CENTERS FOR DISEASE CONTROL

March 4, 1983 / Vol. 32 / No. 8

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Current Trends

Prevention of Acquired Immune Deficiency Syndrome (AIDS): Report of Inter-Agency Recommendations

Since June 1981, over 1,200 cases of acquired immune deficiency syndrome (AIDS) have been reported to CDC from 34 states, the District of Columbia, and 15 countries. Reported cases of AIDS include persons with Kaposi's sarcoma who are under age 60 years and/or persons with life-threatening opportunistic infections with no known underlying cause for immune deficiency. Over 450 persons have died from AIDS, and the case-fatality rate exceeds 60% for cases first diagnosed over 1 year previously (*1,2*). Reports have gradually increased in number. An average of one case per day was reported during 1981, compared with three to four daily in late 1982 and early 1983. Current epidemiologic evidence identifies several groups in the United States at increased risk for developing AIDS (*3-7*). Most cases have been reported among homosexual men with multiple sexual partners, abusers of intravenous (IV) drugs, and Haitians, especially those who have entered the country within the past few years. However, each group contains many persons who probably have little risk of acquiring AIDS. Recently, 11 cases of unexplained, life-threatening opportunistic infections and cellular immune deficiency have been diagnosed in patients with hemophilia. Available data suggest that the severe disorder of immune regulation underlying AIDS is caused by a transmissible agent.

A national case-control study and an investigation of a cluster of cases among homosexual men in California indicate that AIDS may be sexually transmitted among homosexual or bisexual men (*8,9*). AIDS cases were recently reported among women who were steady sexual partners of men with AIDS or of men in high-risk groups, suggesting the possibility of heterosexual transmission (*10*). Recent reports of unexplained cellular immunodeficiencies and opportunistic infections in infants born to mothers from groups at high risk for AIDS have raised concerns about in utero or perinatal transmission of AIDS (*11*). Very little is known about risk factors for Haitians with AIDS.

The distribution of AIDS cases parallels that of hepatitis B virus infection, which is transmitted sexually and parenterally. Blood products or blood appear responsible for AIDS among hemophilia patients who require clotting factor replacement. The likelihood of blood transmission is supported by the occurrence of AIDS among IV drug abusers. Many drug abusers share contaminated needles, exposing themselves to blood-borne agents, such as hepatitis B virus. Recently, an infant developed severe immune deficiency and an opportunistic infection several months after receiving a transfusion of platelets derived from the blood of a man subsequently found to have AIDS (*12*). The possibility of acquiring AIDS through blood components or blood is further suggested by several cases in persons with no known risk factors who have received blood products or blood within 3 years of AIDS diagnosis (*2*). These cases are currently under investigation.

No AIDS cases have been documented among health care or laboratory personnel caring

AIDS — Continued

for AIDS patients or processing laboratory specimens. To date, no person-to-person transmission has been identified other than through intimate contact or blood transfusion.

Several factors indicate that individuals at risk for transmitting AIDS may be difficult to identify. A New York City study showed that a significant proportion of homosexual men who were asymptomatic or who had nonspecific symptoms or signs (such as generalized lymphadenopathy) had altered immune functions demonstrated by in vitro tests (*2,13,14*). Similar findings have been reported among patients with hemophilia (*2,15,16*). Although the significance of these immunologic alterations is not yet clear, their occurrence in at least two groups at high risk for AIDS suggests that the pool of persons potentially capable of transmitting an AIDS agent may be considerably larger than the presently known number of AIDS cases. Furthermore, the California cluster investigation and other epidemiologic findings suggest a "latent period" of several months to 2 years between exposure and recognizable clinical illness and imply that transmissibility may precede recognizable illness. Thus, careful histories and physical examinations alone will not identify all persons capable of transmitting AIDS but should be useful in identifying persons with definite AIDS diagnoses or related symptoms, such as generalized lymphadenopathy, unexplained weight loss, and thrush. Since only a small percentage of members of high-risk groups actually has AIDS, a laboratory test is clearly needed to identify those with AIDS or those at highest risk of acquiring AIDS. For the above reasons, persons who may be considered at increased risk of AIDS include those with symptoms and signs suggestive of AIDS; sexual partners of AIDS patients; sexually active homosexual or bisexual men with multiple partners; Haitian entrants to the United States; present or past abusers of IV drugs; patients with hemophilia; and sexual partners of individuals at increased risk for AIDS.

Statements on prevention and control of AIDS have been issued by the National Gay Task Force, the National Hemophilia Foundation, the American Red Cross, the American Association of Blood Banks, the Council of Community Blood Centers, the American Association of Physicians for Human Rights, and others. These groups agree that steps should be implemented to reduce the potential risk of transmitting AIDS through blood products, but differ in the methods proposed to accomplish this goal. Public health agencies, community organizations, and medical organizations and groups share the responsibility to rapidly disseminate information on AIDS and recommended precautions.

Although the cause of AIDS remains unknown, the Public Health Service recommends the following actions:

1. Sexual contact should be avoided with persons known or suspected to have AIDS. Members of high risk groups should be aware that multiple sexual partners increase the probability of developing AIDS.
2. As a temporary measure, members of groups at increased risk for AIDS should refrain from donating plasma and/or blood. This recommendation includes all individuals belonging to such groups, even though many individuals are at little risk of AIDS. Centers collecting plasma and/or blood should inform potential donors of this recommendation. The Food and Drug Administration (FDA) is preparing new recommendations for manufacturers of plasma derivatives and for establishments collecting plasma or blood. This is an interim measure to protect recipients of blood products and blood until specific laboratory tests are available.
3. Studies should be conducted to evaluate screening procedures for their effectiveness in identifying and excluding plasma and blood with a high probability of transmitting AIDS. These procedures should include specific laboratory tests as well as careful histories and physical examinations.

AIDS – Continued

4. Physicians should adhere strictly to medical indications for transfusions, and autologous blood transfusions are encouraged.
5. Work should continue toward development of safer blood products for use by hemophilia patients.

The National Hemophilia Foundation has made specific recommendations for management of patients with hemophilia (*17*).

The interim recommendation requesting that high-risk persons refrain from donating plasma and/or blood is especially important for donors whose plasma is recovered from plasmapheresis centers or other sources and pooled to make products that are not inactivated and may transmit infections, such as hepatitis B. The clear intent of this recommendation is to eliminate plasma and blood potentially containing the putative AIDS agent from the supply. Since no specific test is known to detect AIDS at an early stage in a potential donor, the recommendation to discourage donation must encompass all members of groups at increased risk for AIDS, even though it includes many individuals who may be at little risk of transmitting AIDS.

As long as the cause remains unknown, the ability to understand the natural history of AIDS and to undertake preventive measures is somewhat compromised. However, the above recommendations are prudent measures that should reduce the risk of acquiring and transmitting AIDS.

Reported by the Centers for Disease Control, the Food and Drug Administration, and the National Institutes of Health.

References

1. CDC. Update on acquired immune deficiency syndrome (AIDS)—United States. MMWR 1982;31:507-8, 513-4.
2. CDC. Unpublished data.
3. CDC. Update on Kaposi's sarcoma and opportunistic infections in previously health persons—United States. MMWR 1982;31:294, 300-1.
4. CDC. Opportunistic infections and Kaposi's sarcoma among Haitians in the United States. MMWR 1982;31:353-4, 360-1.
5. CDC. *Pneumocystis carinii* pneumonia among persons with hemophilia A. MMWR 1982;31:365-7.
6. CDC. Update on acquired immune deficiency syndrome (AIDS) among patients with hemophilia A. MMWR 1982;31:644-6, 652.
7. Vieira J, Frank E, Spira TJ, Landesman SH. Acquired immune deficiency in Haitians: opportunistic infections in previously healthy Haitian immigrants. N Engl J Med 1983;308:125-9.
8. CDC. Unpublished data.
9. CDC. A cluster of Kaposi's sarcoma and *Pneumocystis carinii* pneumonia among homosexual male residents of Los Angeles and Orange Counties, California. MMWR 1982;31:305-7.
10. CDC. Immunodeficiency among female sexual partners of males with acquired immune deficiency syndrome (AIDS)—New York. MMWR 1983;31:697-8.
11. CDC. Unexplained immunodeficiency and opportunistic infections in infants—New York, New Jersey, California. MMWR 1982;31:665-7.
12. CDC. Possible transfusion-associated acquired immune deficiency syndrome (AIDS)—California. MMWR 1982;31:652-4.
13. CDC. Persistent, generalized lymphadenopathy among homosexual males. MMWR 1982;31:249-51.
14. Kornfeld H, Vande Stouwe RA, Lange M, Reddy MM, Grieco MH. T-lymphocyte subpopulations in homosexual men. N Engl J Med 1982;307:729-31.
15. Lederman MM, Ratnoff OD, Scillian JJ, Jones PK, Schacter B. Impaired cell-mediated immunity in patients with classic hemophilia. N Engl J Med 1983;308:79-83.
16. Menitove JE, Aster RH, Casper JT, et al. T-lymphocyte subpopulations in patients with classic hemophilia treated with cryoprecipitate and lyophilized concentrates. N Engl J Med 1983;308:83-6.
17. Medical and Scientific Advisory Council. Recommendations to prevent AIDS in patients with hemophilia. New York: National Hemophilia Foundation, January 14, 1983.

Neonatal and Infant Weight-Specific Mortality Rates — New Mexico

As recent studies have indicated, underreporting of neonatal deaths may occur when neonatal mortality rates are below 750 per 1,000 live births in the 500-1,000 g birth-weight range (*1-3*). In a current study, neonatal* and infant† weight-specific mortality rates for New Mexico were computed from that state's vital statistics data. No significant underreporting was found.

New Mexico recorded 87,724 births from 1974 through 1977. Of 1,438 recorded infant deaths, 1,364 (95%) were matched with corresponding birth records. Accuracy of neonate and infant classifications in the New Mexico records was checked by comparing vital statistics codes with a computer calculation of age at death (day, month, and year of birth were subtracted from day, month, and year of death [*4*]). In only nine instances was age at death coded as neonatal when it should have been postneonatal, or vice versa. Tables 1 and 2 show the New Mexico rates plus corrected neonatal mortality rates for Georgia, 1974-1976 (*2*), infant mortality rates for New York City, 1968 (*5*), and neonatal and infant mortality rates for the United States, 1960 (*6*). To assess relative differences in rates for various areas, 95% confidence intervals were constructed for each birth-weight category§ (*7*).

*Less than 28 days of age

†Less than 365 days of age

§Although previous studies have reported weight-specific mortality rates in grams, New Mexico's weights were reported in pounds and ounces; thus, the data here are given in both systems.

TABLE 1. Neonatal weight-specific mortality rates* — New Mexico, Georgia, United States

Weight in grams (pounds)	New Mexico (1974-1977)	Georgia (1974-1976)	United States (1960)
≤ 1,000 (≤ 2.25)	778.7	796.9	912.8†
1,001-1,500 (2.26-3.29)	301.4	316.9	521.5†
1,501-2,000 (3.30-4.39)	100.9	76.7	180.6†
2,001-2,500 (4.40-5.50)	19.7	18.1	41.4†
> 2,500 (> 5.50)	3.0	2.9	5.5†
Unknown	398.3	51.6§	—
Total¶	10.8	13.7§	18.4†

*Number of individuals who died before 28 days of age per 1,000 live births

†Significantly different, at the 95% level, from Georgia's and New Mexico's rates

§Significantly different, at the 95% level, from New Mexico's rates

¶Data for all weight categories combined (including unknown)

Neonatal Mortality Rates – Continued

Neonatal mortality rates for New Mexico did not differ statistically in any of the five weight-specific categories from the corresponding corrected rates for Georgia. Similarly, infant mortality rates for New Mexico did not differ statistically in the first four weight-specific categories from the corresponding rates for New York City. In the over-2500-g category, the infant mortality rate from New Mexico was statistically distinct from that of New York City. Although the difference was not large, it was important because 90% of the births occurred in this category. In the unknown-weight category, New Mexico's rate was statistically different from Georgia's for neonates and from New York City's for infants. The total neonatal mortality rate (data for all known and unknown birth weights combined) for New Mexico differed statistically from that for Georgia, and the total infant mortality rate for New Mexico differed statistically from that for New York City. This shows the effects of the unknown category and of the differential composition of each birth-weight category on the total mortality rate. For New York City, it may also reflect the 6-year lag between the study in that city and the New Mexico study.

U.S. mortality rates for both neonates and infants in all weight-specific categories and totals were significantly higher for 1960 than were the corresponding rates from the later studies in New Mexico, Georgia, and New York City, presumably because of improved standards of living, medical technology, and public health.

Reported by RG Rogers, Population Research Center, University of Texas, Austin, Texas; MW Ammann, AA Ortiz, P Totkamachi, New Mexico Vital Statistics Bureau, Santa Fe, New Mexico.

Editorial Note: Many studies of neonatal and infant mortality begin by reviewing and matching birth and death certificates and then verifying the data with computer tape records. The

TABLE 2. Infant weight-specific mortality rates* – New Mexico, New York City, United States

Weight in grams (pounds)	New Mexico (1974-1977)	New York (1968)	United States (1960)
≤ 1,000 (≤ 2.25)	801.1	847.2	919.3†
1,001-1,500 (2.26-3.29)	340.1	379.5	548.5†
1,501-2,000 (3.30-4.39)	119.9	131.1	206.6†
2,001-2,500 (4.40-5.50)	30.2	34.9	58.4†
> 2,500 (> 5.50)	7.0	8.4§	11.2†
Unknown	855.9	132.3§	--
Total¶	16.4	21.9§	25.1†

*Number of individuals who died before 365 days of age per 1,000 live births

†Significantly different, at the 95% level, from New York's and New Mexico's rates

§Significantly different, at the 95% level, from New Mexico's rates

¶Data for all weight categories combined (including unknown)

Neonatal Mortality Rates – Continued

New Mexico study was done in reverse. While some data may have been missed because they were miscoded or not entered on the tape, other records found on the tape were not filed with the birth and death certificates. Thus, it appears to make little difference which starting point is used.

A comparison of New Mexico's weight-specific mortality rates with those of the United States and New York City and corrected rates for Georgia uncovered no reason to follow-up any particular weight group in the New Mexico study. Moreover, New Mexico's neonatal mortality rate for the 500-1,000-g birth weight category exceeded the minimum rate of 750 deaths per 1,000 live births at which underreporting should be suspected (*1*).

For comparison purposes, investigators and public health officials in other states may use the baseline rates provided by this current study.

References

1. CDC. Underreporting of neonatal deaths—Georgia, 1974-1977. MMWR 1979;28:253-4.
2. McCarthy BJ, Terry J, Rochat RW, Quave S, Tyler CW Jr. The underregistration of neonatal deaths: Georgia 1974-77. Am J Public Health 1980;70:977-82.
3. Rogers PB, Council CR, Abernathy JR. Testing death registration completeness in a group of premature infants. Public Health Rep 1961;76:717-24.

(Continued on page 111)

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

Disease	8th Week Ending			Cumulative, 8th Week Ending		
	February 26, 1983	February 27, 1982	Median 1978-1982	February 26, 1983	February 27, 1982	Median 1978-1982
Aseptic meningitis	57	81	62	657	625	509
Encephalitis: Primary (arthropod-borne & unspec.)	16	20	17	121	119	97
Post-infectious	1	-	4	6	5	20
Gonorrhea: Civilian	15,549	18,089	16,901	137,661	144,957	145,280
Military	396	344	480	3,706	4,259	4,259
Hepatitis: Type A	574	655	527	3,641	3,427	4,009
Type B	435	443	272	3,127	2,789	2,249
Non A, Non B	69	35	N	432	230	N
Unspecified	180	217	196	1,120	1,234	1,458
Legionellosis	17	5	N	77	39	N
Leprosy	6	1	1	36	18	23
Malaria	15	24	23	92	107	107
Measles: Total	16	8	172	74	72	1,141
Indigenous	13	N	N	57	N	N
Imported*	3	N	N	17	N	N
Meningococcal infections: Total	60	84	73	462	471	471
Civilian	60	83	73	453	468	468
Military	-	1	-	9	3	3
Mumps	71	176	230	578	744	1,980
Pertussis	31	33	37	162	145	172
Rubella (German measles)	21	43	91	122	257	511
Syphilis (Primary & Secondary): Civilian	657	678	473	5,161	5,229	4,010
Military	3	9	9	81	71	64
Toxic-shock syndrome	6	N	N	52	N	N
Tuberculosis	429	520	494	3,098	3,399	3,428
Tularemia	5	2	1	23	12	13
Typhoid fever	14	4	8	49	60	60
Typhus fever, tick-borne (RMSF)	-	1	-	9	15	8
Rabies, animal	96	125	96	685	666	666

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1983		Cum. 1983
Anthrax	-	Plague	-
Botulism: Foodborne	4	Poliomyelitis: Total	1
Infant	6	Paralytic	1
Other (Mass. 2)	2	Psittacosis (Mo. 1, Calif. 1)	7
Brucellosis (Ark. 3)	14	Rabies, human	-
Cholera	-	Tetanus	7
Congenital rubella syndrome	4	Trichinosis	3
Diphtheria	-	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	3
Leptospirosis (La. 1)	4		

*Three of the sixteen 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.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 26, 1983 and February 27, 1982 (8th week)

Reporting Area	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy	Malaria
		Primary	Post-infectious			A	B	NA,NB	Unspecified			
	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1982	1983	1983	1983	1983	1983	Cum. 1983	Cum. 1983
UNITED STATES	57	121	6	137,661	144,957	574	435	69	180	17	36	92
NEW ENGLAND	2	5	-	3,628	3,238	5	20	1	11	3	-	1
Maine	-	-	-	213	173	-	2	-	-	-	-	-
N.H.	-	-	-	104	122	-	-	-	-	-	-	-
Vt.	-	-	-	62	78	1	4	-	-	-	-	-
Mass.	1	3	-	1,522	1,439	4	9	1	11	-	-	-
R.I.	1	-	-	202	231	-	3	-	-	-	-	-
Conn.	-	2	-	1,525	1,195	-	2	-	-	3	-	1
MID ATLANTIC	12	19	-	17,568	16,950	109	129	8	20	-	3	17
Upstate N.Y.	3	9	-	2,428	2,635	10	16	2	1	-	-	6
N.Y. City	4	6	-	7,208	7,278	38	18	-	4	-	3	7
N.J.	2	2	-	3,443	3,034	16	30	1	13	-	-	3
Pa.	3	2	-	4,489	4,003	45	65	5	2	-	-	1
E.N. CENTRAL	4	26	1	16,856	20,680	42	29	5	15	8	1	3
Ohio	2	13	1	5,274	6,048	17	19	1	7	5	1	-
Ind.	-	1	-	2,532	2,703	2	2	-	1	-	-	-
Ill.	-	-	-	2,456	5,154	3	1	1	4	-	-	-
Mich.	2	12	-	4,880	4,917	20	7	3	3	3	-	3
Wis.	-	-	-	1,714	1,858	-	-	-	-	-	-	-
W.N. CENTRAL	2	7	1	6,583	6,766	28	6	2	4	-	-	2
Minn.	-	-	-	1,035	1,003	1	2	-	-	-	-	-
Iowa	1	6	-	674	726	2	1	1	1	-	-	1
Mo.	1	-	-	3,079	3,000	3	-	1	3	-	-	-
N. Dak.	-	-	-	65	89	-	-	-	-	-	-	-
S. Dak.	-	-	-	187	196	-	-	-	-	-	-	-
Nebr.	-	1	-	384	402	20	-	-	-	-	-	-
Kans.	-	-	1	1,159	1,350	2	3	-	-	-	-	1
S. ATLANTIC	15	25	1	34,947	37,211	43	81	9	10	1	1	12
Del.	-	-	-	694	577	-	2	-	-	-	-	-
Md.	3	1	-	4,585	5,055	1	17	1	1	-	-	3
D.C.	-	-	-	2,324	1,798	-	3	1	-	-	-	-
Va.	1	11	1	3,183	3,074	3	7	3	1	1	-	3
W. Va.	-	-	-	360	423	1	1	1	-	-	-	1
N.C.	3	6	-	4,937	6,006	2	6	-	1	-	-	-
S.C.	1	1	-	3,526	3,399	6	9	-	2	-	-	1
Ga.	1	1	-	6,762	6,227	5	12	-	-	-	-	-
Fla.	6	5	-	8,576	10,652	25	24	3	5	-	1	4
E.S. CENTRAL	4	6	2	12,569	11,882	42	20	4	1	2	-	2
Ky.	4	-	-	1,612	1,565	25	-	-	-	-	-	-
Tenn.	-	1	-	4,790	4,543	13	14	2	-	2	-	-
Ala.	-	5	2	3,960	3,605	2	4	2	1	-	-	1
Miss.	-	-	-	2,207	2,169	2	2	-	-	-	-	1
W.S. CENTRAL	6	10	-	19,926	20,503	123	37	1	64	1	2	5
Ark.	-	-	-	1,599	1,648	1	2	-	2	-	-	1
La.	-	1	-	3,167	3,400	36	14	1	4	1	-	-
Okla.	3	3	-	2,407	2,134	13	2	-	10	-	-	2
Tex.	3	6	-	12,753	13,321	73	19	-	48	-	2	2
MOUNTAIN	2	5	-	4,064	5,287	66	32	8	10	1	3	4
Mont.	-	-	-	206	248	3	1	-	-	-	-	-
Idaho	-	-	-	182	218	3	1	-	-	-	-	-
Wyo.	-	1	-	126	152	-	1	-	-	-	-	-
Colo.	1	1	-	1,173	1,472	8	7	-	-	-	-	2
N. Mex.	-	-	-	552	695	10	1	-	-	-	-	-
Ariz.	-	-	-	937	1,399	39	14	5	9	1	3	2
Utah	1	3	-	195	192	1	2	2	-	-	-	-
Nev.	-	-	-	693	911	2	5	1	1	-	-	-
PACIFIC	10	18	1	21,520	22,440	116	81	31	45	1	26	46
Wash.	1	1	-	1,284	1,908	1	4	2	1	-	2	2
Oreg.	-	-	-	1,056	1,303	16	4	2	1	-	1	2
Calif.	6	16	1	18,289	18,274	97	70	27	43	1	18	42
Alaska	-	-	-	464	572	2	2	-	-	-	-	-
Hawaii	3	1	-	427	383	-	1	-	-	-	5	-
Guam	U	-	-	6	20	U	U	U	U	U	-	-
P.R.	1	-	-	432	470	4	7	-	-	-	-	1
V.I.	-	-	-	41	34	-	4	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	80	U	U	U	U	U	-	-

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 26, 1983 and February 27, 1982 (8th week)

Reporting Area	Measles (Rubeola)					Menin-gococcal Infections	Mumps			Pertussis			Rubella		
	Indigenous		Imported *		Total										
	1983	Cum. 1983	1983	Cum. 1983	Cum. 1982	Cum. 1983	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982
UNITED STATES	13	57	3	17	72	462	71	578	744	31	162	145	21	122	257
NEW ENGLAND	-	-	-	-	2	22	4	29	65	1	9	14	-	3	8
Maine	-	-	-	-	-	2	1	5	14	-	-	-	-	-	-
N.H.	-	-	-	-	-	1	1	8	6	-	2	4	-	-	8
Vt.	-	-	-	-	2	-	1	4	3	-	1	-	-	1	-
Mass.	-	-	-	-	-	7	-	4	32	1	5	3	-	2	-
R.I.	-	-	-	-	-	1	1	3	5	-	1	5	-	-	-
Conn.	-	-	-	-	-	11	-	5	5	-	-	2	-	-	-
MID ATLANTIC	-	1	1	2	16	60	6	37	48	15	43	18	6	9	15
Upstate N.Y.	-	-	-	1	10	25	4	14	17	7	23	12	5	6	11
N.Y. City	-	1	-	-	4	8	-	5	8	2	5	3	-	2	4
N.J.	-	-	1†	1	-	6	-	9	9	2	5	2	1	1	-
Pa.	-	-	-	-	2	21	2	9	14	4	10	1	-	-	-
E.N. CENTRAL	-	13	-	5	4	75	36	293	342	5	42	49	2	15	31
Ohio	-	-	-	-	-	31	17	169	218	2	21	10	-	1	-
Ind.	-	-	-	-	1	12	-	8	13	-	3	5	-	-	3
Ill.	-	13	-	-	1	10	5	18	23	3	14	14	-	4	9
Mich.	-	-	-	5	2	20	12	84	62	-	1	6	2	4	8
Wis.	-	-	-	-	-	2	2	14	26	-	3	14	-	6	11
W.N. CENTRAL	-	-	-	-	-	26	2	50	29	-	9	7	-	9	10
Minn.	-	-	-	-	-	3	-	4	3	-	-	2	-	2	1
Iowa	-	-	-	-	-	4	2	26	10	-	2	-	-	-	-
Mo.	-	-	-	-	-	13	-	2	3	-	2	3	-	-	6
N. Dak.	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Kans.	-	-	-	-	-	4	-	18	13	-	5	-	-	7	3
S. ATLANTIC	8	16	2	4	12	108	2	23	75	3	19	12	2	10	9
Del.	-	-	-	-	-	-	-	-	1	-	-	4	-	-	-
Md.	-	-	-	-	-	12	1	4	6	-	-	-	-	1	1
D.C.	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Va.	-	1	-	1	9	14	-	8	10	-	7	-	1	1	5
W. Va.	-	-	-	-	1	-	-	6	35	-	-	2	-	1	1
N.C.	-	-	-	-	-	21	-	3	4	-	-	1	-	-	-
S.C.	-	-	2†	3	-	13	1	1	2	2	2	2	-	-	-
Ga.	1	1	-	-	-	18	-	1	2	-	8	-	-	2	1
Fla.	7	14	-	-	2	29	-	-	15	1	2	3	1	5	1
E.S. CENTRAL	-	-	-	-	4	31	-	9	11	1	1	2	-	1	6
Ky.	-	-	-	-	1	6	-	6	4	-	-	-	-	1	6
Tenn.	-	-	-	-	3	11	-	3	4	1	1	1	-	-	-
Ala.	-	-	-	-	-	13	-	-	1	-	-	-	-	-	-
Miss.	-	-	-	-	-	1	-	-	2	-	-	1	-	-	-
W.S. CENTRAL	-	-	-	-	2	59	11	62	40	3	23	9	4	23	19
Ark.	-	-	-	-	-	2	-	1	3	-	1	-	-	-	-
La.	-	-	-	-	-	9	-	-	-	-	2	-	-	-	-
Okla.	-	-	-	-	-	8	-	-	-	-	2	1	-	-	1
Tex.	-	-	-	-	2	40	11	61	37	3	18	8	4	23	18
MOUNTAIN	-	-	-	1	-	14	2	19	22	2	11	10	-	4	10
Mont.	-	-	-	-	-	-	-	-	1	-	1	-	-	1	1
Idaho	-	-	-	-	-	2	-	1	2	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	1	-	-	-	-	1	3
Colo.	-	-	-	1	-	6	-	1	4	2	6	4	-	-	-
N. Mex.	-	-	-	-	-	2	-	-	-	-	4	2	-	-	1
Ariz.	-	-	-	-	-	1	2	13	7	-	-	4	-	1	1
Utah	-	-	-	-	-	3	-	4	5	-	-	-	-	1	3
Nev.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1
PACIFIC	5	27	-	5	32	67	8	56	112	1	5	24	7	48	149
Wash.	1	1	-	-	14	15	2	9	17	1	1	4	-	-	6
Oreg.	1	2	-	-	-	4	-	-	-	-	-	2	-	2	1
Calif.	3	23	-	5	17	46	5	39	92	-	4	18	7	46	141
Alaska	-	-	-	-	-	-	1	5	3	-	-	-	-	-	-
Hawaii	-	1	-	-	1	2	-	3	-	-	-	-	-	-	1
Guam	U	-	U	-	-	-	U	-	1	U	-	-	U	-	1
P.R.	-	13	-	-	14	5	-	22	4	1	1	1	1	1	2
V.I.	-	1	-	4	-	-	-	-	-	-	-	-	-	1	-
Pac. Trust Terr.	U	-	U	-	-	-	U	-	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations. U: Unavailable †International §Out-of-state

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 26, 1983 and February 27, 1982 (8th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1983	Cum. 1982	1983	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983
UNITED STATES	5,161	5,229	6	429	3,098	23	49	9	685
NEW ENGLAND	119	93	-	8	61	-	2	1	-
Maine	3	-	-	-	5	-	-	-	-
N.H.	1	-	-	-	5	-	-	-	-
Vt.	-	-	-	1	1	-	-	-	-
Mass.	81	67	-	4	25	-	2	1	-
R.I.	2	7	-	-	6	-	-	-	-
Conn.	32	19	-	3	19	-	-	-	-
MID ATLANTIC	585	689	-	83	582	-	12	-	20
Upstate N.Y.	24	67	-	8	117	-	3	-	15
N.Y. City	352	440	-	33	222	-	4	-	-
N.J.	113	74	-	42	146	-	5	-	-
Pa.	96	108	-	-	97	-	-	-	5
E.N. CENTRAL	206	308	3	76	500	-	6	1	47
Ohio	84	48	-	8	64	-	2	-	6
Ind.	38	41	-	13	74	-	1	-	-
Ill.	36	166	-	30	244	-	1	-	23
Mich.	32	38	3	21	95	-	2	1	-
Wis.	16	15	-	4	23	-	-	-	18
W.N. CENTRAL	60	95	2	16	101	9	1	2	101
Minn.	29	18	-	6	16	-	-	-	27
Iowa	2	3	-	1	16	-	-	-	33
Mo.	20	58	-	8	55	8	1	2	11
N. Dak.	-	2	-	-	-	-	-	-	7
S. Dak.	-	-	-	-	5	-	-	-	6
Nebr.	1	2	-	-	2	-	-	-	6
Kans.	8	12	2	1	7	1	-	-	11
S. ATLANTIC	1,363	1,408	1	65	642	7	6	1	249
Del.	10	2	-	-	1	-	-	-	-
Md.	75	86	-	9	111	2	2	-	103
D.C.	57	93	-	1	21	-	-	-	-
Va.	100	93	-	5	36	1	2	-	105
W. Va.	4	5	1	3	23	-	1	-	10
N.C.	133	107	-	11	58	4	-	-	1
S.C.	115	77	-	3	55	-	-	-	5
Ga.	232	301	-	7	117	-	-	-	20
Fla.	637	644	-	26	220	-	1	1	5
E.S. CENTRAL	378	397	-	36	303	2	1	3	55
Ky.	23	20	-	8	92	-	-	-	12
Tenn.	105	96	-	4	83	2	1	1	36
Ala.	155	132	-	10	79	-	-	2	7
Miss.	95	149	-	14	49	-	-	-	-
W.S. CENTRAL	1,320	1,408	-	54	270	3	1	-	123
Ark.	23	38	-	2	13	3	-	-	23
La.	252	255	-	4	43	-	-	-	6
Okla.	41	26	-	4	43	-	-	-	15
Tex.	1,004	1,089	-	44	171	-	1	-	79
MOUNTAIN	114	151	-	9	87	1	-	-	32
Mont.	2	1	-	-	6	-	-	-	27
Idaho	1	12	-	-	5	-	-	-	-
Wyo.	2	7	-	-	2	-	-	-	-
Colo.	29	42	-	-	5	-	-	-	-
N. Mex.	46	33	-	-	16	1	-	-	1
Ariz.	19	27	-	4	41	-	-	-	4
Utah	6	4	-	3	7	-	-	-	-
Nev.	9	25	-	2	5	-	-	-	-
PACIFIC	1,016	680	-	82	552	1	20	1	58
Wash.	25	20	-	8	33	-	1	-	-
Oreg.	16	28	-	6	27	-	-	-	-
Calif.	953	609	-	64	449	1	19	1	57
Alaska	5	5	-	-	4	-	-	-	1
Hawaii	17	18	-	4	39	-	-	-	-
Guam	-	-	U	U	-	-	-	-	-
P.R.	97	81	-	9	84	-	-	-	10
V.I.	1	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	U	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending February 26, 1983 (8th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	735	523	141	33	18	20	78
Boston, Mass.	193	131	37	10	6	9	23
Bridgeport, Conn.	72	52	15	3	1	1	6
Cambridge, Mass.	21	16	4	1	-	-	3
Fall River, Mass.	28	20	8	-	-	-	-
Hartford, Conn.	66	46	11	2	3	4	3
Lowell, Mass.	20	16	3	1	-	-	2
Lynn, Mass.	22	17	5	-	-	-	-
New Bedford, Mass.	21	19	2	-	-	-	1
New Haven, Conn.	81	50	19	6	3	3	6
Providence, R.I.	57	40	12	1	3	1	8
Somerville, Mass.	8	8	-	-	-	-	-
Springfield, Mass.	48	34	10	2	1	1	14
Waterbury, Conn.	33	27	3	3	-	-	3
Worcester, Mass.	65	47	12	4	1	1	9
MID. ATLANTIC	2,596	1,776	528	167	66	58	132
Albany, N.Y.	61	45	9	1	2	4	3
Allentown, Pa.	15	15	-	-	-	-	-
Buffalo, N.Y.	136	84	32	9	6	4	17
Camden, N.J.	42	28	11	2	1	-	2
Elizabeth, N.J.	26	18	7	1	-	-	-
Erie, Pa.†	53	39	10	3	1	-	3
Jersey City, N.J.	67	41	14	4	-	8	5
N.Y. City, N.Y.	1,459	1,000	291	107	39	22	60
Newark, N.J.	37	21	7	5	3	1	3
Paterson, N.J.	22	14	5	1	2	-	2
Philadelphia, Pa.†	183	114	47	14	4	4	13
Pittsburgh, Pa.†	73	53	13	4	1	2	1
Reading, Pa.	32	27	3	1	-	1	3
Rochester, N.Y.	123	90	21	9	-	3	8
Schenectady, N.Y.	32	22	9	1	-	-	1
Scranton, Pa.†	22	13	9	-	-	-	1
Syracuse, N.Y.	104	75	18	2	3	6	3
Trenton, N.J.	42	23	12	2	3	2	1
Utica, N.Y.	23	20	3	-	-	-	1
Yonkers, N.Y.	44	34	7	1	1	1	5
E.N. CENTRAL	2,333	1,532	519	145	70	67	110
Akron, Ohio	65	42	15	3	1	4	1
Canton, Ohio	37	26	10	-	-	1	2
Chicago, Ill.	526	308	130	42	23	23	12
Cincinnati, Ohio	126	88	30	1	4	3	12
Cleveland, Ohio	167	93	49	14	6	5	2
Columbus, Ohio	136	91	25	10	7	3	4
Dayton, Ohio	107	63	30	10	3	1	1
Detroit, Mich.	275	171	61	23	10	10	14
Evansville, Ind.	47	38	7	1	1	-	4
Fort Wayne, Ind.	62	45	13	1	2	1	4
Gary, Ind.	25	13	8	3	1	-	3
Grand Rapids, Mich.	76	58	11	4	1	2	4
Indianapolis, Ind.	145	111	24	6	2	2	5
Madison, Wis.	56	36	10	5	3	2	10
Milwaukee, Wis.	170	126	34	6	1	3	6
Peoria, Ill.	55	40	12	1	-	2	9
Rockford, Ill.	42	29	9	3	-	1	4
South Bend, Ind.	42	29	7	4	-	2	4
Toledo, Ohio	124	89	22	7	4	2	9
Youngstown, Ohio	50	36	12	1	1	-	-
W.N. CENTRAL	720	516	136	36	14	18	44
Des Moines, Iowa	38	30	6	-	-	2	4
Duluth, Minn.	20	19	-	-	1	-	1
Kansas City, Kans.	47	26	11	7	2	1	2
Kansas City, Mo.	140	98	23	14	2	3	8
Lincoln, Nebr.	35	24	9	1	1	-	7
Minneapolis, Minn.	80	58	15	4	-	3	1
Omaha, Nebr.	80	55	19	2	1	3	5
St. Louis, Mo.	153	116	27	2	6	2	7
St. Paul, Minn.	64	51	8	2	1	2	3
Wichita, Kans.	63	39	18	4	-	2	6

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,307	812	320	104	33	38	71
Atlanta, Ga.	146	79	35	24	3	5	7
Baltimore, Md.	212	129	56	13	9	5	7
Charlotte, N.C.	71	44	15	5	3	4	8
Jacksonville, Fla.	109	73	25	8	1	2	9
Miami, Fla.	109	66	31	10	1	1	3
Norfolk, Va.	64	33	16	9	-	6	9
Richmond, Va.	99	67	27	3	1	1	5
Savannah, Ga.	56	32	17	6	-	1	6
St. Petersburg, Fla.	132	113	13	3	2	1	8
Tampa, Fla.	96	64	15	9	4	4	6
Washington, D.C.	178	91	62	14	7	4	3
Wilmington, Del.	35	21	8	-	2	4	-
E.S. CENTRAL	725	453	181	40	13	38	45
Birmingham, Ala.	119	67	33	10	4	5	2
Chattanooga, Tenn.	73	47	15	2	3	6	10
Knoxville, Tenn.	32	22	7	3	-	-	1
Louisville, Ky.	117	82	24	3	2	6	7
Memphis, Tenn.	150	79	47	13	3	8	10
Mobile, Ala.	59	44	12	2	-	1	4
Montgomery, Ala.	69	41	16	2	1	9	5
Nashville, Tenn.	106	71	27	5	-	3	6
W.S. CENTRAL	1,514	851	404	137	59	63	70
Austin, Tex.	36	26	5	4	1	-	1
Baton Rouge, La.	57	30	18	3	2	4	6
Corpus Christi, Tex.	35	19	9	7	-	-	-
Dallas, Tex.	216	124	54	16	7	15	7
El Paso, Tex.	89	42	25	12	1	9	1
Fort Worth, Tex.	107	66	27	8	3	3	11
Houston, Tex.	449	220	138	48	26	17	12
Little Rock, Ark.	66	39	15	7	5	-	5
New Orleans, La.	170	105	41	11	11	2	-
San Antonio, Tex.	151	92	39	10	1	9	14
Shreveport, La.	44	23	15	6	-	-	-
Tulsa, Okla.	94	65	18	5	2	4	13
MOUNTAIN	658	436	144	41	19	17	24
Albuquerque, N.Mex.	77	47	21	4	4	1	5
Colo. Springs, Colo.	37	22	12	2	1	-	4
Denver, Colo.	104	70	16	11	5	2	3
Las Vegas, Nev.	77	52	18	5	1	1	3
Ogden, Utah	12	10	1	-	-	1	1
Phoenix, Ariz.	178	127	38	5	4	4	-
Pueblo, Colo.	17	15	1	1	-	-	4
Salt Lake City, Utah	53	21	16	6	4	6	1
Tucson, Ariz.	103	72	21	7	-	2	3
PACIFIC	1,580	1,009	333	111	69	55	96
Berkeley, Calif.	25	15	5	1	2	2	-
Fresno, Calif.	85	59	10	5	4	4	4
Glendale, Calif.	14	9	2	1	1	1	1
Honolulu, Hawaii	87	58	20	5	1	3	13
Long Beach, Calif.	102	64	24	5	5	4	3
Los Angeles, Calif.	355	224	70	35	17	9	14
Oakland, Calif.	64	36	16	4	5	3	1
Pasadena, Calif.	27	22	2	2	1	-	5
Portland, Oreg.	102	62	22	6	4	8	4
Sacramento, Calif.	66	42	18	2	2	2	4
San Diego, Calif.	99	61	22	7	4	5	12
San Francisco, Calif.	166	104	44	13	3	2	6
San Jose, Calif.	163	102	35	12	11	3	17
Seattle, Wash.	134	87	28	11	4	4	6
Spokane, Wash.	46	32	10	1	2	1	5
Tacoma, Wash.	45	32	5	1	3	4	1
TOTAL	12,168††	7,908	2,706	814	361	374	670

* 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.

Neonatal Mortality Rates — Continued

4. Helwig JT, Council KA, eds. SAS user's guide. Raleigh, N.C.: SAS Institute, Inc. 1979.
5. Institute of Medicine, Panel on Health Services Research. Infant death: an analysis of maternal risk and health care. Washington, D.C.: National Academy of Sciences, IOM, 1973:90 (Table 3-25).
6. Department of Health, Education, and Welfare. A study of infant mortality from linked records (NCHS report, Series 20, No. 12). Washington, D.C.: Department of Health, Education, and Welfare, May 1972. (Births: Table 3, page 33; infant deaths: Table 1, page 27).
7. Kleinman, JC. Infant mortality. Statistical Notes for Health Planners (NCHS) 1976;2:1-12.

Update: Influenza Activity — United States

Influenza virus activity continues in all regions of the United States. An excess in the ratio of deaths from pneumonia and influenza (P&I) to total deaths was recorded from 121 cities for the seventh consecutive week. The ratio of P&I deaths for the week ending February 26, 1983, was 5.5, and the expected ratio was 4.1. Five states (Iowa, Missouri, Nebraska, Ohio, and Texas) reported widespread activity, and 12 states reported regional influenza activity for the week ending February 26.

Iowa, North Carolina, and South Carolina have now reported their first isolations of the season, all influenza type A(H3N2), making a total of 40 states with reported influenza isolates. Although the majority of isolates reported continues to be type A(H3N2) virus, the proportion of type A(H1N1) virus isolates has increased in recent weeks, and 13 states have now reported isolates of H1N1 virus. Influenza type B virus has been isolated from sporadic cases in five states.

The Ohio State Department of Health has provided a comparison of outbreaks associated with H3N2 and with H1N1 viruses. The Ohio State Diagnostic Laboratory documented the parallel activity of H3N2 and H1N1 viruses near Columbus, Ohio, in late January and the first 2 weeks of February. An outbreak of influenza, with a peak absentee rate of 20% in a parochial elementary school in the Columbus area, was followed approximately 10 days later by a similar outbreak, with an absentee rate of 27%, in another parochial elementary school located six miles away. In the first outbreak, four influenza type A(H3N2) virus isolates were recovered from specimens collected from seven ill pupils, and in the second outbreak, three influenza type A(H1N1) virus isolates were recovered from six ill pupils. Typical of the illnesses in each school were cases of typical influenza with abrupt onset and temperatures occasionally higher than 39.4 C (103 F). Each school was closed for 1 day at the height of its outbreak, and each reported a return to a normal level of illness within a week. Other school outbreaks occurred, and by the week ending February 19, nine parochial schools were closed in Franklin County, and absentee rates up to 27% were reported in Columbus city schools. Isolates of both H1N1 and H3N2 viruses have also been identified from children in the Dayton area, where several schools were closed in February due to influenza-like illness. Whether other outbreaks of influenza among schoolchildren, now being reported by several states, involve H1N1 or H3N2 virus infections or a mixture of both has not been determined. However, during recent years, investigations of outbreaks involving older patients, such as those in nursing homes, have shown H3N2 or type B influenza virus rather than H1N1 virus as the cause.

Reported by JP Baxa, K Sullivan, G Davidson, DrPH, MW Plummer, B Stimpert, T Halpin, MD, State Epidemiologist, Ohio State Dept of Health; Respective state epidemiologists and laboratory directors; Div of Surveillance and Epidemiologic Studies, Epidemiology Program Office, WHO Collaborating Center for Influenza, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Epidemiologic Notes and Reports

African Trypanosomiasis

On September 9, 1981, a 72-year-old male from Edinburg, Texas, developed fever and weakness 16 days after being bitten by tsetse flies during a hunting trip in northwest Tanzania. Several days after onset of fever, he noticed a raised, tender, erythematous nodule (6-8 cm in diameter) on the posterior aspect of his right arm. He was hospitalized in Africa and treated for 5 days with a cephalosporin for presumed cellulitis. After little improvement, he returned to Texas on September 20.

On arrival, the patient had a temperature of 38.9 C (102 F), a morbilliform rash of the trunk, and right-sided, anterior cervical lymphadenopathy. Laboratory tests revealed a hemoglobin of 10.7 g/100 ml, a white-cell count of 2,400/mm^3, and a platelet count of 75,000/mm^3; peripheral blood smears showed trypanosomes. Cerebrospinal fluid (CSF) contained 12 red cells and 18 mononuclear cells/mm^3, with a normal protein (32 mg/dL); no trypanosomes or morula cells of Mott (thought to be degenerated plasma cells) were observed. Serum obtained on September 21 and tested at CDC reacted to trypanosome antigen by indirect immunofluorescence at a dilution of 1:4096.

Treatment with suramin (1 g intravenously on days 1, 3, 7, 14, and 21) was initiated on September 22, and within 48 hours of the first dose, neck swelling decreased noticeably, and rash and fever disappeared. The thrombocytopenia, anemia, and leukopenia resolved over a 2-week period. A second lumbar puncture on October 1, 10 days after therapy was begun, showed five lymphocytes/mm^3, a protein of 27 mg/dL, and no IgM. Several follow-up examinations during the past year showed no clinical evidence of recurrent illness, but the patient declined additional lumbar punctures.

Reported by R Reves, H Dupont, W Sievert, University of Texas Health Sciences Center, Houston; Protozoal Diseases Br, Div of Parasitic Diseases, Center for Infectious Diseases, CDC.

Editorial Note: This is the sixth published report since 1967 of imported African trypanosomiasis (African sleeping sickness) in Americans (*1*). All six patients have shared several characteristics: exposure to infected tsetse flies while visiting game parks in eastern or southern Africa, development of acute, febrile illness consistent with *Trypanosoma brucei rhodesiense* infection 1-21 days after visiting the game parks, detectable typanosomes on peripheral blood smears, and recovery after appropriate therapy. Only two of the five earlier cases showed clear evidence of central nervous system (CNS) involvement; both patients had elevated CSF protein, increased CSF cell count, and trypanosomes in the CSF.

Suramin is recommended for treating the hemolymphatic stage of African trypanosomiasis, but because it does not cross the blood-brain barrier, it is ineffective against trypanosomes in the CNS. Melarsoprol, a relatively toxic drug, is used either alone or in combination with suramin when infection has progressed to involve the CNS (*2*).

The patient described here illustrates the difficulty a physician may encounter in determining whether CNS invasion has occurred. Little diagnostic difficulty occurs when trypanosomes are observed in the CSF, and similarly, the presence of morula cells of Mott or an elevated CSF IgM is thought to strongly suggest CNS involvement (*4*). An elevated CSF cell count usually accompanies these other findings, but the significance of a mildly elevated cell count alone is difficult to assess. Physicians caring for the patient reported here elected to use suramin alone, and the decreased CSF cell count after 10 days of treatment was reassuring. Another patient, with an elevated CSF cell count (10/mm^3) and normal IgM, presented a similar diagnostic dilemma in 1980; he was also treated successfully with suramin alone, and has

African Trypanosomiasis – Continued

shown no signs of CNS involvement during the past 2 years (*3*).

Any individual with African trypanosomiasis should be monitored for evidence of CNS involvement during treatment and at regular intervals for 1-2 years thereafter (*4*).

References

1. Spencer HC Jr, Gibson JJ Jr, Brodsky RE, Schultz MG. Imported African trypanosomiasis in the United States. Ann Intern Med 1975;82:633-8.
2. Drugs for parasitic infections. The Medical Letter 1982;24:5-12.
3. CDC. Unpublished data.
4. Manson-Bahr PE, Apted FI. Manson's tropical diseases. 18th ed. London: Bailliere Tindall, 1982:72-85.

Measles in Universities — Indiana, 1983

During the first 2 months of 1983, 85 clinical measles cases were reported among university students in Indiana. Four had been serologically confirmed as of February 25. The cases occurred on two of the largest campuses in the state.

At Indiana University (enrollment 32,000), 67 cases have been reported, with rash onset ranging from February 11 through February 28. Two students required stays at the Student Health Center for observation. A voluntary immunization program was initiated on February 15, and over 9,000 students had been vaccinated by February 27. At Purdue University (enrollment 32,000), 18 cases have been reported, with rash onset from January 19 to February 18. Two students required hospitalization, and two other students' illnesses were consistent with atypical measles syndrome (*1*). A voluntary immunization program was initiated on February 3, and over 9,000 students had been vaccinated by February 27.

As a result of these measles outbreaks the State Board of Health, in cooperation with local health departments and university officials, has begun a state-wide immunization campaign to increase the level of measles immunity among the approximately 200,000 college and university students. Twenty-one of the 65 independent and public colleges and universities, which contain more than 90% of Indiana's college student population, currently have active vaccination programs.

Reported by D Lotz, R Hongen, MD, Student Health Service, Indiana University; TW Sharp, MD, Monroe County Health Dept, G Chastain, CL Barrett, MD, State Epidemiologist, Indiana State Board of Health; Div of Immunization, Center for Prevention Svcs, CDC.

Editorial Note: Measles outbreaks have been and continue to be reported from places where young adults are concentrated, such as colleges and universities. In 1980, more than 200 measles cases were reported from at least 36 colleges (*2*). In 1981, 101 cases were reported in 19 colleges in 11 states. In 1982, 115 cases were reported in 14 colleges in eight states, including an outbreak at Baylor University in Waco, Texas, with at least 80 confirmed measles cases (*3*). These outbreaks indicate that sufficient numbers of susceptibles may exist in college and university populations to sustain transmission when measles is introduced.

While past serologic studies have indicated that overall susceptibility to measles is low, there can be considerable variation within college population subgroups. In 1977, as many as 20% of University of California-Los Angeles students in some dormitories lacked detectable measles antibody (*4*). The high susceptibility rate in some college and university subpopulations is probably the result of four interactive factors: 1) many children growing up in the mid-1960s may have missed measles vaccination in the first years following licensure; 2) many students may not have been immunized under comprehensive school laws now in effect in many states involving students in kindergarten through 12th grade; 3) many colleges

Measles – Continued

and universities lacked immunization requirements; 4) many students may have escaped natural measles infection because of decreasing transmission.

The high susceptability rates in some college populations, coupled with the high mobility of college students who may travel to countries where measles is endemic, increases the potential for measles outbreaks. While sources of the Indiana college outbreaks have not yet been determined, outbreaks at Harding College in Arkansas in 1981 and Baylor University in 1982 resulted from importations by students who acquired measles abroad (*3,5*).

Preventing measles in college-age populations is particularly important because the disease can be more serious in adults than in gradeschool-aged children. Persons 20 years of age and older have had the highest death-to-case ratio in recent years (*6*). In 1980, a 22-year-old student at the University of Minnesota developed measles complicated by encephalitis and died. In the Indiana outbreak, four of the 85 measles patients required either hospitalization or prolonged observation in the Student Health Center.

With spring break beginning at Purdue on March 4 and at Indiana University on March 11, physicians around the country should be alert to the possibility of measles as those students travel to other parts of the state and nation.

Identifying persons susceptible to measles during a measles outbreak is not only costly and a source of disruption to college routine but is also a major obstacle in control of the outbreak. In view of the importance of preventing measles in college students, the Immunization Practices Advisory Committee has recommended that officials strongly consider immunization requirements for college entry (*7*). Such requirements should include written documentation, with dates, of prior measles vaccination* or prior physician diagnosed measles disease, since undocumented parental or student histories have been demonstrated to be inaccurate (*4,8*). Even before vaccination requirements are instituted, university officials should aggressively urge that all college students be protected against measles.

References

1. CDC. Atypical measles—California, 1974-1975. MMWR 1976;25:245-6.
2. Hinman AR, Preblud SR. Epidemic potential of measles and rubella. J Am Coll Health Assoc 1980;29:105-9.
3. Walch T, Moellenberg R. Measles outbreak—Baylor University, September-October 1982. Texas Preventable Disease News, October 23, 1982.
4. Krause PJ, Cherry JD, Desada-Tous J, et al. Epidemic measles in young adults. Clinical, epidemiologic and serologic studies. Ann Intern Med 1979;90:873-6.
5. CDC. Measles, United States—Weeks 37-40, 1981. MMWR 1981;30:533-5.
6. CDC. Measles surveillance report no. 11, 1977-1981. Issued September 1982.
7. CDC. Rubella—United States, 1977-1980. MMWR 1980;29:378-80.
8. Preblud SR, Gross F, Halsey NA, Hinman AR, Herrmann KL, Koplan JP. Assessment of susceptiblity to measles and rubella. JAMA 1982;247:1134-7.

*Vaccination should be with live vaccine on or after the first birthday.

International Notes

Quarantine Measures

The following changes should be made in the "Supplement—Health Information for International Travel," *MMWR*, 1982:31. Situation as of January 1, 1983:

BOLIVIA

Yellow Fever - Delete all information on page 22. Insert code III. Insert: A certificate is required ALSO

Quarantine Measures — Continued

from travelers going to countries with infected areas. A certificate is required ALSO for all travelers going to Santa Cruz de la Sierra, Bolivia. ALSO insert code III* on page 10.

BRAZIL

Delete note concerning poliomyelitis.

COLOMBIA

Insert: *Yellow Fever* - Colombia recommends vaccination for travelers to the middle valley of the Magdalena River, eastern foothills of the Cordillera Oriental from the frontier with Ecuador to that with Venezuela, Uraba, the southeastern part of the Sierra Nevada de Santa Marta, and the gallery forest along the Guaviare River.

CUBA

Yellow Fever - Delete all information. Insert code II > 1 yr. ALSO delete * on page 11.

ECUADOR

Yellow Fever - Delete all information. ALSO delete code on page 11.

GHANA

Yellow Fever - Insert: Ghana recommends vaccination.

IRAN

On pages 5, 12, 38, and 103, change name to Iran (Islamic Republic of).

OMAN

Delete note. Insert: *Yellow Fever* - II. ALSO, on page 14, insert code II.

SAINT KITTS-NEVIS-ANGUILLA

On pages 4, 15, and 102, delete Anguilla.

THAILAND

Yellow Fever - Delete note. ALSO, on page 15, delete *.

Notice to Readers

Clarification of Rabies Compendium

In *MMWR* 1982;31:693, the "Compendium of Animal Rabies Vaccines, 1983" made recommendations on rabies control in imported dogs and cats. These were recommendations of the National Association of State Public Health Veterinarians, Inc.; in regard to cats, however, they do not conform to the official recommendations of the Centers for Disease Control and the Public Health Service. Although domestic feline rabies has increased, there has been no evidence of increased risk of imported rabies in cats. United States Foreign Quarantine Regulations do not require rabies vaccinations for imported cats.

The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and distributed by the National Technical Information Service, Springfield, Virginia. 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.

HHS Publication No. (CDC) 83-8017