CENTERS FOR DISEASE CONTROL



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- 477 Update: Public Health Service Workshop on Human T-Lymphotropic Virus Type III Antibody Testing — United States
- 478 Outbreaks of Influenza among Nursing Home Residents — Connecticut, United States
- 487 Birthweight-Specific Neonatal Mortality Rates — Kentucky
- 488 Imported Dengue Fever United States, 1984
- 489 Isolation of Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus from Serum Proteins Given to Cancer Patients — Bahamas

Current Trends

Update: Public Health Service Workshop on Human T-Lymphotropic Virus Type III Antibody Testing — United States

The enzyme immunoassay (EIA) serologic tests to detect antibody to human T-lymphotropic virus type III (HTLV-III) are highly sensitive and specific, according to reports presented at a U.S. Public Health Service Workshop on HTLV-III Antibody Testing on July 31, 1985. The tests are currently being used at blood banks, plasma collection centers, health departments, and selected clinical centers throughout the United States.

The U.S. Food and Drug Administration reported cumulative HTLV-III antibody test data from more than 1.1 million units of blood collected at 155 centers through June 16, 1985. Of these, 2,831 (0.25%) were reported as positive based on a repeatedly reactive EIA test. The pattern of positive tests varied slightly in different regions of the country and by test kit used.

The Atlanta Region of the American Red Cross (ARC) and CDC reported data from testing more than 51,000 blood donors, of whom 0.23% were repeatedly reactive by the Abbott EIA method.* Among the specimens from 106 blood donors with repeatedly reactive tests, 34 (32%) were strongly reactive (ratio of specimen absorbance to cutoff value 7.0 or greater). EIA tests categorized as strongly reactive correlated highly with both positive Western blot tests (94%) and culture for HTLV-III/lymphadenopathy-associated virus (LAV) (56%).

Of 220 donors whose tests were initially reactive and subsequently negative, as well as a random sample of 50 with an initially negative EIA test, none had either a positive Western blot test or positive culture. Among those donors notified and interviewed to date, 16 (89%) of 18 with strongly reactive EIA tests had identifiable risk factors for HTLV-III/LAV infection, while none of 20 with weakly reactive tests had identifiable risk factors.

To determine the sensitivity of the Abbott EIA test in high-risk persons, virus isolations were attempted from homosexual men attending a clinic for sexually transmitted diseases in San Francisco, California. None of 70 men with negative HTLV-III antibody tests had a positive culture, while 43 (60%) of 72 with repeatedly reactive tests were culture-positive. Among the 72 EIA-positive sera in this portion of the study, 70 (97%) were considered to be highly reactive. Ninety-seven percent of those EIA-positive specimens tested to date have had a positive Western blot test.

^{*}Use of trade names is for identification only and does not imply endorsement by CDC or the U.S. Public Health Service.

HTLV-III Testing - Continued

Data from other blood banking organizations paralleled the findings of the ARC/CDC study in suggesting that approximately one-third of EIA-positive sera from blood donors were strongly reactive, regardless of the test kit used. Donors with strongly reactive EIA tests were also highly likely to have positive Western blot tests and to have positive EIA tests by other test kits.

Weakly reactive EIA tests correlated poorly with positive Western blot tests and were judged to be nonspecific for HTLV-III/LAV infection. The reason for nonspecific test reactivity is unknown, but proposed refinements in the test may eliminate many of the low level reactions.

Reported by Center for Drugs and Biologics, U.S. Food and Drug Administration; AIDS Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Based on available data, only about 0.25% (1 in 400) blood donors have repeatedly reactive EIA tests to HTLV-III antibody. Approximately 0.08% (1 in 1,200) donors were found to have strongly reactive EIA tests, and these donors were likely to have other test results (Western blot, HTLV-III/LAV culture) that suggested they had been infected with HTLV-III/LAV.

Thus, in less than 5 months, serologic tests for HTLV-III antibody have been introduced and demonstrated to be highly useful in screening donated blood. Screening performed during this period may have removed as many as 1,000 potentially infectious units of blood from the U.S. blood supply. Continued use of this highly sensitive test procedure for HTLV-III antibody, in combination with voluntary avoidance of donation by members of high-risk groups, will virtually eliminate the risk of acquired immunodeficiency syndrome (AIDS) transmission by the nation's blood supply. Discussions and evaluations of other potentially appropriate and useful applications of this test are under way.

Epidemiologic Notes and Reports

Outbreaks of Influenza among Nursing Home Residents — Connecticut, United States

From January to April 1985, influenza viruses related to A/Philippines/2/82(H3N2) caused widespread or regional outbreaks in 37 states. In addition, the percentage of deaths attributed to pneumonia and influenza reported from 121 U.S. cities was the highest since 1976 (1). Outbreaks in nursing homes are often reported to CDC when influenza viruses circulate. Following are descriptions of investigations of influenza-like illness* in four Connecticut nursing homes and a summary of similar outbreak investigations reported by other states to CDC. **CONNECTICUT**

In February and March 1985, three separate outbreaks of influenza-like illness among nursing home residents were investigated by the Connecticut Department of Health Services and the Department of Epidemiology and Public Health, Yale University School of Medicine. Influenza type A(H3N2) appears to have caused all three outbreaks. Investigators found that, in each outbreak, residents who had recently received currently recommended influenza vaccine were just as likely as unvaccinated residents to become ill.

^{*}Defined by fever 37.8 C (100 F) or higher accompanied by cough, coryza, or sore throat.

MMWR

Influenza – Continued

Outbreak 1. Nineteen residents of a skilled-care nursing facility had influenza-like illnesses. Ages ranged from 65 years to 94 years (median 84 years). Six of seven ill persons had four-fold or greater rises in hemagglutination-inhibition (HI) antibody against influenza A(H3N2) viruses but no comparable rises against other respiratory pathogens. Residents of only one floor of the facility became ill. On the affected floor, the attack rate was 25% (19/75); the rate was 26% (15/57) for vaccinated persons; 19% (3/16) for unvaccinated persons; and 50% (1/2) for residents whose vaccination status was unknown. None of these differences were statistically significant (p > 0.05).

Outbreak 2. Twenty-six residents of a skilled-care nursing facility had influenza-like illnesses. Ages ranged from 33 years to 95 years (median 83 years). One of 14 throat swabs collected from ill residents yielded influenza A(H3N2) virus similar to A/Philippines/2/82. All six ill residents from whom serum specimens were obtained had fourfold or greater rises in HI antibody against influenza A(H3N2). The overall attack rate was 31% (26/85); the rate was 40% (12/30) for vaccinated persons and 25% (14/55) for unvaccinated persons (p > 0.05). Vaccinated persons did not differ from unvaccinated persons in terms of age, sex, or level of needed care. After 41 (66%) of the remaining 62 well residents were started on amantadine hydrochloride prophylaxis (100 mg/day), only one, a resident who had not received amantadine, became ill.

Outbreak 3. One hundred eleven residents of a large multiple level-of-care facility had influenza-like illnesses. Ages ranged from 64 years to 104 years (median 85 years). One of six throat swab specimens yielded influenza A(H3N2) virus similar to A/Philippines/2/82. Fourteen of 18 ill residents from whom paired sera were obtained had fourfold or greater rises in antibody against influenza A(H3N2). The overall attack rate was 23% (111/489); the rate was 22% (75/336) for vaccinated persons; 20% (25/128) for unvaccinated persons; and 44% (11/25) for residents whose vaccination status were unknown (p > 0.05). After the widespread institution of amantadine hydrochloride prophylaxis (100 mg/day) for residents and staff members, three additional cases were identified among residents on amantadine.

Ten influenza-related deaths were reported from all three nursing homes. Because of small numbers, statistically significant differences between vaccinated and unvaccinated influenza patients were not detected for length of illness, frequency of hospitalization, development of pneumonia, or risk of death.

Outbreak 4. A fourth influenza A(H3N2) outbreak in Connecticut was investigated by local personnel. Fourteen (23%) of 60 nursing home residents requiring intermediate care were affected, including 10 (20%) of 49 vaccinated persons and four (36%) of 11 unvaccinated persons (p > 0.05). One influenza-related death was reported.

ELSEWHERE IN THE UNITED STATES

To obtain additional data on the occurrence of influenza in nursing homes and to further evaluate the performance of the currently recommended influenza vaccine, CDC contacted officials in 24 state health departments during late March and early April. The 24 states were selected from all regions of the United States and were among those that had reported wide-spread or regional influenza activity for at least 2 consecutive weeks since December 1984.

Ninety outbreaks of influenza-like illness in nursing homes were reported through active or passive surveillance systems between December 1984 and April 1985. Fifty-three (59%) of these were investigated; influenza viruses related to A/Philippines/2/82(H3N2) were isolated from clinical specimens obtained in 27 (51%) of these homes, while the etiology of the remaining outbreaks could not be determined.

Vaccine efficacy estimates were available for nine outbreaks investigated by state and local health department personnel or university-based investigators in Georgia, Maryland, Min-

Influenza – Continued

nesota, Pennsylvania, and Wyoming. Two hundred sixty-nine (25%) of 1,068 residents in these homes were affected overall; at least 26 (10%) of affected residents developed pneumonia, and 11 (4%) died. Attack rates in individual homes ranged from 13% to 49% (median 35%) and were often higher for unvaccinated residents (Table 1). Amantadine pro-phylaxis (100 mg/day) was initiated for all asymptomatic residents in three of the homes soon after the outbreaks became apparent, and no additional cases were identified.

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Editorial Note: The results of the above vaccine efficacy studies should be interpreted cautiously because they were based on passively reported outbreaks that may not be representative of nursing homes in general and because few cases were laboratory confirmed. The results of these studies are consistent with those reported previously (2-12), most of which suggest that the efficacy of influenza vaccine in reducing the incidence of illness is often lower for nursing home residents than for younger, healthier populations. The reasons for this phenomenon probably include an age-related decline in immune response and high frequency of exposure and ease of transmission once the virus is introduced into the closed, relatively crowded setting (3). In addition, for reasons that are not well understood, influenza vaccine

		Total	No. with	Va	ccinated	Unv	accinated	Vaccine	
State	Home	residents	ILI* (%)	Total	No. ILI (%)	Total	No. ILI (%)	efficacy†	
Maryland	1	232	31 (13)	108	16 (15)	124	15 (12)	0%	
	2	41	19 (46)	28	12 (43)	13	7 (54)	20%	
Pennsylvania	1	68	24 (35)	60	20 (33)	8	4 (50)	34%	
	2	103 [§]	48 (47)	49	24 (49)	54	24 (44)	0 %	
Georgia		55	16 (29)	32	7 (22)	23	9 (39)	44%	
Minnesota	1	189	44 (23)	166	35 (21)	23	9 (39)	46 %	
	2	84	29 (35)	69	22 (32)	15	7 (47)	32%	
	3	247	31 (13)	216	27 (13)	31	4 (13)	0%	
Wyoming		55	27 (49)	40	16 (40)	15	11 (73)	45%	

TABLE 1. Preliminary summary of vaccine efficacy studies in nine nursing homes, by state — United States, January-April 1985

*Influenza-like illness (fever \ge 37.8 C (100 F) accompanied by cough, coryza, or sore throat).

[†]Attack rate (AR) unvaccinated – AR vaccinated x 100.

AR unvaccinated

[§]Excludes 20 residents whose vaccination status could not be determined.

MMWR

Influenza – Continued

efficacy can vary from home to home. In a recent study of influenza-like illness among nursing home residents in Genesee County, Michigan (2), attack rates were similar for vaccinated and unvaccinated residents in six of the 13 homes studied, including three of the seven homes with outbreaks. Vaccination, however, was associated with a significant reduction in illness when the 1,476 residents were considered together.

Since complications following influenza virus infections account for the greatest impact on elderly patients in terms of both health and health-care costs, it is also important to evaluate the efficacy of influenza vaccine in reducing the severity of illness. Studies of elderly patients have consistently demonstrated a significant association between vaccination and reductions in the length of illness (9-11), the necessity for hospitalization (2, 10), the development of pneumonia (2, 10, 13), and subsequent death (2, 10, 12, 13). Furthermore, vaccination rates in individual nursing homes in the range of 70%-80%—a target recently proposed by the Immunization Practices Advisory Committee (ACIP) (14)—have also been shown to reduce the risk of outbreaks through the induction of herd immunity (15), which can further minimize the risk of severe influenza-related complications.

The use of amantadine in several of these outbreaks suggests that amantadine prophylaxis (in a reduced dosage of 100 mg/day) is useful in preventing additional cases once an outbreak of influenza A has been identified, a strategy that has also been recommended recently by the ACIP (14). It should also be emphasized that amantadine prophylaxis should not be considered a substitute for vaccination because of inherent difficulties in rapidly administering the drug to asymptomatic residents when outbreaks do occur, as well as lack of protection against type B influenza viruses.

Health-care providers are encouraged to report as early as possible clusters of influenza-like illness occurring in nursing homes and other health-care institutions to local and state health departments. Investigations of these outbreaks are important to determine the exact cause of illness and to accumulate a data base about control measures, such as the efficacy of influenza vaccine and amantadine in preventing severe illness during outbreaks. The efficacy of other infection-control procedures, such as respiratory isolation of patients with influenza-like illness in preventing transmission of illness (*16*), and the reasons for interhome variation in vaccine efficacy are also important areas for continuing research.

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Influenza – Continued

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	:	31st Week End	ing	Cumulat	tive, 31st Week	Ending
Disease	Aug. 3, 1985	Aug. 4, 1984	Median 1980-1984	Aug. 3, 1985	Aug. 4, 1984	Median 1980-1984
Acquired Immunodeficiency Syndrome (AIDS)	190	79	N	4,502	2.365	N
Aseptic meningitis	309	337	337	3,303	3,201	3.507
Encephalitis: Primary (arthropod-borne	000	557	007	0,000	0,201	0,007
& unspec.)	20	32	38	546	544	608
Post-infectious	2	1	1	81	81	60
Gonorrhea: Civilian	17,467	16,199	19.892	487.532	479.060	560.890
Military	315	679	613	10,679	12,749	15,814
Hepatitis; Type A	565	397	414	12,762	12,214	13,141
Туре В	613	624	484	15.031	14,900	12,489
Non A, Non B	103	75	Ň	2.436	2.254	N
Unspecified	139	116	163	3.378	2.871	5.037
Legionellosis	13	13	N	336	337	N
Leprosy	7	5	5	210	136	136
Malaria	40	23	23	558	510	609
Measles: Total*	28	47	33	2,122	2,145	2,145
Indigenous	25	44	Ň	1.741	1,902	N
Imported	3	3	N	381	243	N
Meningococcal infections: Total	30	50	43	1.593	1,883	1.883
Civilian	30	49	43	1,590	1.879	1.879
Military	-	1	1	3	4	12
Mumps	32	23	33	2.039	2.049	3.014
Pertussis	100	58	58	1.094	1,200	816
Rubella (German measles)	7	7	23	450	478	1.661
Syphilis (Primary & Secondary): Civilian	476	504	596	14,966	16.439	17.749
Military	-	6	5	97	209	230
Toxic Shock syndrome	3	8	Ň	223	300	N
Tuberculosis	439	435	443	12.493	12,515	15.004
Tularemia	3	12	11	79	179	135
Typhoid fever	6	8	11	188	186	226
Typhus fever, tick-borne (RMSF)	26	40	49	358	505	691
Rabies, animal	90	105	107	3,022	2,997	3,825

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

TABLE II. Notifiable diseases of low frequency, United States

• <u>••••</u> •••••••••••••••••••••••••••••••	Cum. 1985		Cum. 1985
Anthrax	-	Leptospirosis	18
Botulism: Foodborne (Alaska 6)	32	Plague	7
Infant	29	Poliomyelitis: Total	3
Other (Tenn. 1)	1	Paralytic	3
Brucellosis (Okla. 1, Tex. 1)	66	Psittacosis (Upstate N.Y. 1, Calif. 1)	1 71
Cholera	2	Rabies, human	_
Congenital rubella syndrome	-	Tetanus (Tenn, 1)	33
Congenital syphilis, ages < 1 year	90	Trichinosis	47
Diphtheria	1	Typhus fever, flea-borne (endemic, murine)	6

*One of the 28 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.

		Aseptic	Encer	Encephalitis Gonorrhea Hepatitis (Viral), by type				pe	Logiczał			
Reporting Area	AIDS	Menin- gitis	Primary	Post-in- fectious	(Ci	ormea vilian)	A	в	NA,NB	Unspeci- fied	Legionel- losis	Leprosy
	Cum. 1985	1985	Cum. 1985	Cum. 1985	Cum. 1985	Cum. 1984	1985	1985	1985	1985	1985	Cum 1985
UNITED STATES	4,502	309	546	81	487,532	479,060	565	613	103	139	13	210
NEW ENGLAND Maine	161	15	15	-	13,958	13,311	15 1	27 2	1	4	3	4
N.H.	6	-	4	-	630 323	556 407	-	-	-		-	-
Vt. Mass.	1	4	10	-	184	223		15	-	-	1	-
R.I.	95 8	6 1	10	-	5,388 1,068	5,413 899	11	15 5	1	4	2	4
Conn.	51	4	1	-	6,365	5,813	2	5	-	-	-	-
MID ATLANTIC	1,766	34	80	6	74,802	65,409	25	63	8	2	-	16
Upstate N.Y.	215	26	27	4	9,854	9,854	5	18	2	-	-	-
N.Y. City N.J.	1,183 263	7	7 18	-	37,852 11,400	27,191 10,954	1 12	21	1	1	-	16
Pa.	105	1	28	2	15,696	17,410	7	24	5	1	-	-
E.N. CENTRAL	193	27	120	17	68,306	66,502	9	33	5	1	4	20
Ohio	34	5	47	4	17,169	16,980	4	14	-	-	1	2
Ind. III.	13 94	13	18 14	2 6	7,242 18,211	7,886 15,038	1	5 3	2	1	-	16
Mich	36	9	30	-	19,314	19,139	4	11	3	-	3	2
Wis	16	-	11	5	6,370	7,459	-	-	-	-	-	-
W.N. CENTRAL	52	17	35	3	23,831	23,210	29	23	1	1	-	-
Minn. Iowa	13 8	2 5	16 11	1	3,473 2,559	3,457 2,530	2 4	4 4	1	-	-	-
Mo.	23	7	-	-	11,372	11,268	2	10	-	1	-	-
N. Dak. S. Dak.	-	÷	:	1	155	224			-	-	-	-
Nebr	3	1	3	-	434 2.124	568 1,576	17	-	-	-		-
Kans.	5	-	5	1	3,714	3,587	3	5	-	-	-	-
S. ATLANTIC	697	61	66	28	106,297	121,512	38	118	17	8	2	5
Del. Md.	8	4	1	-	2,401	2,149	-	1	1	-	-	-
D.C.	81 87	11	15	1	17,207 8.899	14,010 8,793	1	15	3	-	-	1
Va.	46	11	17	4	10,961	11,465	2	14	1	-	1	-
W. Va. N.C.	4 32	5 6	10 20	-	1,469 20,299	1,479 19,410	5 4	1 18	3	2	-	2
SC	6	2	3	-	13 123	12,074	-	22	1	-	-	-
Ga. Fla.	111 322	7 15	-	23	31,938	22,984 29,148	5 21	15 32	4 4	6	1	1 1
E.S. CENTRAL	44	20	23	4	42,917	41,904	17	40	1	6		-
Ку.	12	2	8	-	4,834	5,012	14	11	-	÷	-	-
Tenn. Ala	14 16	2 11	4 9	4	16,744 13,319	17,311 13,412	2	8 15	1	4	-	-
Miss	2	5	2	-	8,020	6,169	1	6	-	1	-	
W.S. CENTRAL	333	72	67	2	65,558	65,683	145	78	14	72	1	16
Ark.	5	-	2	1	6,368	5,964	2	1	-	1	-	1
La. Okla	54 8	1 6	3 17	1	13,172 6,879	14,853 7,049	10 5	4	1	1	1	1
Tex.	266	65	45	-	39,139	37,817	128	68	13	67	-	14
MOUNTAIN	69	6	24	5	15,993	15,356	68	59	14	7	2	5
Mont.	-	2	-	-	440	652	2	2	1	1	-	-
ldaho Wyo.	-	1	1	:	497 380	781 445	5	4		-	1	
Colo	25	1	6	1	4,777	4,411	3	4	-	3	1	1
N. Mex. Ariz.	7 25	-	3 4	-	1,822 4,806	1,734 4,177	12 31	16 21	1	- 3	-	1
Utah	25	2	7	4	678	748	6	3	'i	-	-	ź
Nev.	3	-	3	-	2,593	2,408	9	9	· -	-	-	1
PACIFIC	1,187	57	116	16	75,870	66,173	219	172	42	38	1	144
Wash. Oreg.	70	6	12	-	5,238 3,703	4,787 3,770	25 37	24 4	4	5 1	-	31 2
Calif.	1,081	47	101	16	64,079	54,838	153	141	34	32	1	92
Alaska	2	-	3	-	1,788	1,653	2	-	-	-	-	-
Hawaii	18	4	-	-	1,062	1,125	2	3	-	-	-	19
Guam		U	-	-	81	151	U	U	U	U	U	1
P.R. V.I.	52 2	Ū	4	2	2,099 279	1,993 323	Ū	Ū	- U	- U	- U	2
Pac. Trust Terr.	-	Ũ	-	-	146	-	ŭ	ŭ	ŭ	ŭ	ŭ	20

TABLE III. Cases of specified notifiable diseases, United States, weeks ending August 3, 1985 and August 4, 1984 (31st Week)

N: Not notifiable

			Au	gust 3	8, 198	5 and	August 4	, 198	4 (31s	t Wee	ək)				
	Malaria			sles (Rut			Menin- gococcal	Mu	mps		Pertussi	5		Rubella	
Reporting Area	Cum.	Indiç 1985	enous Cum.	Impo 1985	rted * Cum.	Total Cum.	Infections Cum.		Cum.		Cum.	Cum.		Cum.	Cum.
	1985		1985		1985	1984	1985	1985	1985	1985	1985	1984	1985	1985	1984
UNITED STATES	558 28	25	1,741 34	3	381 85	2,145 103	1,593	32	2,039	100	1,094	1,200	7	450	478
Maine N.H.	20 3 4	-	- 34	-	85 - -	36	69 2 8	-	41 6	5	58 2	32 1	1	11	18 1
Vt. Mass.	-	-	-	-	-	7	9	-	7 2	1 1	26 3	6 16	-	2	1
R.I.	13 2	-	30	-	82	47	12 13	-	13 8	3	10 11	7	:	6	16
Conn.	6	-	4	-	3	13	25	-	5	-	6	1	1	3	-
MID ATLANTIC Upstate N.Y.	86 29	4	159 71	1	27 10	137 31	275 110	1	217 124	5 5	72 35	104 59	2	184 17	166 98
N.Y. City N.J.	29 10	3 1	50 15	1t	7 10	95 7	44 39	-	14 27	-	9	4	1	145 9	50
Pa.	18	-	23	-	-	4	82	-	52	-	25	34	1	13	17 1
E.N. CENTRAL Ohio	24 6	-	343	•	125 43	657 8	275	14	776	5	134	319	1	21	77
Ind.	3 2	-	48	-	1	3	91 37	-	232 33	-	26 11	56 208	1	1	2 2
Mich.	11	-	204 37	-	66 15	161 452	61 58	13 1	163 282	5	17 27	19 18	-	5 14	47 18
Wis.	2	-	54	-	-	33	28	-	66	-	53	18	-	1	8
W.N. CENTRAL Minn.	18 7	-	1	-	8 4	10 3	84 21	-	63 1	4	80 19	90 12	•	19 2	29 2
lowa Mo.	1 4	2	-	-	2	-3	7 34	-	9 11	-	5	6	-	1	1
N. Dak. S. Dak.	1	-	-	-	2	-	3	-	2	3	19 9	15	-	7 2	3
Nebr.	1	-	-	-	-	-	2 7	:	2	-	1 4	6 2		:	· -
Kans.	3	-	1	-	-	4	10	-	38	1	23	49	-	7	23
S. ATLANTIC Del.	70	1	218	2	6	43	312 7	6	194 1	38	251	127 2	3	52 1	21
Md. D.C.	17 4	2	56 2		4	17 8	43 6	1	27	24	114	35	3	6	1
Va. W. Va.	14 1	-	21 31	-	1	4	40 8	4	35	3	8	17	-	2	-
N.C. S.C.	ż	-	9	-	-	-	42	-	56 11	1	2 13	8 17	-	11	:
Ga. Fla.	6 21	- 1	8	-	-	1	32 52	-	7 28	7	73	2 10	-	3 4	2
		1	91	-	-	13	82	-	29	2	40	36	-	25	18
E.S. CENTRAL Ky.	8 2	-	-	2	1	3 1	74 5	-	18 4	-	17 3	8 1		2 2	9 3
Tenn. Ala.	- 5	2	-		-	2	29 24	-	12	-	5	4	-		- 3
Miss.	1	-	-		1	-	16	-	2	-	3	3	-		3
W.S. CENTRAL Ark.	50	13	376	-	9	499 7	138 13	4	214 4	1	147	238	-	28	6
La. Okla.	1	-	42	-	1	, - 8	22	-	2	1	12 9	14 4	-	1	3
Tex.	47	13	334	-	8	484	26 77	N 4	N 208	2	75 51	211 9	-	1 26	- 3
MOUNTAIN	31	-	448	-	43	139	67	-	199	21	93	81	-	4	15
Mont. Idaho	1	-	122 120	:	17 18	23	5 2	-	7 9	1	5 3	17	-	1	1
Wyo. Colo.	1	-	-	-	- 6	-	6 19	-	2 16	-	-	3	-	-	2
N. Mex.	10	-	1	-	2	88	8	N	Ň	2	31 10	29 5	-	2	2
Ariz. Utah	5 2	-	205	2	-	27	18 7	:	97 6	2 15	20 24	16 6	-	1	-7
Nev.	3	-	-	-	-	-	2	-	62	-	-	2	-	-	3
PACIFIC Wash.	243 17	7	162 9	2	77 32	554 124	299 55	7	317 29	21 8	242 43	201 46	-	129 11	137
Oreg. Calif.	11 198	6	3 136	2 §	40	291	27 206	Ň	N	-	21	11	-	2	1
Alaska Hawaii	150	1	130	-	40 - 5	139	7	4	270	12	147 27	74 1	-	74 1	131 1
	15	י U	14	- U	5		4	2	14	1	4	69	-	41	3
Guam P.R.	-	-	48	-	-	90 3	10	U -	4 116	U	7	:	U	1 23	4 6
V.I. Pac. Trust Terr.	-	U U	4	U U	6	2	-	UU	3	U U	-	-	U U	-	-
For measles only					·				3		-	-	U	-	-

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending August 3, 1985 and August 4, 1984 (31st Week)

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

August 3, 1985 and August 4, 1984 (31st Week)											
Reporting Area	Syphilis (Primary &	(Civilian) Secondary)	Toxic- shock Syndrome	Tuber	culosis	Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal		
	Cum. 1985	Cum. 1984	1985	Cum. 1985	Cum. 1984	Cum. 1985	Cum. 1985	Cum. 1985	Cum. 1985		
UNITED STATES	14,966	16,439	3	12,493	12,515	79	188	358+27	3,022		
NEW ENGLAND	323	311		421	362	1	6	3	9		
Maine N.H.	9 6	3 9	-	33 12	18 20		-	-	1		
Vt. Mass.	3	1	-	4	7	· -	-	-	÷		
R.I.	169 11	185 11	-	255 35	198 28	1	5	3	5		
Conn.	125	102		82	91	-	1	-	3		
MID ATLANTIC	2,056	2,264	-	2,309	2,268	1	29	11+4	257		
Upstate N.Y. N.Y. City	144 1,280	190	-	392 1.145	370 922	- 1	8 15	73	64		
N.J.	404	1,396 399	-	316	922 487	-	5	-	24		
Pa.	228	279	-	456	489	-	1	2	169		
E.N. CENTRAL	670	752	-	1,563	1,655	-	18	32+2	105		
Ohio Ind.	88 63	153 85		284 193	321 186	-	4 3	25 Ž. 2	22 15		
00.	340	249	-	675	687	-	4	3	18		
Mich. Wis.	140	218 47	-	318	357	-	5 2	2	14 36		
	39			93	104						
W.N. CENTRAL Minn.	136	239	2	327	383	24	8	29 + 4 1 1	552 115		
lowa	28 15	69 10	-	63 43	66 42	1	5 1		100		
Mo.	68	124	-	153	188	18	1	1 1 1 2	23		
N. Dak. S. Dak.	2 4	5	1	6. 18	9 15	4	-	1 🖓	83 170		
Nebr	6	10	-	11	20	1	1	2	26		
Kans.	13	21	1	33	43	-	-	22 3	33		
S. ATLANTIC	3,752	4,877		2,531	2,579	6	20	155 +8	803		
Del. Md.	23 233	13 309	-	25 238	30 259	1	5	1 14 2	395		
DC	214	191	-	101	97	-	-		-		
Va W. Va	177 10	246 12		222 66	248 84	1	3	16 I 1	107 18		
N.C.	397	488	-	313	398	4	2	57	4		
S.C. Ga	473	446 832	-	325 413	315 371	-	2	46 9 15 2	46 122		
Fla	2,225	2,340	-	828	777	-	8	5	111		
E.S. CENTRAL	1,269	1,104		1,117	1,159	5	4	38 73	147		
Ky.	36	61	-	246	275	-	1	1	21		
Tenn. Ala.	366 406	300 354	-	325 347	354 343	4 1	1 2	21 9 2	29 94		
Miss	461	389	-	199	187	-	-	7	3		
W.S. CENTRAL	3,641	4,057	-	1,503	1,443	25	14	74 + 5	, 558		
Ark.	187	126	-	159	158	10	-	12 1	92		
La. Okla.	633 101	716 134	-	204 158	182 147	11		53 4	12 70		
Tex	2,720	3,081	-	982	956	4	14	9	384		
MOUNTAIN	432	365		330	324	13	7	14+1	255		
Mont.	3	2	-	46	14	4	-	6	125		
ldaho Wyo	3	15 6	-	15 5	20			1	6 16		
Colo.	102	86	-	41	33	2	4	ĩ	13		
N. Mex. Ariz.	73 217	48 137	-	61 134	61 153	2 3	2 1	-	5 86		
Utah	6	12	-	6	28	2			-		
Nev	21	59	-	22	15	-	-	2	4		
PACIFIC	2,687	2,470	1	2,392	2,342	4	82	2	336		
Wash. Oreg.	64 54	88 71	-	145 82	118 93	1	-	-	4		
Calif.	2,524	2,261	1	1,983	1,961	1	79	2	328		
Alaska Hawaii	2 43	3 47	-	69 113	43 127	2	- 3	-	3		
		÷,	-			•	ک	-	-		
Guam P.R.	2 486	486	U	19 206	32 244	-	1	-	24		
V.I.	1	480	Ū.	1	244		1 52	-	24		
Pac. Trust Terr.	13	-	U	16	-	-		-	-		

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending August 3, 1985 and August 4, 1984 (31st Week)

U. Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending August 3, 1985 (31st Week)

-		All Caus	es, By A	ge (Year	s)					All Cau	ses, By A	Age (Yea	rs)		
Reporting Area	All Ages	≥65	45-64	25-44	1-24	<1	P&I** Total	Reporting Area	All Ages	≥65	45-64	25-44	1-24	<1	P&I** Total
NEW ENGLAND	643	453	120	35	15	20	50	S. ATLANTIC	1,154	658	258	124	55	57	36
Boston, Mass.	147	87	27	16	6	11	17	Atlanta, Ga.	151	81	43	17	7	3	2
Bridgeport, Conn.	43 36	35 25	5 9	1 2	1	1	2	Baltimore, Md.	204	116	55	9	9	15	5
Cambridge, Mass. Fall River, Mass.	31	23	8	-	-		1	Charlotte, N.C. Jacksonville, Fla.	61 118	32 75	13 28	7 10	3	6 5	2 6
Hartford, Conn.	40	23	1Õ	5	1	1	1	Miami, Fla.	121	71	24	14	4	8	2
Lowell, Mass.	26	20	4	2	-	-	4	Norfolk, Va.	53	28	14	3	5	3	3
Lynn, Mass. New Bedford, Mas	20 s. 29	16 25	4	1	-	1	1	Richmond, Va. Savannah, Ga.	66 30	34 17	21	4	3	4	4
New Haven, Conn.		43	12	ż	3	2	-	St. Petersburg, F		91	8 11	1 2	2	2 2	2 3
Providence, R.I.	64	45	13	3	-	3	10	Tampa, Fla.	67	43	11	5	5	3	3
Somerville, Mass. Springfield, Mass.	7 42	5 33	1	1	1	1	1	Washington, D.C		48	28	50	15	5	4
Waterbury, Conn.	29	23	5	i	1		2	Wilmington, Del.	29	22	2	2	2	1	-
Worcester, Mass.	67	50	14	i	2	-	3	E.S. CENTRAL	590	391	125	27	28	19	28
								Birmingham, Ala	107	67	23	5	7	5	1
MID ATLANTIC	2,582 46	1,659 30	585	211	63	64	106	Chattanooga, Te		36	11	4	2	2	3
Albany, N.Y. Allentown, Pa.	40	12	11 2		3	2	2	Knoxville, Tenn. Louisville, Ky.	61 107	43 74	13 21	1 6	2 2	2 4	10
Buffalo, N.Y.	116	73	27	8	4	4	9	Memphis, Tenn.	92	63	21	2	6	4	6 4
Camden, N.J.	34	25	5	2	1	1	1	Mobile, Ala.	34	20	7	3	3	1	-
Elizabeth, N.J.	21 40	13 29	5 8	2 1	1	1	- 3	Montgomery, Al		14	5	-	2	1	-
Erie, Pa.† Jersey City, N.J.	40	25	9	6	ł	1	3	Nashville, Tenn.	112	74	24	6	4	4	4
N.Y. City, N.Y.	1,322	853	290	125	29	25	54	W.S. CENTRAL	1,217	805	221	78	65	48	58
Newark, N.J.	72	30	21	10	1	10	2	Austin, Tex.	69	39	15	6	6	3	6
Paterson, N.J. Philadelphia, Pa.	28 405	18 247	6 107	3 37	1 9	- 5	4	Baton Rouge, La		11	13	3	-	1	2
Pittsburgh, Pa.†	405	42	14	37	2	5 1	3	Corpus Christi, 1 Dallas, Tex.	Tex. 29 192	23 108	5 49	1 17	10	8	11
Reading, Pa.	26	20	1	4	1		ž	El Paso, Tex.	68	33	17	6	9	3	2
Rochester, N.Y.	130	95	22	4	3	6		Fort Worth, Tex.	92	54	20	7	6	5	6
Schenectady, N.Y Scranton, Pa.†	20 28	16 22	3 6	1	-	-	1	Houston, Tex. §	283	246	2	8	17	10	5
Syracuse, N.Y.	86	50	24	2	5	5		Little Rock, Ark. New Orleans, La	85 121	56 70	18 32	6 8	1	4	6
Trenton, N.J.	45	29	9	3	2	2		San Antonio, Te		101	31	10	8	6	14
Utica, N.Y.	17	9	8	-	-	-		Shreveport, La.	32	20	7	4	-	1	3
Yonkers, N.Y.	28	21	7	-	-	-	3	Tulsa, Okla.	62	44	12	2	1	3	3
E.N. CENTRAL	2,172	1,490	394	142	60	85		MOUNTAIN	590	372	132	42	23	21	36
Akron, Ohio Canton, Ohio	45 38	31 24	8 10	2	3 1	3		Albuquerque, N.		50	13	4	5	-	3
Chicago, III.§	553	462	11	26	16	37		Colo. Springs, C Denver, Colo.	olo. 40 95	25 64	10 18	4 11	2	1	8
Cincinnati, Ohio	155	103	43	5	3	1		Las Vegas, Nev.	82	44	28	5	2	2	5 4
Cleveland, Ohio	148	80	46	10	6	6		Ogden, Utah	32	22	- 5	ĭ	1	3	3
Columbus, Ohio	132 105	82 71	32 24	9 5	4 3	5 2	1	Phoenix, Ariz.	121	69	26	9	8	9	3
Dayton, Ohio Detroit, Mich.	244	136	57	31	10	10		Pueblo, Colo. Salt Lake City, U	11 Itah 41	7 24	1	2 2	4	1	1
Evansville, Ind.	44	32	10	2	-	-	. 3	Tucson, Ariz.	96	67	23	4	4	3 2	9
Fort Wayne, Ind.	52	35	12	2	-	3								-	0
Gary, Ind.	7 ich. 70	5 42	1	- 6	1	5	. 1 5	PACIFIC Berkeley, Calif.	1,842	1,184	368	154	74	57	106
Grand Rapids, M Indianapolis, Ind		115	41	14	4	5		Fresno, Calif.	19 56	10 29	6 15	1 4	1 5	3	4 6
Madison, Wis.	29	21	6	2	-		. 2	Glendale, Calif.	29	19	7	2	1	3	1
Milwaukee, Wis.	110	72	24	11	2	1		Honolulu, Hawai		35	10	2	2	-	5
Peoria, III.	51 43	36 27	11	1	2	3		Long Beach, Cal Los Angeles, Cal		51	18	5	3	3	10
Rockford, III. South Bend, Ind.		27	9		2	2		Oakland, Calif.	lif. 527 81	342 48	91 18	52 9	21 3	17 3	12
Toledo, Ohio	68	42	16	6	4			Pasadena, Calif.	41	22	12	1	3	3	5
Youngstown, Of	nio 57	46	8	2	1	-		Portland, Oreg. Sacramento, Cal	129 lif. 106	85 68	23 23	11	4 2	6	9
W.N. CENTRAL	702		121	36	19	19		San Diego, Calif.	146	94	25	12	8	6 7	7 13
Des Moines, Iow	a 67	52	12		1	2	2	San Francisco, C		131	46	15	3	3	7
Duluth, Minn.	44 s 22	31 13	8	2	1	2	-	San Jose, Calif. Seattle, Wash.	133 125	84 83	29 24	16 10	3 3	1 5	9 7
Kansas City, Kar Kansas City, Mo		80	19	5	-	2		Spokane, Wash.		44	7	4	4	5	6
Lincoln, Nebr.	20	18	1	ī	-		. 3	Tacoma, Wash.	64	39	14	3	8	-	5
Minneapolis, Mi	nn. 78	54	11	7	4	-	2 2		t	t					
Omaha, Nebr	96	65 97	23 18		3 3	1	27	TOTAL	11,492	7,519	2,324	849	402	390	538
St. Louis, Mo. St. Paul, Minn.	137 78	61	18	12	4			1							
St. Paul, Minn. Wichita, Kans.	54	36	ii	3	2			1							
								1							

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.

t†Total includes unknown ages. § Data not available. Figures are estimates based on average of past 4 weeks.

Birthweight-Specific Neonatal Mortality Rates — Kentucky

Studies of birthweight-specific neonatal mortality rates have indicated that rates below 750 per 1,000 live births in the 1,000 g or less birthweight range (1) suggest underreporting of neonatal deaths. In a current study, the degree of underreporting of neonatal deaths and the neonatal birthweight-specific mortality rates for the 1981 Kentucky birth cohort were estimated for low birthweight (LBW) (2,500 g, or less) infants.*

Kentucky recorded 57,294 resident in-state live births in 1981, as determined by a review of the 1981 and 1982 computer birth files. Of these, 4,057 (7.1%) were 2,500 g or less. Among the 4,057 LBW births, 332 neonatal deaths were identified through a computer system for linking infant death and birth files. Subsequently, all LBW birth cohort members not known to have died were grouped by hospital of birth, and a request was mailed to each hospital for classification of births by discharge status (dead, alive to home, or alive to another hospital). Similar requests were sent to hospitals receiving transfers during the neonatal period. Infants classified as discharged dead during the neonatal period and for whom no death certificate could be located were classified as reporting failures.

Fifteen unreported neonatal deaths were identified by 11 different hospitals, one of which had three unreported deaths (Table 2). No significant trend in underreporting by birthweight was found. An additional 18 neonatal deaths could not be classified by birthweight because of lack of information.

Reported by CW Spurlock, Div of Epidemiology, MW Hinds, MD, State Epidemiologist, Kentucky Dept of Health Svcs; GH Bergeisen, Indian Health Svc, Bemidji, Minnesota; Program Evaluation Br, Pregnancy Epidemiology Br, Div of Reproductive Health, Center for Health Promotion and Education, CDC.

Editorial Note: The birthweight-specific mortality rates observed in Kentucky are roughly comparable to rates reported during similar periods in other southern states that link birth and infant death certificates (2-4).

*In 1979, the National Center for Health Statistics recommended that the definition of low birthweight be changed from 2,500 g or less to less than 2,500 g to comply with the International Classification of Diseases, 9th Revision. National vital statistics are reported using the less than 2,500 g definition; however, the 2,500 g or less definition has been recently used by the Institute of Medicine for comparison with previous years.

Weight	Total				
(grams)	births	Reported	Unreported	Total	Rate*
≤ 1,000	302	205	8 (3.8%)	213	705.3
1,001-1,500	337	51	3 (5.6%)	54	160.2
1,501-2,000	757	44	3 (6.4%)	47	62.1
2,001-2,500	2,661	32	1 (3.0%)	33	12.4
> 2,500	53,201	101	t	101	1.9
Unknown	36	18	t	18	500.0
Total	57,294	451	15	466	8.1

TABLE 2. Neonatal deaths and mortality rates, by birthweight — Kentucky, 1981

*Deaths for infants under 28 days of age per 1,000 live births.

[†]Underreporting was not investigated for these weights.

Neonatal Mortality Rates - Continued

These findings indicate that current neonatal mortality rates below 750 per 1,000 live births in the 1,000 g or less weight range do not necessarily indicate underreporting and may reflect continuing advances in perinatal care for very small infants. *References*

- 1. McCarthy BJ, Terry J, Rochat RW, Quave S, Tyler CW Jr. The underregistration of neonatal deaths: Georgia 1974-1977. Am J Public Health 1980;70:977-82.
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Current Trends

Imported Dengue Fever — United States, 1984

In 1984, 67 cases of dengue-like illness were reported to CDC from 30 states. Adequate blood samples were received on 44 cases. Of these, six (14%) were confirmed as dengue infection. The remaining 38 (86%) were negative for dengue antibody. Illness associated with confirmed imported dengue was relatively mild and of the classical type. No severe hemorrhagic disease was associated with any of the cases.

The six confirmed cases were reported from six states (Figure 1). Serologic evidence in two cases suggested dengue type 1 and 3 infections. By contrast, in 1983, antibody to all four dengue serotypes were detected. Dengue virus was not isolated from any of the cases imported into the United States in 1984.

Only one case of confirmed dengue was imported into a state (Tennessee) where *Aedes aegypti* may be found at least part of the year (Figure 1). The other five cases were imported into California, Missouri, New York, Virginia, and Wisconsin. No indigenous transmission of dengue was reported in the continental United States in 1984.

Travel histories of persons with confirmed dengue showed that infection was imported from Caribbean basin countries (Mexico and Haiti) and from Asia (India, Thailand, and the Philippines).

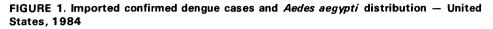
Reported by Viral and Rickettsial Disease Laboratory, California Dept of Health Svcs; Div of Health, Section of Laboratory Svcs, Missouri Dept of Social Svc; Dept of General Svcs, Bureau of Microbiological Science, Richmond, Virginia; State Laboratory of Hygiene, Madison, Wisconsin; Center for Laboratories and Research, New York State Dept of Health; Div of Laboratories, Tennessee Dept of Public Health; Dengue Br, Div of Vector-Borne Viral Diseases, Center for Infectious Diseases, CDC.

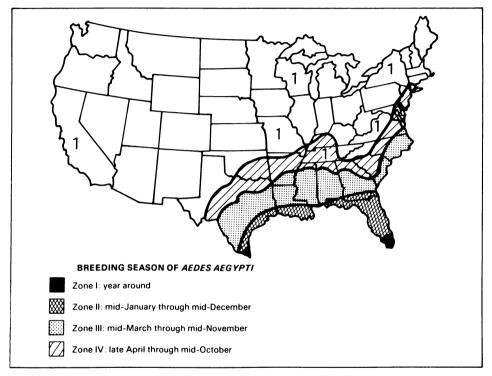
Editorial Note: The number of suspected dengue cases imported into the United States in 1984 was the lowest in several years and reflects the decreased epidemic dengue activity in most tropical areas of the world during that year, including Puerto Rico and the U.S. Virgin Islands, where only six and three dengue cases were confirmed, respectively. However, the amount of dengue is cyclic, and increased activity is expected to occur in the next year or so,

MMWR

Dengue Fever - Continued

at which time more imported cases may be anticipated in the United States. Many of the southern Gulf states of the United States are still infested with *A. aegypti* mosquitoes, the principal vector of epidemic dengue. The repeated introduction of dengue viruses poses a constant potential for dengue transmission in those states.





Epidemiologic Notes and Reports

Isolation of Human T-Lymphotropic Virus Type III/ Lymphadenopathy-Associated Virus from Serum Proteins Given to Cancer Patients — Bahamas

Since 1977, a private clinic in Freeport, Grand Bahama Island, Bahamas, has given cancer patients vials of human serum proteins, prepared at the clinic, for a series of self-administered subcutaneous injections. These products, described by the clinic as immunoaugmentative therapy, are not approved for use in the United States and have been previously associated with the occurrence of cutaneous *Nocardia asteroides* infections (1). In addition, both hepatitis B surface

Isolation of HTLV-III/LAV - Continued

antigen (HBsAg) and a variety of bacterial species have been reported in vials of serum proteins obtained from several patients who attended the clinic (1, 2).

In May 1985, two laboratories in the State of Washington tested samples of the serum proteins that had been obtained from two patients who had attended the clinic. Eighteen vials were tested for human T-lymphotropic virus type III (HTLV-III) antibody by the Abbott enzyme immunoassay (EIA) method*; eight of the 18 were either repeatedly reactive or repeatedly borderline in the two laboratories' tests. All 18 specimen vials were also positive for HBsAg by the Abbott Auszyme EIA method.

In June, these specimens were sent from Washington to CDC for additional testing. Six of the 18 specimens were repeatedly reactive by the Abbott HTLV-III EIA. Testing of all 18 specimens by the Western blot method (*3*) yielded uninterpretable results. Aliquots of nine specimens, including the six that were reactive in the EIA, were placed in primary human lymphocyte culture in an attempt to isolate HTLV-III/lymphadenopathy-associated virus (LAV) (*4*). Of 18 specimens tested for HBsAg by radioimmunoassay (Ausria-II; Abbott Laboratories), 13 were positive and could be neutralized by antibody to HBsAg.

On July 2, authorities of the Bahamian Ministry of Health, accompanied by a staff member and a consultant to the Pan American Health Organization, visited the clinic. On July 17, the Ministry of Health ordered the clinic to close.

Subsequent to closure of the clinic, HTLV-III/LAV was isolated at CDC from one of the nine specimens that had been placed in lymphocyte culture. This finding was confirmed by isolation of HTLV-III/LAV from a second aliquot of this specimen. It was reactive in the HTLV-III EIA and also positive for HBsAg by radioimmunoassay. Reportedly, this specimen vial had not been used by the patient who received it at the clinic, and it had been kept frozen until it was obtained by the laboratories in Washington. The Washington laboratories do not maintain stocks of HTLV-III/LAV.

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Editorial Note: HTLV-III/LAV, the retrovirus that causes acquired immunodeficiency syndrome (AIDS), has been transmitted by transfusion of blood and blood products (4,5). The present report documents the presence of HTLV-III/LAV in a vial of serum protein prepared for injection by the clinic in the Bahamas. AIDS cases have not been reported as a consequence of receiving treatment at the clinic. In addition, the serum proteins used in this therapy may contain HBsAg. CDC has documented hepatitis B virus (HBV) infection in two clinic patients who had no other known risk for infection (6). Several other hepatitis B cases in clinic attendees are under investigation.

These findings suggest that patients who have received serum proteins for injection at this clinic may be at risk of acquiring HTLV-III/LAV and HBV infections. The magnitude of the risk is not known, but it must be assumed that all injectable materials presently in possession of attendees at the clinic are potentially contaminated. Patients who have received such therapy should consult their physicians. If it is decided to test the patient's serum for HTLV-III/LAV antibody or for evidence of HBV infection, such testing is available through state health department laboratories. If an initial test is negative, a testing of a follow-up sample, collected 6 months later, is recommended.

^{*}Use of trade names is for identification only and does not imply endorsement by CDC or the U.S. Public Health Service.

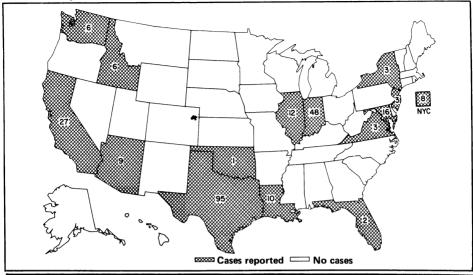
MMWR

Isolation of HTLV-III/LAV - Continued

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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.

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