

MORBIDITY AND MORTALITY WEEKLY REPORT

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Current Trends

**Summary:**  
**Recommendations for Preventing Transmission of Infection**  
**with Human T-Lymphotropic Virus Type III/**  
**Lymphadenopathy-Associated Virus in the Workplace**

The information and recommendations contained in this document have been developed with particular emphasis on health-care workers and others in related occupations in which exposure might occur to blood from persons infected with HTLV-III/LAV, the "AIDS virus." Because of public concern about the purported risk of transmission of HTLV-III/LAV by persons providing personal services and those preparing and serving food and beverages, this document also addresses personal-service and food-service workers. Finally, it addresses "other workers"—persons in settings, such as offices, schools, factories, and construction sites, where there is no known risk of AIDS virus transmission.

Because AIDS is a bloodborne, sexually transmitted disease that is not spread by casual contact, this document does *not* recommend routine HTLV-III/LAV antibody screening for the groups addressed. Because AIDS is not transmitted through preparation or serving of food and beverages, these recommendations state that food-service workers known to be infected with AIDS should not be restricted from work unless they have another infection or illness for which such restriction would be warranted.

This document contains detailed recommendations for precautions appropriate to prevent transmission of all bloodborne infectious diseases to people exposed—in the course of their duties—to blood from persons who may be infected with HTLV-III/LAV. They emphasize that health-care workers should take all possible precautions to prevent needlestick injury. The recommendations are based on the well-documented modes of HTLV-III/LAV transmission and incorporate a "worst case" scenario, the hepatitis B model of transmission. Because the hepatitis B virus is also bloodborne and is both hardier and more infectious than HTLV-III/LAV, recommendations that would prevent transmission of hepatitis B will also prevent transmission of AIDS.

Formulation of specific recommendations for health-care workers who perform invasive procedures is in progress.

## **Recommendations for Preventing Transmission of Infection with Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus in the Workplace**

Persons at increased risk of acquiring infection with human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV), the virus that causes acquired immunodeficiency syndrome (AIDS), include homosexual and bisexual men, intravenous (IV) drug abusers, persons transfused with contaminated blood or blood products, heterosexual contacts of persons with HTLV-III/LAV infection, and children born to infected mothers. HTLV-III/LAV is transmitted through sexual contact, parenteral exposure to infected blood or blood components, and perinatal transmission from mother to neonate. HTLV-III/LAV has been isolated from blood, semen, saliva, tears, breast milk, and urine and is likely to be isolated from some other body fluids, secretions, and excretions, but epidemiologic evidence has implicated only blood and semen in transmission. Studies of nonsexual household contacts of AIDS patients indicate that casual contact with saliva and tears does not result in transmission of infection. Spread of infection to household contacts of infected persons has not been detected when the household contacts have not been sex partners or have not been infants of infected mothers. The kind of nonsexual person-to-person contact that generally occurs among workers and clients or consumers in the workplace does not pose a risk for transmission of HTLV-III/LAV.

As in the development of any such recommendations, the paramount consideration is the protection of the public's health. The following recommendations have been developed for all workers, particularly workers in occupations in which exposure might occur to blood from individuals infected with HTLV-III/LAV. These recommendations reinforce and supplement the specific recommendations that were published earlier for clinical and laboratory staffs (1) and for dental-care personnel and persons performing necropsies and morticians' services (2). Because of public concern about the purported risk of transmission of HTLV-III/LAV by persons providing personal services and by food and beverages, these recommendations contain information and recommendations for personal-service and food-service workers. Finally, these recommendations address workplaces in general where there is no known risk of transmission of HTLV-III/LAV (e.g., offices, schools, factories, construction sites). Formulation of specific recommendations for health-care workers (HCWs) who perform invasive procedures (e.g., surgeons, dentists) is in progress. Separate recommendations are also being developed to prevent HTLV-III/LAV transmission in prisons, other correctional facilities, and institutions housing individuals who may exhibit uncontrollable behavior (e.g., custodial institutions) and in the perinatal setting. In addition, separate recommendations have already been developed for children in schools and day-care centers (3).

HTLV-III/LAV-infected individuals include those with AIDS (4); those diagnosed by their physician(s) as having other illnesses due to infection with HTLV-III/LAV; and those who have virologic or serologic evidence of infection with HTLV-III/LAV but who are not ill.

These recommendations are based on the well-documented modes of HTLV-III/LAV transmission identified in epidemiologic studies and on comparison with the hepatitis B experience. Other recommendations are based on the hepatitis B model of transmission.

### **COMPARISON WITH THE HEPATITIS B VIRUS EXPERIENCE**

The epidemiology of HTLV-III/LAV infection is similar to that of hepatitis B virus (HBV) infection, and much that has been learned over the last 15 years related to the risk of acquiring hepatitis B in the workplace can be applied to understanding the risk of HTLV-III/LAV transmission in the health-care and other occupational settings. Both viruses are transmitted through

*HTLV-III/LAV – Continued*

sexual contact, parenteral exposure to contaminated blood or blood products, and perinatal transmission from infected mothers to their offspring. Thus, some of the same major groups at high risk for HBV infection (e.g., homosexual men, IV drug abusers, persons with hemophilia, infants born to infected mothers) are also the groups at highest risk for HTLV-III/LAV infection. Neither HBV nor HTLV-III/LAV has been shown to be transmitted by casual contact in the workplace, contaminated food or water, or airborne or fecal-oral routes (5).

HBV infection is an occupational risk for HCWs, but this risk is related to degree of contact with blood or contaminated needles. HCWs who do not have contact with blood or needles contaminated with blood are not at risk for acquiring HBV infection in the workplace (6-8).

In the health-care setting, HBV transmission has not been documented between hospitalized patients, except in hemodialysis units, where blood contamination of the environment has been extensive or where HBV-positive blood from one patient has been transferred to another patient through contamination of instruments. Evidence of HBV transmission from HCWs to patients has been rare and limited to situations in which the HCWs exhibited high concentrations of virus in their blood (at least 100,000,000 infectious virus particles per ml of serum), and the HCWs sustained a puncture wound while performing traumatic procedures on patients or had exudative or weeping lesions that allowed virus to contaminate instruments or open wounds of patients (9-11).

Current evidence indicates that, despite epidemiologic similarities of HBV and HTLV-III/LAV infection, the risk for HBV transmission in health-care settings far exceeds that for HTLV-III/LAV transmission. The risk of acquiring HBV infection following a needlestick from an HBV carrier ranges from 6% to 30% (12,13), far in excess of the risk of HTLV-III/LAV infection following a needlestick involving a source patient infected with HTLV-III/LAV, which is less than 1%. In addition, all HCWs who have been shown to transmit HBV infection in health-care settings have belonged to the subset of chronic HBV carriers who, when tested, have exhibited evidence of exceptionally high concentrations of virus (at least 100,000,000 infectious virus particles per ml) in their blood. Chronic carriers who have substantially lower concentrations of virus in their blood have not been implicated in transmission in the health-care setting (9-11,14). The HBV model thus represents a "worst case" condition in regard to transmission in health-care and other related settings. Therefore, recommendations for the control of HBV infection should, if followed, also effectively prevent spread of HTLV-III/LAV. Whether additional measures are indicated for those HCWs who perform invasive procedures will be addressed in the recommendations currently being developed.

Routine screening of all patients or HCWs for evidence of HBV infection has never been recommended. Control of HBV transmission in the health-care setting has emphasized the implementation of recommendations for the appropriate handling of blood, other body fluids, and items soiled with blood or other body fluids.

**TRANSMISSION FROM PATIENTS TO HEALTH-CARE WORKERS**

HCWs include, but are not limited to, nurses, physicians, dentists and other dental workers, optometrists, podiatrists, chiropractors, laboratory and blood bank technologists and technicians, phlebotomists, dialysis personnel, paramedics, emergency medical technicians, medical examiners, morticians, housekeepers, laundry workers, and others whose work involves contact with patients, their blood or other body fluids, or corpses.

Recommendations for HCWs emphasize precautions appropriate for preventing transmission of bloodborne infectious diseases, including HTLV-III/LAV and HBV infections. Thus, these precautions should be enforced routinely, as should other standard infection-control precautions, regardless of whether HCWs or patients are known to be infected with HTLV-III/LAV or HBV. In addition to being informed of these precautions, all HCWs, including students

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and housestaff, should be educated regarding the epidemiology, modes of transmission, and prevention of HTLV-III/LAV infection.

**Risk of HCWs acquiring HTLV-III/LAV in the workplace.** Using the HBV model, the highest risk for transmission of HTLV-III/LAV in the workplace would involve parenteral exposure to a needle or other sharp instrument contaminated with blood of an infected patient. The risk to HCWs of acquiring HTLV-III/LAV infection in the workplace has been evaluated in several studies. In five separate studies, a total of 1,498 HCWs have been tested for antibody to HTLV-III/LAV. In these studies, 666 (44.5%) of the HCWs had direct parenteral (needlestick or cut) or mucous membrane exposure to patients with AIDS or HTLV-III/LAV infection. Most of these exposures were to blood rather than to other body fluids. None of the HCWs whose initial serologic tests were negative developed subsequent evidence of HTLV-III/LAV infection following their exposures. Twenty-six HCWs in these five studies were seropositive when first tested; all but three of these persons belonged to groups recognized to be at increased risk for AIDS (15). Since one was tested anonymously, epidemiologic information was available on only two of these three seropositive HCWs. Although these two HCWs were reported as probable occupationally related HTLV-III/LAV infection (15,16), neither had a preexposure nor an early postexposure serum sample available to help determine the onset of infection. One case reported from England describes a nurse who seroconverted following an accidental parenteral exposure to a needle contaminated with blood from an AIDS patient (17).

In spite of the extremely low risk of transmission of HTLV-III/LAV infection, even when needlestick injuries occur, more emphasis must be given to precautions targeted to prevent needlestick injuries in HCWs caring for any patient, since such injuries continue to occur even during the care of patients who are known to be infected with HTLV-III/LAV.

**Precautions to prevent acquisition of HTLV-III/LAV infection by HCWs in the workplace.** These precautions represent prudent practices that apply to preventing transmission of HTLV-III/LAV and other bloodborne infections and should be used routinely (18).

1. Sharp items (needles, scalpel blades, and other sharp instruments) should be considered as potentially infective and be handled with extraordinary care to prevent accidental injuries.
2. Disposable syringes and needles, scalpel blades, and other sharp items should be placed into puncture-resistant containers located as close as practical to the area in which they were used. To prevent needlestick injuries, needles should not be recapped, purposefully bent, broken, removed from disposable syringes, or otherwise manipulated by hand.
3. When the possibility of exposure to blood or other body fluids exists, routinely recommended precautions should be followed. The anticipated exposure may require gloves alone, as in handling items soiled with blood or equipment contaminated with blood or other body fluids, or may also require gowns, masks, and eye-coverings when performing procedures involving more extensive contact with blood or potentially infective body fluids, as in some dental or endoscopic procedures or postmortem examinations. Hands should be washed thoroughly and immediately if they accidentally become contaminated with blood.
4. To minimize the need for emergency mouth-to-mouth resuscitation, mouth pieces, resuscitation bags, or other ventilation devices should be strategically located and available for use in areas where the need for resuscitation is predictable.
5. Pregnant HCWs are not known to be at greater risk of contracting HTLV-III/LAV infections than HCWs who are not pregnant; however, if a HCW develops HTLV-III/LAV infection during pregnancy, the infant is at increased risk of infection resulting from

*HTLV-III/LAV – Continued*

perinatal transmission. Because of this risk, pregnant HCWs should be especially familiar with precautions for the preventing HTLV-III/LAV transmission (19).

**Precautions for HCWs during home care of persons infected with HTLV-III/LAV.** Persons infected with HTLV-III/LAV can be safely cared for in home environments. Studies of family members of patients infected with HTLV-III/LAV have found no evidence of HTLV-III/LAV transmission to adults who were not sexual contacts of the infected patients or to children who were not at risk for perinatal transmission (3). HCWs providing home care face the same risk of transmission of infection as HCWs in hospitals and other health-care settings, especially if there are needlesticks or other parenteral or mucous membrane exposures to blood or other body fluids.

When providing health-care service in the home to persons infected with HTLV-III/LAV, measures similar to those used in hospitals are appropriate. As in the hospital, needles should not be recapped, purposefully bent, broken, removed from disposable syringes, or otherwise manipulated by hand. Needles and other sharp items should be placed into puncture-resistant containers and disposed of in accordance with local regulations for solid waste. Blood and other body fluids can be flushed down the toilet. Other items for disposal that are contaminated with blood or other body fluids that cannot be flushed down the toilet should be wrapped securely in a plastic bag that is impervious and sturdy (not easily penetrated). It should be placed in a second bag before being discarded in a manner consistent with local regulations for solid waste disposal. Spills of blood or other body fluids should be cleaned with soap and water or a household detergent. As in the hospital, individuals cleaning up such spills should wear disposable gloves. A disinfectant solution or a freshly prepared solution of sodium hypochlorite (household bleach, see below) should be used to wipe the area after cleaning.

**Precautions for providers of prehospital emergency health care.** Providers of prehospital emergency health care include the following: paramedics, emergency medical technicians, law enforcement personnel, firefighters, lifeguards, and others whose job might require them to provide first-response medical care. The risk of transmission of infection, including HTLV-III/LAV infection, from infected persons to providers of prehospital emergency health care should be no higher than that for HCWs providing emergency care in the hospital if appropriate precautions are taken to prevent exposure to blood or other body fluids.

Providers of prehospital emergency health care should follow the precautions outlined above for other HCWs. No transmission of HBV infection during mouth-to-mouth resuscitation has been documented. However, because of the theoretical risk of salivary transmission of HTLV-III/LAV during mouth-to-mouth resuscitation, special attention should be given to the use of disposable airway equipment or resuscitation bags and the wearing of gloves when in contact with blood or other body fluids. Resuscitation equipment and devices known or suspected to be contaminated with blood or other body fluids should be used once and disposed of or be thoroughly cleaned and disinfected after each use.

**Management of parenteral and mucous membrane exposures of HCWs.** If a HCW has a parenteral (e.g., needlestick or cut) or mucous membrane (e.g., splash to the eye or mouth) exposure to blood or other body fluids, the source patient should be assessed clinically and epidemiologically to determine the likelihood of HTLV-III/LAV infection. If the assessment suggests that infection may exist, the patient should be informed of the incident and requested to consent to serologic testing for evidence of HTLV-III/LAV infection. If the source patient has AIDS or other evidence of HTLV-III/LAV infection, declines testing, or has a positive test, the HCW should be evaluated clinically and serologically for evidence of HTLV-III/LAV infection as soon as possible after the exposure, and, if seronegative, retested after 6 weeks and on a periodic basis thereafter (e.g., 3, 6, and 12 months following exposure) to determine if

*HTLV-III/LAV - Continued*

transmission has occurred. During this follow-up period, especially the first 6-12 weeks, when most infected persons are expected to seroconvert, exposed HCWs should receive counseling about the risk of infection and follow U.S. Public Health Service (PHS) recommendations for preventing transmission of AIDS (20,21). If the source patient is seronegative and has no other evidence of HTLV-III/LAV infection, no further follow-up of the HCW is necessary. If the source patient cannot be identified, decisions regarding appropriate follow-up should be individualized based on the type of exposure and the likelihood that the source patient was infected.

**Serologic testing of patients.** Routine serologic testing of all patients for antibody to HTLV-III/LAV is not recommended to prevent transmission of HTLV-III/LAV infection in the workplace. Results of such testing are unlikely to further reduce the risk of transmission, which, even with documented needlesticks, is already extremely low. Furthermore, the risk of needlestick and other parenteral exposures could be reduced by emphasizing and more consistently implementing routinely recommended infection-control precautions (e.g., not recapping needles). Moreover, results of routine serologic testing would not be available for

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

Disease	45th Week Ending			Cumulative, 45th Week Ending		
	Nov. 9, 1985	Nov. 10, 1984	Median 1980-1984	Nov. 9 1985	Nov. 10, 1984	Median 1980-1984
Acquired Immunodeficiency Syndrome (AIDS)	205	67	N	6,897	3,643	N
Aspecific meningitis	252	148	215	8,712	7,078	8,272
Encephalitis: Primary (arthropod-borne & unsp.)	23	25	26	1,059	1,043	1,337
Post-infectious	-	2	1	107	103	81
Gonorrhea: Civilian	11,497	15,584	17,153	726,159	728,211	828,957
Military	369	498	580	15,869	18,630	22,977
Hepatitis: Type A	287	456	484	19,460	18,545	19,734
Type B	381	494	435	22,444	22,407	18,702
Non A, Non B	54	76	N	3,527	3,287	N
Unspecified	70	114	162	4,944	4,422	7,465
Legionellosis	9	13	N	562	602	N
Leprosy	3	-	3	304	195	195
Malaria	4	25	15	872	875	931
Measles: Total*	17	5	24	2,598	2,439	2,439
Indigenous	17	2	N	2,165	2,150	N
Imported	-	3	N	433	289	N
Meningococcal infections: Total	35	38	53	2,038	2,322	2,365
Civilian	35	38	52	2,034	2,318	2,350
Military	-	-	-	4	4	14
Mumps	37	48	70	2,541	2,565	3,884
Pertussis	70	35	35	2,761	2,069	1,525
Rubella (German measles)	7	8	15	580	670	1,899
Syphilis (Primary & Secondary): Civilian	313	581	581	21,970	24,199	26,766
Military	1	4	4	126	261	334
Toxic Shock syndrome	6	3	N	307	415	N
Tuberculosis	303	383	467	18,350	18,399	21,977
Tularemia	1	3	2	143	266	238
Typhoid fever	4	15	9	315	322	404
Typhus fever, tick-borne (RMSF)	5	12	6	660	801	1,072
Rabies, animal	64	99	99	4,624	4,753	5,514

**TABLE II. Notifiable diseases of low frequency, United States**

	Cum 1985		Cum 1985
Anthrax	-	Leptospirosis	32
Botulism: Foodborne	43	Plague	15
Infant	50	Poliomyelitis: Total	5
Other	1	Paralytic	5
Brucellosis (Ohio 1, Tex. 2)	119	Psittacosis (Mich. 1, Oreg. 1)	94
Cholera	3	Rabies, human	1
Congenital rubella syndrome	-	Tetanus (La. 1)	61
Congenital syphilis, ages < 1 year	149	Trichinosis (Tex. 1)	56
Diphtheria	1	Typhus fever, flea-borne (endemic, murine) (Md. 1)	21

\*There were no cases of internationally imported measles reported for this week.

**TABLE III. Cases of specified notifiable diseases, United States, weeks ending  
November 9, 1985 and November 10, 1984 (45th Week)**

Reporting Area	AIDS	Aseptic Mening- itis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel- losis	Leprosy
			Primary	Post-in- fectious			A	B	NA,NB	Unspeci- fied		
	Cum. 1985	1985	Cum. 1985	Cum. 1985	Cum. 1985	Cum. 1984	1985	1985	1985	1985	1985	Cum. 1985
UNITED STATES	6,897	252	1,059	107	726,159	728,211	287	381	54	70	9	304
NEW ENGLAND	235	19	29	-	19,741	19,781	4	38	2	17	-	6
Maine	11	3	-	-	998	864	-	4	-	-	-	-
N.H.	3	-	7	-	495	639	-	1	-	-	-	-
Vt.	2	-	-	-	288	327	1	3	-	-	-	-
Mass.	138	6	17	-	8,193	8,449	3	24	1	17	-	6
R.I.	12	-	-	-	1,566	1,404	-	1	1	-	-	-
Conn.	69	10	5	-	8,201	8,098	-	5	-	-	-	-
MID ATLANTIC	2,684	59	132	11	110,724	97,224	27	53	10	-	-	33
Upstate N.Y.	296	12	40	4	15,562	15,530	9	10	3	-	-	1
N.Y. City	1,834	-	14	-	53,766	37,672	1	-	-	-	-	28
N.J.	394	13	27	-	16,806	17,273	4	22	1	-	-	-
Pa.	160	34	51	7	24,590	26,749	13	21	6	-	-	4
E.N. CENTRAL	293	55	289	20	101,339	102,222	17	41	8	3	5	21
Ohio	46	35	134	4	27,212	26,561	10	21	3	-	5	3
Ind.	23	-	62	2	11,061	11,217	-	-	-	-	-	-
Ill.	149	3	15	8	24,122	22,642	2	2	-	-	-	16
Mich.	53	17	58	-	29,210	30,330	5	18	5	3	-	2
Wis.	22	-	20	6	9,734	11,472	-	-	-	-	-	-
W.N. CENTRAL	94	10	71	4	36,244	35,903	9	22	5	1	1	2
Minn.	30	3	34	1	5,362	5,366	5	8	2	-	-	1
Iowa	10	1	26	-	3,815	3,887	-	1	-	-	-	-
Mo.	40	3	-	-	17,491	17,227	1	8	2	1	-	1
N. Dak.	1	-	-	1	241	337	-	-	-	-	-	-
S. Dak.	1	1	-	-	691	846	-	-	-	-	1	-
Nebr.	3	-	5	-	3,168	2,662	-	4	-	-	-	-
Kans.	9	2	6	2	5,476	5,578	3	1	1	-	-	-
S. ATLANTIC	1,051	69	124	42	160,787	184,586	31	96	12	9	3	7
Del.	10	1	7	-	3,851	3,442	1	2	1	-	1	-
Md.	119	1	25	1	25,307	20,744	2	15	3	-	1	1
D.C.	151	-	-	-	13,752	13,161	-	1	-	-	-	-
Va.	89	32	26	6	16,649	17,573	6	23	3	1	-	-
W. Va.	5	-	33	-	2,287	2,375	-	1	-	-	-	-
N.C.	56	8	27	1	32,166	29,743	4	10	1	4	-	2
S.C.	24	-	6	-	19,147	18,989	-	6	-	1	-	-
Ga.	164	12	-	-	-	34,165	8	15	-	1	-	1
Fla.	433	15	-	34	47,628	44,394	10	23	4	2	1	3
E.S. CENTRAL	61	14	37	4	66,224	66,085	2	33	2	-	-	-
Ky.	15	5	17	-	7,537	7,867	1	4	-	-	-	-
Tenn.	16	8	6	-	25,479	26,747	-	14	1	-	-	-
Ala.	24	-	11	4	19,762	20,194	-	9	1	-	-	-
Miss.	6	1	3	-	13,446	11,277	1	6	-	-	-	-
W.S. CENTRAL	509	17	133	2	97,374	99,366	83	46	5	28	-	25
Ark.	6	-	6	1	9,282	9,163	2	4	-	-	-	1
La.	81	2	8	-	18,411	21,772	3	1	-	-	-	6
Okla.	15	3	24	1	10,779	10,778	6	4	2	-	-	-
Tex.	407	12	95	-	58,902	57,653	72	37	3	28	-	18
MOUNTAIN	127	8	40	6	24,141	23,952	60	29	8	11	-	9
Mont.	1	-	-	-	693	920	-	2	-	-	-	-
Idaho	1	-	-	-	825	1,148	13	-	-	-	-	-
Wyo.	-	-	1	-	563	642	-	-	-	-	-	-
Colo.	45	1	6	2	7,028	6,871	10	5	2	3	-	2
N. Mex.	12	-	3	-	2,764	2,902	6	9	1	-	-	-
Ariz.	46	5	17	-	7,193	6,619	22	11	3	6	-	1
Utah	13	2	10	4	1,176	1,142	-	1	1	-	-	4
Nev.	9	-	3	-	3,899	3,708	9	1	1	2	-	2
PACIFIC	1,843	1	204	18	109,585	99,092	54	23	2	1	-	201
Wash.	106	1	13	1	8,581	7,783	5	14	-	-	-	34
Oreg.	29	-	1	-	5,640	5,797	48	9	1	-	-	3
Calif.	1,687	U	152	17	91,181	81,359	U	U	U	U	U	143
Alaska	3	-	38	-	2,679	2,467	1	-	1	1	-	-
Hawaii	18	-	-	-	1,504	1,686	-	-	-	-	-	21
Guam	1	U	-	-	128	208	U	U	U	U	U	3
P.R.	86	3	6	2	2,732	2,922	1	14	-	1	-	2
V.I.	2	U	-	-	353	469	U	U	U	U	U	-
Pac. Trust Terr.	-	U	-	-	146	-	U	U	U	U	U	20

N: Not notifiable

U: Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending  
November 9, 1985 and November 10, 1984 (45th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin- gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1985	1985	Cum. 1985	1985	Cum. 1985	Cum. 1984	Cum. 1985	1985	Cum. 1985	1985	Cum. 1985	Cum. 1984	1985	Cum. 1985	Cum. 1984
UNITED STATES	872	17	2,165	-	433	2,439	2,038	37	2,541	70	2,761	2,069	7	580	670
NEW ENGLAND	51	-	38	-	88	106	97	-	58	4	193	68	-	12	18
Maine	4	-	-	-	1	-	4	-	6	-	10	3	-	-	1
N.H.	4	-	-	-	-	36	14	-	10	-	103	17	-	2	1
Vt.	1	-	-	-	-	7	10	-	3	-	3	23	-	-	-
Mass.	25	-	34	-	84	49	16	-	17	-	46	18	-	6	16
R.I.	6	-	-	-	-	-	17	-	15	3	22	3	-	-	-
Conn.	11	-	4	-	3	14	36	-	7	1	9	4	-	4	-
MID ATLANTIC	138	8	193	-	38	159	357	8	298	29	224	178	7	226	222
Upstate N.Y.	47	-	72	-	13	38	136	7	159	5	106	100	1	18	99
N.Y. City	53	8	67	-	12	109	62	-	30	4	27	7	6	185	103
N.J.	14	-	17	-	10	7	58	-	46	-	11	13	-	9	19
Pa.	24	-	37	-	3	5	101	1	63	20	80	58	-	14	1
E.N. CENTRAL	57	-	435	-	90	696	355	13	894	5	574	477	-	33	93
Ohio	9	-	-	-	54	9	115	3	265	5	101	72	-	-	2
Ind.	4	-	55	-	2	3	44	-	37	-	188	229	-	1	5
Ill.	21	-	286	-	10	180	80	8	200	-	46	26	-	16	56
Mich.	17	-	37	-	23	464	88	2	310	-	46	30	-	15	22
Wis.	6	-	57	-	1	40	28	-	82	-	193	120	-	1	8
W.N. CENTRAL	30	-	2	-	10	56	105	1	78	-	212	122	-	19	39
Minn.	14	-	-	-	6	47	26	-	1	-	108	16	-	2	4
Iowa	2	-	-	-	-	-	10	-	16	-	28	12	-	1	1
Mo.	5	-	1	-	2	4	41	1	14	-	28	20	-	7	-
N. Dak.	2	-	-	-	2	-	5	-	4	-	9	-	-	2	3
S. Dak.	1	-	-	-	-	-	3	-	-	-	3	9	-	-	-
Nebr.	1	-	-	-	-	-	9	-	3	-	8	12	-	-	-
Kans.	5	-	1	-	-	5	11	-	40	-	28	53	-	7	31
S. ATLANTIC	102	1	279	-	30	66	389	12	254	5	371	205	-	55	24
Del.	-	-	-	-	-	-	11	-	1	-	2	2	-	1	-
Md.	24	-	104	-	9	22	55	-	33	-	155	61	-	6	1
D.C.	8	-	9	-	1	8	6	-	-	-	1	-	-	-	-
Va.	20	-	21	-	7	5	48	1	46	2	19	19	-	2	-
W. Va.	2	-	31	-	2	-	8	3	68	-	4	11	-	9	-
N.C.	9	-	9	-	-	1	53	2	19	1	31	33	-	1	-
S.C.	-	-	-	-	3	1	34	-	11	-	2	2	-	3	-
Ge.	9	-	8	-	-	2	67	1	29	-	93	17	-	4	2
Fla.	30	1	97	-	8	27	107	5	47	2	64	60	-	29	21
E.S. CENTRAL	11	-	-	-	7	6	91	-	29	3	58	14	-	3	12
Ky.	4	-	-	-	5	1	9	-	8	-	8	2	-	3	6
Tenn.	-	-	-	-	1	2	35	-	17	1	25	7	-	-	-
Ala.	6	-	-	-	-	3	26	-	1	2	21	1	-	-	3
Miss.	1	-	-	-	1	-	21	-	3	-	4	4	-	-	3
W.S. CENTRAL	82	-	421	-	15	565	176	3	282	22	502	321	-	37	54
Ark.	3	-	-	-	-	8	17	-	6	-	14	21	-	1	3
La.	1	-	42	-	-	8	25	-	2	1	16	8	-	-	-
Okla.	5	-	-	-	1	8	32	N	N	-	155	241	-	1	-
Tex.	73	-	379	-	14	541	102	3	274	21	317	51	-	35	51
MOUNTAIN	46	-	497	-	51	145	91	-	230	1	202	118	-	5	21
Mont.	-	-	122	-	17	-	11	-	11	-	9	19	-	-	-
Idaho	2	-	126	-	18	23	4	-	9	-	7	7	-	1	1
Wyo.	1	-	5	-	-	-	6	-	2	-	-	6	-	-	2
Colo.	14	-	6	-	7	6	23	-	24	-	83	45	-	-	2
N. Mex.	14	-	1	-	5	88	10	N	N	1	13	9	-	2	1
Ariz.	10	-	237	-	4	1	22	-	113	-	38	23	-	1	4
Utah	2	-	-	-	-	27	9	-	6	-	52	7	-	-	7
Nev.	3	-	-	-	-	-	6	-	65	-	-	2	-	1	4
PACIFIC	355	8	300	-	104	640	377	-	418	1	425	566	-	190	187
Wash.	23	8	90	-	39	154	65	-	35	-	75	316	-	14	1
Oreg.	13	-	4	-	1	-	35	N	N	1	45	30	-	1	2
Calif.	300	U	188	U	59	323	264	U	356	U	258	144	U	132	178
Alaska	2	-	-	-	-	-	9	-	9	-	30	1	-	1	1
Hawaii	17	-	18	-	5	163	4	-	18	-	17	75	-	42	5
Guam	1	U	10	U	1	90	-	U	5	U	-	-	U	2	4
P.R.	-	4	67	-	-	137	13	1	146	1	12	1	-	27	16
V.I.	-	U	4	U	6	-	-	U	3	U	-	-	U	-	-
Pac. Trust Terr.	-	U	-	U	-	-	-	U	3	U	-	-	U	-	-

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

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



TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending  
November 9, 1985 and November 10, 1984 (45th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		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	21,970	24,199	6	18,350	18,399	143	315	660+7	4,624
NEW ENGLAND	514	461	-	627	560	3	13	8	20
Maine	13	9	-	39	27	-	-	-	-
N.H.	36	14	-	19	25	-	-	1	1
Vt.	5	1	-	8	7	-	-	-	1
Mass.	254	263	-	373	313	3	10	6	11
R.I.	15	19	-	47	45	-	-	1	-
Conn.	191	155	-	141	143	-	3	-	7
MID ATLANTIC	3,101	3,213	1	3,311	3,328	2	48	34	533
Upstate N.Y.	234	289	-	578	521	-	12	9	124
N.Y. City	1,871	1,933	-	1,602	1,345	1	25	5	-
N.J.	602	570	-	453	746	1	10	4	39
Pa.	394	421	1	678	716	-	1	16	370
E.N. CENTRAL	876	1,147	1	2,251	2,392	2	39	39	166
Ohio	134	206	1	391	430	-	10	27	28
Ind.	74	123	-	271	290	-	3	4	23
Ill.	400	421	-	985	987	1	16	6	36
Mich.	210	330	-	479	541	-	8	2	25
Wis.	58	67	-	125	144	1	2	-	54
W.N. CENTRAL	205	323	1	515	562	43	13	42	836
Minn.	40	84	-	110	96	1	6	-	161
Iowa	18	11	-	53	56	-	3	1	136
Mo.	111	162	-	245	282	28	3	8	46
N. Dak.	3	9	-	9	12	-	-	1	121
S. Dak.	6	1	-	27	22	8	-	2	294
Nebr.	6	15	1	12	29	2	1	3	34
Kans.	21	41	-	59	65	4	-	27	44
S. ATLANTIC	5,427	7,119	1	3,758	3,810	6	35	313+6	1,170
Del.	35	18	-	41	48	1	-	3	1
Md.	382	440	-	338	356	-	11	26	583
D.C.	296	286	-	136	155	-	-	-	-
Va.	263	367	-	359	376	1	3	25 2	161
W. Va.	22	17	-	97	120	-	1	-	27
N.C.	597	743	1	477	580	4	4	131 3	11
S.C.	724	673	-	457	455	-	1	70 1	61
Ga.	-	1,227	-	635	587	-	3	48	183
Fla.	3,108	3,348	-	1,218	1,133	-	12	9	143
E.S. CENTRAL	1,921	1,745	-	1,609	1,736	8	5	74+1	222
Ky.	61	88	-	394	410	-	1	13	33
Tenn.	568	455	-	477	503	6	2	32	66
Ala.	584	585	-	472	508	1	2	15 1	117
Miss.	708	617	-	266	315	1	-	14	6
W.S. CENTRAL	5,370	5,921	2	2,354	2,179	56	29	133	762
Ark.	290	193	-	281	255	34	-	16	126
La.	944	1,059	-	335	299	-	1	4	19
Okla.	163	187	1	227	207	16	2	90	97
Tex.	3,973	4,482	1	1,511	1,418	6	26	23	520
MOUNTAIN	643	550	-	495	501	15	11	14	403
Mont.	6	3	-	46	17	4	-	6	201
Idaho	5	22	-	22	27	-	-	-	10
Wyo.	10	7	-	5	3	-	-	4	26
Colo.	189	145	-	72	64	2	4	2	24
N. Mex.	112	77	-	79	94	2	4	-	12
Ariz.	276	198	-	224	228	4	3	-	115
Utah	8	18	-	17	35	3	-	-	4
Nev.	37	80	-	30	33	-	-	2	11
PACIFIC	3,913	3,720	-	3,430	3,331	8	122	3	512
Wash.	97	135	-	207	170	-	1	5	4
Oreg.	90	100	-	116	136	1	5	-	4
Calif.	3,663	3,408	U	2,854	2,771	4	110	3	501
Alaska	4	6	-	89	64	3	2	-	3
Hawaii	59	71	-	164	190	-	4	-	-
Guam	2	-	U	30	48	-	-	-	-
P.R.	758	683	U	307	340	-	3	-	34
V.I.	3	10	U	1	4	-	52	-	-
Pac. Trust Terr.	13	-	U	16	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,\* week ending  
November 9, 1985 (45th Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total	Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	688	461	141	44	21	21	55	S. ATLANTIC	1,110	693	242	81	36	56	43
Boston, Mass.	190	105	51	13	9	12	24	Atlanta, Ga.	176	101	38	23	4	10	3
Bridgeport, Conn.	53	39	11	3	-	-	8	Baltimore, Md.	176	114	37	13	6	6	2
Cambridge, Mass.	23	18	5	-	-	-	4	Charlotte, N.C.	71	41	15	2	3	8	6
Fall River, Mass.	34	23	6	3	2	-	1	Jacksonville, Fla.	107	69	24	8	4	2	4
Hartford, Conn.	62	45	5	7	4	1	5	Miami, Fla.	137	75	35	14	6	7	3
Lowell, Mass.	33	23	7	3	-	-	2	Norfolk, Va.	50	25	14	8	1	2	5
Lynn, Mass.	23	15	6	2	-	-	-	Richmond, Va.	63	40	19	1	3	-	4
New Bedford, Mass.	24	18	5	1	-	-	1	Savannah, Ga.	50	28	9	2	2	9	5
New Haven, Conn.	34	21	5	4	2	2	-	St. Petersburg, Fla.	82	72	9	-	-	1	5
Providence, R.I.	45	33	11	-	1	-	1	Tampa, Fla.	67	40	9	5	5	8	2
Somerville, Mass.	12	9	2	1	-	-	1	Washington, D.C.	102	66	26	5	2	3	3
Springfield, Mass.	72	51	12	4	-	5	3	Wilmington, Del.	29	22	7	-	-	-	1
Waterbury, Conn.	28	18	9	-	1	-	2								
Worcester, Mass.	55	43	6	3	2	1	3								
MID ATLANTIC	2,728	1,826	574	215	64	48	140	E.S. CENTRAL	725	457	172	44	18	34	32
Albany, N.Y.	53	31	15	2	4	1	1	Birmingham, Ala.	117	72	26	8	3	8	3
Allentown, Pa.	12	11	1	-	-	-	1	Chattanooga, Tenn.	44	29	9	-	2	4	5
Buffalo, N.Y.	119	74	36	3	4	2	9	Knoxville, Tenn.	68	46	18	1	-	3	4
Camden, N.J.	51	33	9	4	1	3	3	Louisville, Ky.	117	75	29	4	1	8	2
Elizabeth, N.J.	18	12	6	-	-	-	4	Memphis, Tenn.	162	97	38	14	6	7	7
Erie, Pa.†	49	30	14	1	2	2	1	Mobile, Ala.	73	42	20	7	2	2	2
Jersey City, N.J.	40	32	5	3	-	-	-	Montgomery, Ala.	27	24	2	-	1	-	-
N.Y. City, N.Y.	1,429	947	293	135	34	20	56	Nashville, Tenn.	117	72	30	10	3	2	9
Newark, N.J.	63	31	16	9	4	3	9								
Paterson, N.J.	41	26	9	5	-	1	6	W.S. CENTRAL	1,379	817	344	114	58	46	56
Philadelphia, Pa.	411	272	91	31	9	8	23	Austin, Tex.	40	26	7	5	1	1	1
Pittsburgh, Pa.†	51	39	9	3	-	-	3	Baton Rouge, La.	48	32	9	4	2	1	3
Reading, Pa.	33	22	4	7	-	-	6	Corpus Christi, Tex.	70	50	15	3	-	2	3
Rochester, N.Y.	123	88	23	6	2	4	10	Dallas, Tex.	193	104	47	15	16	11	5
Schenectady, N.Y.	21	15	4	1	-	1	1	El Paso, Tex.	43	36	6	-	-	1	6
Scranton, Pa.†	33	27	5	1	-	-	1	Fort Worth, Tex.	85	50	18	9	3	5	10
Syracuse, N.Y.	100	77	18	1	3	1	4	Houston, Tex.	368	195	96	47	21	9	6
Trenton, N.J.	28	20	3	2	1	2	-	Little Rock, Ark.	71	44	18	2	3	4	4
Utica, N.Y.	21	14	7	-	-	-	-	New Orleans, La.	140	70	53	11	3	3	1
Yonkers, N.Y.	32	25	6	1	-	-	2	San Antonio, Tex.	150	94	32	12	7	5	6
								Shreveport, La.	80	49	23	4	1	3	3
								Tulsa, Okla.	91	67	20	2	1	1	8
E.N. CENTRAL	2,185	1,530	362	133	66	93	87	MOUNTAIN	638	395	128	46	34	34	31
Akron, Ohio	56	39	8	2	3	4	-	Albuquerque, N.Mex.	78	47	20	6	2	3	3
Canton, Ohio	28	18	7	2	1	-	3	Colo. Springs, Colo.	40	21	7	4	4	3	6
Chicago, Ill.‡	553	462	11	26	16	37	16	Denver, Colo.	98	62	17	4	6	9	3
Cincinnati, Ohio	118	82	24	8	1	3	11	Las Vegas, Nev.	92	56	21	9	4	2	6
Cleveland, Ohio	171	94	45	17	8	7	2	Ogden, Utah	23	16	5	-	-	2	2
Columbus, Ohio	129	75	29	13	6	6	5	Phoenix, Ariz.	143	82	33	12	7	9	4
Dayton, Ohio	112	74	24	6	5	3	4	Pueblo, Colo.	17	13	1	2	1	-	2
Detroit, Mich.	235	146	48	25	9	7	6	Salt Lake City, Utah	49	29	11	4	2	3	1
Evansville, Ind.	32	23	8	1	-	-	1	Tucson, Ariz.	98	69	13	5	8	3	4
Fort Wayne, Ind.	55	39	7	3	3	3	3								
Gary, Ind.	17	8	5	1	3	-	-	PACIFIC	1,851	1,224	367	153	55	46	90
Grand Rapids, Mich.	45	34	9	1	1	-	4	Berkeley, Calif.	20	14	3	3	-	-	-
Indianapolis, Ind.	153	95	37	8	3	10	3	Fresno, Calif.	90	63	19	3	3	2	6
Madison, Wis.	36	27	6	3	-	-	2	Glendale, Calif.	18	15	1	1	1	-	1
Milwaukee, Wis.	149	106	30	4	1	8	6	Honolulu, Hawaii	60	42	7	5	4	2	3
Peoria, Ill.	44	37	5	2	-	-	6	Long Beach, Calif.	81	58	10	5	1	7	10
Rockford, Ill.	48	28	12	4	4	-	3	Los Angeles, Calif.	495	316	98	51	20	4	12
South Bend, Ind.	49	37	10	1	1	-	2	Oakland, Calif.	78	47	17	10	2	2	3
Toledo, Ohio	97	67	21	5	1	3	8	Pasadena, Calif.	41	29	7	3	1	1	3
Youngstown, Ohio	58	39	16	1	-	2	2	Portland, Oreg.	140	90	31	12	3	4	6
								Sacramento, Calif.	141	92	30	11	3	5	14
W.N. CENTRAL	750	497	169	47	13	24	34	San Diego, Calif.	117	73	27	10	5	2	6
Des Moines, Iowa	71	50	15	5	1	-	5	San Francisco, Calif.	159	97	37	19	2	4	5
Duluth, Minn.	15	11	4	-	-	-	-	San Jose, Calif.	171	123	32	10	2	4	8
Kansas City, Kans.	26	17	7	2	-	-	-	Seattle, Wash.	144	97	30	8	6	3	5
Lincoln, Nebr.	117	77	29	7	1	3	9	Spokane, Wash.	49	34	8	1	1	5	4
Minneapolis, Minn.	25	22	3	-	-	-	2	Tacoma, Wash.	47	34	10	1	1	1	4
Omaha, Nebr.	83	49	23	8	1	2	1								
St. Louis, Mo.	93	66	16	6	1	4	3								
St. Paul, Minn.	174	107	38	9	7	13	3								
Wichita, Kans.	58	47	8	3	-	-	1								
	88	51	26	7	2	2	10								
TOTAL	12,054	7,900	2,499	877	365	402	568								

\* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

\*\* Pneumonia and influenza.

† Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

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

*HTLV-III/LAV – Continued*

emergency cases and patients with short lengths of stay, and additional tests to determine whether a positive test was a true or false positive would be required in populations with a low prevalence of infection. However, this recommendation is based only on considerations of occupational risks and should not be construed as a recommendation against other uses of the serologic test, such as for diagnosis or to facilitate medical management of patients. Since the experience with infected patients varies substantially among hospitals (75% of all AIDS cases have been reported by only 280 of the more than 6,000 acute-care hospitals in the United States), some hospitals in certain geographic areas may deem it appropriate to initiate serologic testing of patients.

**TRANSMISSION FROM HEALTH-CARE WORKERS TO PATIENTS**

**Risk of transmission of HTLV-III/LAV infection from HCWs to patients.** Although there is no evidence that HCWs infected with HTLV-III/LAV have transmitted infection to patients, a risk of transmission of HTLV-III/LAV infection from HCWs to patients would exist in situations where there is both (1) a high degree of trauma to the patient that would provide a portal of entry for the virus (e.g., during invasive procedures) and (2) access of blood or serous fluid from the infected HCW to the open tissue of a patient, as could occur if the HCW sustains a needlestick or scalpel injury during an invasive procedure. HCWs known to be infected with HTLV-III/LAV who do not perform invasive procedures need not be restricted from work unless they have evidence of other infection or illness for which any HCW should be restricted. Whether additional restrictions are indicated for HCWs who perform invasive procedures is currently being considered.

**Precautions to prevent transmission of HTLV-III/LAV infection from HCWs to patients.** These precautions apply to all HCWs, regardless of whether they perform invasive procedures: (1) All HCWs should wear gloves for direct contact with mucous membranes or nonintact skin of all patients and (2) HCWs who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient-care equipment until the condition resolves.

**Management of parenteral and mucous membrane exposures of patients.** If a patient has a parenteral or mucous membrane exposure to blood or other body fluids of a HCW, the patient should be informed of the incident and the same procedure outlined above for exposures of HCWs to patients should be followed for both the source HCW and the potentially exposed patient. Management of this type of exposure will be addressed in more detail in the recommendations for HCWs who perform invasive procedures.

**Serologic testing of HCWs.** Routine serologic testing of HCWs who do not perform invasive procedures (including providers of home and prehospital emergency care) is not recommended to prevent transmission of HTLV-III/LAV infection. The risk of transmission is extremely low and can be further minimized when routinely recommended infection-control precautions are followed. However, serologic testing should be available to HCWs who may wish to know their HTLV-III/LAV infection status. Whether indications exist for serologic testing of HCWs who perform invasive procedures is currently being considered.

**Risk of occupational acquisition of other infectious diseases by HCWs infected with HTLV-III/LAV.** HCWs who are known to be infected with HTLV-III/LAV and who have defective immune systems are at increased risk of acquiring or experiencing serious complications of other infectious diseases. Of particular concern is the risk of severe infection following exposure to patients with infectious diseases that are easily transmitted if appropriate precautions are not taken (e.g., tuberculosis). HCWs infected with HTLV-III/LAV should be counseled about the potential risk associated with taking care of patients with transmissible infections and should continue to follow existing recommendations for infection control to minimize

*HTLV-III/LAV — Continued*

their risk of exposure to other infectious agents (18,19). The HCWs' personal physician(s), in conjunction with their institutions' personnel health services or medical directors, should determine on an individual basis whether the infected HCWs can adequately and safely perform patient-care duties and suggest changes in work assignments, if indicated. In making this determination, recommendations of the Immunization Practices Advisory Committee and institutional policies concerning requirements for vaccinating HCWs with live-virus vaccines should also be considered.

**STERILIZATION, DISINFECTION, HOUSEKEEPING, AND WASTE DISPOSAL TO PREVENT TRANSMISSION OF HTLV-III/LAV**

Sterilization and disinfection procedures currently recommended for use (22,23) in health-care and dental facilities are adequate to sterilize or disinfect instruments, devices, or other items contaminated with the blood or other body fluids from individuals infected with HTLV-III/LAV. Instruments or other nondisposable items that enter normally sterile tissue or the vascular system or through which blood flows should be sterilized before reuse. Surgical instruments used on all patients should be decontaminated after use rather than just rinsed with water. Decontamination can be accomplished by machine or by hand cleaning by trained personnel wearing appropriate protective attire (24) and using appropriate chemical germicides. Instruments or other nondisposable items that touch intact mucous membranes should receive high-level disinfection.

Several liquid chemical germicides commonly used in laboratories and health-care facilities have been shown to kill HTLV-III/LAV at concentrations much lower than are used in practice (25). When decontaminating instruments or medical devices, chemical germicides that are registered with and approved by the U.S. Environmental Protection Agency (EPA) as "sterilants" can be used either for sterilization or for high-level disinfection depending on contact time; germicides that are approved for use as "hospital disinfectants" and are mycobactericidal when used at appropriate dilutions can also be used for high-level disinfection of devices and instruments. Germicides that are mycobactericidal are preferred because mycobacteria represent one of the most resistant groups of microorganisms; therefore, germicides that are effective against mycobacteria are also effective against other bacterial and viral pathogens. When chemical germicides are used, instruments or devices to be sterilized or disinfected should be thoroughly cleaned before exposure to the germicide, and the manufacturer's instructions for use of the germicide should be followed.

Laundry and dishwashing cycles commonly used in hospitals are adequate to decontaminate linens, dishes, glassware, and utensils. When cleaning environmental surfaces, housekeeping procedures commonly used in hospitals are adequate; surfaces exposed to blood and body fluids should be cleaned with a detergent followed by decontamination using an EPA-approved hospital disinfectant that is mycobactericidal. Individuals cleaning up such spills should wear disposable gloves. Information on specific label claims of commercial germicides can be obtained by writing to the Disinfectants Branch, Office of Pesticides, Environmental Protection Agency, 401 M Street, S.W., Washington, D.C., 20460.

In addition to hospital disinfectants, a freshly prepared solution of sodium hypochlorite (household bleach) is an inexpensive and very effective germicide (25). Concentrations ranging from 5,000 ppm (a 1:10 dilution of household bleach) to 500 ppm (a 1:100 dilution) sodium hypochlorite are effective, depending on the amount of organic material (e.g., blood, mucus, etc.) present on the surface to be cleaned and disinfected.

Sharp items should be considered as potentially infective and should be handled and disposed of with extraordinary care to prevent accidental injuries. Other potentially infective waste should be contained and transported in clearly identified impervious plastic bags. If the

*HTLV-III/LAV – Continued*

outside of the bag is contaminated with blood or other body fluids, a second outer bag should be used. Recommended practices for disposal of infective waste (23) are adequate for disposal of waste contaminated by HTLV-III/LAV. Blood and other body fluids may be carefully poured down a drain connected to a sanitary sewer.

**CONSIDERATIONS RELEVANT TO OTHER WORKERS**

**Personal-service workers (PSWs).** PSWs are defined as individuals whose occupations involve close personal contact with clients (e.g., hairdressers, barbers, estheticians, cosmetologists, manicurists, pedicurists, massage therapists). PSWs whose services (tattooing, ear piercing, acupuncture, etc.) require needles or other instruments that penetrate the skin should follow precautions indicated for HCWs. Although there is no evidence of transmission of HTLV-III/LAV from clients to PSWs, from PSWs to clients, or between clients of PSWs, a risk of transmission would exist from PSWs to clients and vice versa in situations where there is both (1) trauma to one of the individuals that would provide a portal of entry for the virus and (2) access of blood or serous fluid from one infected person to the open tissue of the other, as could occur if either sustained a cut. A risk of transmission from client to client exists when instruments contaminated with blood are not sterilized or disinfected between clients. However, HBV transmission has been documented only rarely in acupuncture, ear piercing, and tattoo establishments and never in other personal-service settings, indicating that any risk for HTLV-III/LAV transmission in personal-service settings must be extremely low.

All PSWs should be educated about transmission of bloodborne infections, including HTLV-III/LAV and HBV. Such education should emphasize principles of good hygiene, antisepsis, and disinfection. This education can be accomplished by national or state professional organizations, with assistance from state and local health departments, using lectures at meetings or self-instructional materials. Licensure requirements should include evidence of such education. Instruments that are intended to penetrate the skin (e.g., tattooing and acupuncture needles, ear piercing devices) should be used once and disposed of or be thoroughly cleaned and sterilized after each use using procedures recommended for use in health-care institutions. Instruments not intended to penetrate the skin but which may become contaminated with blood (e.g., razors), should be used for only one client and be disposed of or thoroughly cleaned and disinfected after use using procedures recommended for use in health-care institutions. Any PSW with exudative lesions or weeping dermatitis, regardless of HTLV-III/LAV infection status, should refrain from direct contact with clients until the condition resolves. PSWs known to be infected with HTLV-III/LAV need not be restricted from work unless they have evidence of other infections or illnesses for which any PSW should also be restricted.

Routine serologic testing of PSWs for antibody to HTLV-III/LAV is not recommended to prevent transmission from PSWs to clients.

**Food-service workers (FSWs).** FSWs are defined as individuals whose occupations involve the preparation or serving of food or beverages (e.g., cooks, caterers, servers, waiters, bartenders, airline attendants). All epidemiologic and laboratory evidence indicates that blood-borne and sexually transmitted infections are not transmitted during the preparation or serving of food or beverages, and no instances of HBV or HTLV-III/LAV transmission have been documented in this setting.

All FSWs should follow recommended standards and practices of good personal hygiene and food sanitation (26). All FSWs should exercise care to avoid injury to hands when preparing food. Should such an injury occur, both aesthetic and sanitary considerations would dictate that food contaminated with blood be discarded. FSWs known to be infected with HTLV-III/LAV need not be restricted from work unless they have evidence of other infection or illness for which any FSW should also be restricted.

*HTLV-III/LAV — Continued*

Routine serologic testing of FSWs for antibody to HTLV-III/LAV is not recommended to prevent disease transmission from FSWs to consumers.

**Other workers sharing the same work environment.** No known risk of transmission to co-workers, clients, or consumers exists from HTLV-III/LAV-infected workers in other settings (e.g., offices, schools, factories, construction sites). This infection is spread by sexual contact with infected persons, injection of contaminated blood or blood products, and by perinatal transmission. Workers known to be infected with HTLV-III/LAV should not be restricted from work solely based on this finding. Moreover, they should not be restricted from using telephones, office equipment, toilets, showers, eating facilities, and water fountains. Equipment contaminated with blood or other body fluids of any worker, regardless of HTLV-III/LAV infection status, should be cleaned with soap and water or a detergent. A disinfectant solution or a fresh solution of sodium hypochlorite (household bleach, see above) should be used to wipe the area after cleaning.

**OTHER ISSUES IN THE WORKPLACE**

The information and recommendations contained in this document do not address all the potential issues that may have to be considered when making specific employment decisions for persons with HTLV-III/LAV infection. The diagnosis of HTLV-III/LAV infection may evoke unwarranted fear and suspicion in some co-workers. Other issues that may be considered include the need for confidentiality, applicable federal, state, or local laws governing occupational safety and health, civil rights of employees, workers' compensation laws, provisions of collective bargaining agreements, confidentiality of medical records, informed consent, employee and patient privacy rights, and employee right-to-know statutes.

**DEVELOPMENT OF THESE RECOMMENDATIONS**

The information and recommendations contained in these recommendations were developed and compiled by CDC and other PHS agencies in consultation with individuals representing various organizations. The following organizations were represented: Association of State and Territorial Health Officials, Conference of State and Territorial Epidemiologists, Association of State and Territorial Public Health Laboratory Directors, National Association of County Health Officials, American Hospital Association, United States Conference of Local Health Officers, Association for Practitioners in Infection Control, Society of Hospital Epidemiologists of America, American Dental Association, American Medical Association, American Nurses' Association, American Association of Medical Colleges, American Association of Dental Schools, National Institutes of Health, Food and Drug Administration, Food Research Institute, National Restaurant Association, National Hairdressers and Cosmetologists Association, National Gay Task Force, National Funeral Directors and Morticians Association, American Association of Physicians for Human Rights, and National Association of Emergency Medical Technicians. The consultants also included a labor union representative, an attorney, a corporate medical director, and a pathologist. However, these recommendations may not reflect the views of individual consultants or the organizations they represented.

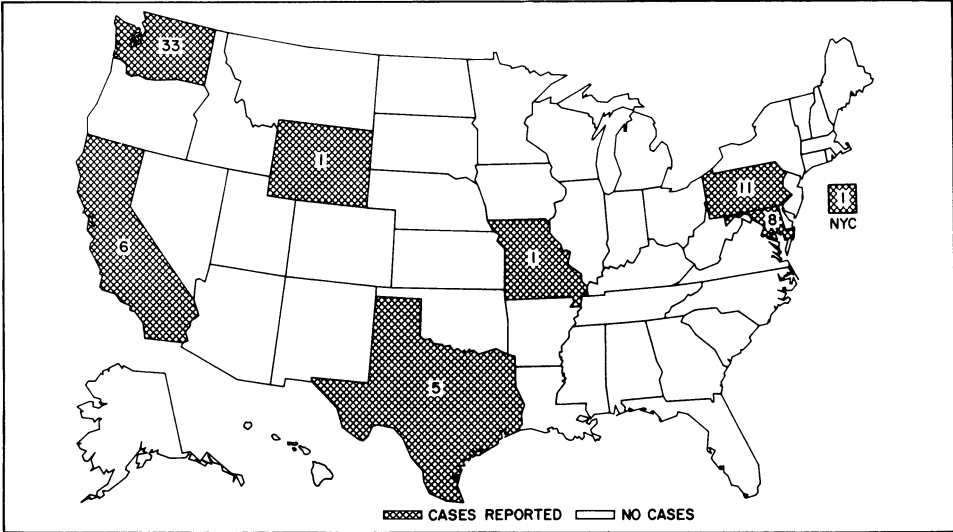
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*HTLV-III/LAV – Continued*

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FIGURE I. Reported measles cases — United States, weeks 41-44, 1985



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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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