue. *Lancet* 1984;ii:1415-6.
4. Curran JW, Lawrence DN, Jaffe HW, et al. Acquired immunodeficiency syndrome (AIDS) associated with transfusions. *N Engl J Med* 1984;310:69-75.
5. Evatt BL, Ramsey RB, Lawrence DN, Zyla LD, Curran JW. Acquired immunodeficiency syndrome in hemophilia patients. *Ann Int Med* 1984;100:495-8.
6. Marx PA, Maul DH, Osborn KG, et al. Simian AIDS: isolation of a type D retrovirus and transmission of the disease. *Science* 1984;223:1083-6.
7. Letvin NL, Aldrich WR, King NW, et al. Experimental transmission of macaque AIDS by means of inoculation of macaque lymphoma tissue. *Lancet* 1983;ii:599-602.

International Conference on Acquired Immunodeficiency Syndrome

An International Conference on Acquired Immunodeficiency Syndrome (AIDS) will be held April 15-17, 1985, at the World Congress Center, Atlanta, Georgia, sponsored by CDC; the National Institutes of Health; the Food and Drug Administration; the Alcohol, Drug Abuse, and Mental Health Administration; the Health Resources and Services Administration; and the World Health Organization. The purpose of the meeting is to review strategies for the prevention and control of AIDS and to exchange information on screening and diagnostic tests for AIDS and on the epidemiology, virology, immunology, clinical manifestations, and treatment of AIDS. Seating will be available for 1,800 participants. An announcement of keynote speakers and a call for abstracts will be published later. To obtain further information and future announcements, contact:

AIDS Conference
Building 1, Room 2047
Centers for Disease Control
Atlanta, Georgia 30333.

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: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

Director, Centers for Disease Control
James O. Mason, M.D., Dr.P.H.
Director, Epidemiology Program Office
Carl W. Tyler, Jr., M.D.

Editor Pro Tem
Walter W. Williams, M.D., M.P.H.
Assistant Editor
Karen L. Foster, M.A.

☆U.S. Government Printing Office: 1984-746-149/10006 Region IV

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control
Atlanta GA 30333

Official Business

Penalty for Private Use \$300



Postage and Fees Paid
U.S. Dept. of H.H.S.

X

S *HCRH NEWV75 8129
DR VERNE F NEWHOUSE
VIROLOGY DIVISION
CID
7-B14