



EPIDEMIOLOGY BULLETIN

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Heterosexual Transmission of HTLV-III

Case Report A 26 year old, previously healthy Virginia woman presented to her physician with fever, fatigue, arthralgias/myalgias, diarrhea, and weight loss of several weeks duration. Examination revealed diffuse lymphadenopathy and oral thrush. Laboratory tests revealed lymphopenia. She had been living with a male companion with whom she had had sexual intercourse. Previous to her illness, he had been diagnosed as having acquired immunodeficiency syndrome (AIDS). She denied any history of I.V. drug use or blood transfusion. Her illness was later confirmed to be AIDS when she developed *Pneumocystis carinii* pneumonia and symptomatic, disseminated infections due to *Mycobacterium avium-intracellulare* and cytomegalovirus. Within two months of the onset of symptoms she died of these complications.

Editor's comment: This is the only case of suspected heterosexually transmitted AIDS reported to date in Virginia. However, six (4%) of the total 148 AIDS cases reported in Virginia had none of the recognized risk factors including homosexuality/bisexuality, blood transfusions, illicit I.V. drug use, or sexual intercourse with a woman known to have AIDS. All six were U.S. born males between the ages of 21 and 45 years. It is not known if any had had sexual intercourse with a female prostitute.

Heterosexual transmission, from man to woman, of the viral agent responsible for causing AIDS (HTLV-III) was suggested as early as 1982 when AIDS in the female sexual partner of a heroin addict was reported. She had no other known risk factors for the disease.¹ In 1983, additional

cases of AIDS were reported in female sexual partners of males with AIDS.² With the advent of serologic tests for antibody to the HTLV-III, it has become possible to demonstrate both asymptomatic infection of female sexual partners of males with AIDS,³ and transmission of the HTLV-III to female sexual partners of asymptotically infected males.⁴ Indeed, on occasion AIDS has developed in the woman prior to becoming manifested in the man from whom she acquired HTLV-III infection.

The prevalence of HTLV-III antibody in spouses of male AIDS patients has been reported to range anywhere from 10-70%.^{3,5} Although one study suggested that the practice of anal intercourse might be a risk factor

quent sexual intercourse apparently may be sufficient for HTLV-III transmission from male to female.⁴ Although the use of condoms is recommended to help prevent sexual transmission of HTLV-III, there has not yet been any confirmation of their effectiveness. A recent case report suggests that the prognosis of a woman already infected with HTLV-III might be favorably influenced by her infected partner's subsequent use of a condom during intercourse.⁸ Further study of this is needed since early studies suggest that a significant number of women infected by their sexual partners will go on to develop AIDS or AIDS-related complex (ARC).⁷

Heterosexual transmission of HTLV-III from woman to man apparently occurs, but is less well documented. Indirect evidence suggests that prostitutes infected with HTLV-III may play a role in such transmission. Kenyan prostitutes tested for HTLV-III antibody have shown positivity rates of 31-66%,⁹ and the range of positivity among U.S. prostitutes tested has been 5-40%.¹⁰ In one study of 42 African women with AIDS or ARC, 24% were professional prostitutes. In the same study heterosexual African men with AIDS were significantly more likely than controls to have had regular contact with prostitutes (81% vs. 34%) and had a greater mean number of sexual partners per year than did controls (32 vs. 3).¹¹ A history of sexual contact with prostitutes has also been identified as a risk factor for AIDS among heterosexual Haitian men living in the U.S.¹² In Haiti, 63% of asymptomatic heterosexual male partners of women with

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for heterosexual transmission of HTLV-III to women,⁶ a subsequent study found no association between serologic status and specific sexual practices, the duration of the sexual relationship, or the number of episodes of sexual contact.⁷ Even infre-

Oral Viral Lesion (Hairy Leukoplakia) Associated with AIDS

From October 1981 to June 1985, 13 (11%) of 123 patients with hairy leukoplakia (HL) seen in San Francisco, California, were additionally diagnosed as having acquired immunodeficiency syndrome (AIDS). Eighty (73%) of the 110 patients who did not have AIDS at the time of HL diagnosis were followed (1). Twenty of these developed AIDS within 1-33 months (mean 7.5 months) of HL diagnosis. Seventy-nine serum specimens from the 123 patients with HL were tested for antibody to human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV) by indirect immunofluorescence (2). Of these, 78 (99%) were positive. The one negative result was also negative by Western blot test. All cases met the CDC case definition for AIDS.

Oral viral "hairy" leukoplakia of the tongue appears as raised white

areas of thickening on the tongue, usually on the lateral border. The lesions may not respond to traditional antifungal therapy and appear to have unusual virologic features. *Candida* has been reported on the surface of the HL lesions. A number of viruses, including papilloma, herpes, and Epstein-Barr, have been identified by electron microscopy in biopsies obtained from the HL lesions. HL was first identified in San Francisco in 1981. The lesion has also been reported in patients examined in Los Angeles, California; Baltimore, Maryland; Ann Arbor, Michigan; Paris, France; Copenhagen, Denmark; and London, England.

Editorial Note: HL may be of diagnostic value as an early indicator of HTLV-III/LAV infections, especially when observed in combination with other clinical findings. Approximately 95% of patients with AIDS and AIDS-

related complex are reported to have cervical lymphadenopathy and other head and neck manifestations of disease, which may be detected by dentists or others undertaking oral or facial examination (3).

Health-care providers, including dental personnel, are in a unique position to identify clinical oral symptoms and their potential association with AIDS. Kaposi's sarcoma (KS), candidiasis, recurrent herpetic infections, and papillomas are oral manifestations that have been associated with AIDS. Unresolved candidiasis may be one of the earliest signs of AIDS in persons in groups at risk of acquiring AIDS. Oral KS is virtually pathognomonic of AIDS in males aged 25-44 years. Squamous cell carcinomas, non-Hodgkins lymphomas, and malignant melanomas have also been reported to occur in the oral cavity in (continued to page 7)

Heterosexual Transmission (continued from page 1)

AIDS were found to be HTLV-III antibody positive.¹³ Finally, of 68 U.S. men with AIDS and no identifiable risk factors, 34% gave a history of sexual contact with female prostitutes.¹⁰

Sexually active persons, whether heterosexual, bisexual, or homosexual need to be aware that the more sexual partners they have, the greater their risk of acquiring HTLV-III infection and AIDS. Even the risks to monogamous individuals are increased if their partners are members of groups at risk for AIDS, if their partners are known sexual contacts of risk-group members, or if their partners engage in sex with multiple individuals.

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Education and Foster Care of Children with HTLV-III/LAV

The information and recommendations contained in this document were developed and compiled by CDC in consultation with individuals appointed by their organizations to represent the Conference of State and Territorial Epidemiologists, the Association of State and Territorial Health Officers, the National Association of County Health Officers, the Division of Maternal and Child Health (Health Resources and Services Administration), the National Association for Elementary School Principals, the National Association of State School Nurse Consultants, the National Congress of Parents and Teachers, and the Children's Aid Society. The consultants also included the mother of a child with acquired immunodeficiency syndrome (AIDS), a legal advisor to a state education department, and several pediatricians who are experts in the field of pediatric AIDS. This document is made available to assist state and local health and education departments in developing guidelines for their particular situations and locations.

These recommendations apply to all children known to be infected with human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV). This includes children with AIDS as defined for reporting purposes (Table 1); children who are diagnosed by their physicians as having an illness due to infection with HTLV-III/LAV but who do not meet the case definition; and children who are asymptomatic but have virologic or serologic evidence of infection with HTLV-III/LAV. These recommendations do not apply to siblings of infected children unless they are also infected.

BACKGROUND

The Scope of the Problem. As of August 20, 1985, 183 of the 12,599 reported cases of AIDS in the United States were among children under 18 years of age. This number is expected to double in the next year. Children with AIDS have been reported from

23 states, the District of Columbia, and Puerto Rico, with 75% residing in New York, California, Florida, and New Jersey.

The 183 AIDS patients reported to CDC represent only the most severe form of HTLV-III/LAV infection, i.e., those children who develop opportunistic infections or malignancies (Table 1). As in adults with HTLV-III/LAV infection, many infected children may have milder illness or may be asymptomatic.

Legal Issues. Among the legal issues to be considered in forming guidelines for the education and foster care of HTLV-III/LAV-infected children are the civil rights aspects of public school attendance, the protections for handicapped children under 20 U.S.C. 1401 et seq. and 29 U.S.C. 794, the confidentiality of a student's school record under state laws and under 20 U.S.C. 1232g, and employee

right-to-know statutes for public employees in some states.

Confidentiality Issues. The diagnosis of AIDS or associated illnesses evokes much fear from others in contact with the patient and may evoke suspicion of life styles that may not be acceptable to some persons. Parents of HTLV-III/LAV-infected children should be aware of the potential for social isolation should the child's condition become known to others in the care or educational setting. School, day-care, and social service personnel and others involved in educating and caring for these children should be sensitive to the need for confidentiality and the right to privacy in these cases.

Assessment of Risks

Risk Factors for Acquiring HTLV-III/LAV Infection and Transmission. In adults and adolescents, HTLV-III/ (continued to page 4)

TABLE 1. Provisional case definition for acquired immunodeficiency syndrome (AIDS) surveillance of children

For the limited purposes of epidemiologic surveillance, CDC defines a case of pediatric acquired immunodeficiency syndrome (AIDS) as a child who has had:

1. A reliably diagnosed disease at least moderately indicative of underlying cellular immunodeficiency, and
2. No known cause of underlying cellular immunodeficiency or any other reduced resistance reported to be associated with that disease.

The diseases accepted as sufficiently indicative of underlying cellular immunodeficiency are the same as those used in defining AIDS in adults. In the absence of these opportunistic diseases, a histologically confirmed diagnosis of chronic lymphoid interstitial pneumonitis will be considered indicative of AIDS unless test(s) for HTLV-III/LAV are negative. Congenital infections, e.g., toxoplasmosis or herpes simplex virus infection in the first month after birth or cytomegalovirus infection in the first 6 months after birth must be excluded.

Specific conditions that must be excluded in a child are:

1. Primary immunodeficiency diseases—severe combined immunodeficiency, DiGeorge syndrome, Wiskott-Aldrich syndrome, ataxia-telangiectasia, graft versus host disease, neutropenia, neutrophil function abnormality, agammaglobulinemia, or hypogammaglobulinemia with raised IgM.
2. Secondary immunodeficiency associated with immunosuppressive therapy, lymphoreticular malignancy, or starvation.



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LAV is transmitted primarily through sexual contact (homosexual or heterosexual) and through parenteral exposure to infected blood or blood products. HTLV-III/LAV has been isolated from blood, semen, saliva, and tears but transmission has not been documented from saliva and tears. Adults at increased risk for acquiring HTLV-III/LAV include homosexual/bisexual men, intravenous drug abusers, persons transfused with contaminated blood or blood products, and sexual contacts of persons with HTLV-III/LAV infection or in groups at increased risk for infection.

The majority of infected children acquire the virus from their infected mothers in the perinatal period (1-4). In utero or intrapartum transmission are likely, and one child reported from Australia apparently acquired the virus postnatally, possibly from ingestion of breast milk (5). Children may also become infected through transfusion of blood or blood products that contain the virus. Seventy percent of the pediatric cases reported to CDC occurred among children whose parent had AIDS or was a member of a group at increased risk of acquiring HTLV-III/LAV infection; 20% of the cases occurred among children who had received blood or blood products; and for 10%, investigations are incomplete.

Risk of Transmission in the School, Day-Care or Foster-Care Setting. None of the identified cases of HTLV-III/LAV infection in the United States are known to have been transmitted in the school, day-care, or foster-care setting or through other casual person-to-person contact. Other than the sexual partners of HTLV-III/LAV-infected patients and infants born to infected mothers, none of the family members of the over 12,000 AIDS patients reported to CDC have been reported to have AIDS. Six studies of family members of patients with HTLV-III/LAV infection have failed to demonstrate HTLV-III/LAV transmission to adults who were not sexual contacts of the infected patients or to older children who were not likely at

risk from perinatal transmission (6-11).

Based on current evidence, casual person-to-person contact as would occur among schoolchildren appears to pose no risk. However, studies of the risk of transmission through contact between younger children and neurologically handicapped children who lack control of their body secretions are very limited. Based on experience with other communicable diseases, a theoretical potential for transmission would be greatest among these children. It should be emphasized that any theoretical transmission would most likely involve exposure of open skin lesions or mucous membranes to blood and possibly other body fluids of an infected person.

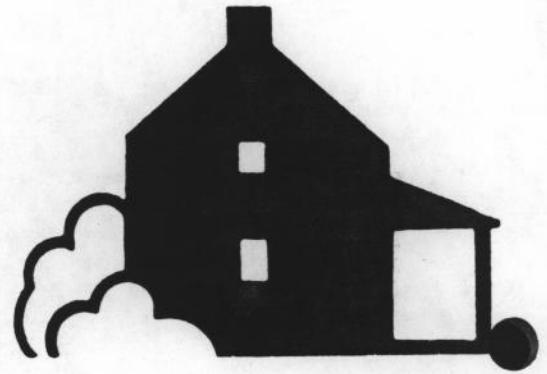
Risks to the Child with HTLV-III/LAV Infection. HTLV-III/LAV infection may result in immunodeficiency. Such children may have a greater risk of encountering infectious agents in a school or day-care setting than at home. Foster homes with multiple children may also increase the risk. In addition, younger children and neurologically handicapped children who may display behaviors such as mouthing of toys would be expected to be at greater risk for acquiring infections. Immunodepressed children are also at greater risk of suffering severe complications from such infections as chickenpox, cytomegalovirus, tuberculosis, herpes simplex, and measles. Assessment of the risk to the immunodepressed child is best made by the child's physician who is aware of the child's immune status. The risk of acquiring some infections, such as chickenpox, may be reduced by prompt use of specific immune globulin following a known exposure.

Recommendations

1. Decisions regarding the type of educational and care setting for HTLV-III/LAV-infected children should be based on the behavior, neurologic development, and physical condition of the child and the expected type of interaction with others in that setting. These decisions are best made using the team approach including

the child's physician, public health personnel, the child's parent or guardian, and personnel associated with the proposed care or educational setting. In each case, risks and benefits to both the infected child and to others in the setting should be weighed.

2. For most infected school-aged children, the benefits of an unrestricted setting would outweigh the risks of their acquiring potentially harmful infections in the setting and the apparent nonexistent risk of transmission of HTLV-III/LAV. These children should be allowed to attend school and after-school day-care and to be placed in a foster home in an unrestricted setting.



3. For the infected preschool-aged child and for some neurologically handicapped children who lack control of their body secretions or who display behavior, such as biting, and those children who have uncoverable, oozing lesions, a more restricted environment is advisable until more is known about transmission in these settings. Children infected with HTLV-III/LAV should be cared for and educated in settings that minimize exposure of other children to blood or body fluids.
4. Care involving exposure to the infected child's body fluids and excrement, such as feeding and diaper changing, should be performed by persons who are aware of the child's HTLV-III/LAV infection and the modes of possible transmission. In any setting involving



an HTLV-III/LAV-infected person, good handwashing after exposure to blood and body fluids and before caring for another child should be observed, and gloves should be worn if open lesions are present on the caretaker's hands. Any open lesions on the infected person should also be covered.

5. Because other infections in addition to HTLV-III/LAV can be present in blood or body fluids, all schools and day-care facilities, regardless of whether children with HTLV-III/LAV infection are attending, should adopt routine procedures for handling blood or body fluids. Soiled surfaces should be promptly cleaned with disinfectants, such as household bleach (diluted 1 part bleach to 10 parts water). Disposable towels or tissues should be used whenever possible, and mops should be rinsed in the disinfectant. Those who are cleaning should avoid exposure of open skin lesions or mucous membranes to the blood or body fluids.
6. The hygienic practices of children with HTLV-III/LAV infection may improve as the child matures. Alternatively, the hygienic practices may deteriorate if the child's condition worsens. Evaluation to assess the need for a restricted environment should be performed regularly.
7. Physicians caring for children born to mothers with AIDS or at increased risk of acquiring HTLV-III/LAV infection should consider testing the children for evidence of HTLV-III/LAV infection for medical reasons. For example, vaccination of infected children with live virus vaccines, such as the measles-mumps-rubella vaccine (MMR), may be hazardous. Those children also need to be followed closely for problems with growth and development and given prompt and aggressive therapy for infections and exposure to potentially lethal infections, such as varicella. In the event that an antiviral agent or other therapy for HTLV-

III/LAV infection becomes available, these children should be considered for such therapy. Knowledge that a child is infected will allow parents and other caretakers to take precautions when exposed to the blood and body fluids of the child.

8. Adoption and foster-care agencies should consider adding HTLV-III/LAV screening to their routine medical evaluations of children at increased risk of infection before placement in the foster or adoptive home, since these parents must make decisions regarding the medical care of the child and must consider the possible social and psychological effects on their families.
9. Mandatory screening as a condition for school entry is not warranted based on available data.
10. Persons involved in the care and education of HTLV-III/LAV-infected children should respect the child's right to privacy, including maintaining confidential records. The number of personnel who are aware of the child's condition should be kept at a minimum needed to assure proper care of the child and to detect situations where the potential for transmission may increase (e.g., bleeding injury).
11. All educational and public health departments, regardless of whether HTLV-III/LAV-infected children are involved, are strongly encouraged to inform parents, children, and educators regarding HTLV-III/LAV and its transmission. Such education would greatly assist efforts to provide the best care and education for infected children while minimizing the risk of transmission to others.

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Preventing Possible Transmission of HTLV-III from Tears

Human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV), the etiologic agent of acquired immunodeficiency syndrome (AIDS), has been found in various body fluids, including blood, semen, and saliva. Recently, scientists at the National Institutes of Health isolated the virus from the tears of an AIDS patient (1). The patient, a 33-year-old woman with a history of *Pneumocystis carinii* pneumonia and disseminated *Mycobacterium avium-intracellulare* infection, had no ocular complaints, and her eye examination was normal. Of the tear samples obtained from six other patients with AIDS or related conditions, three showed equivocal culture results, and three were culture-negative.

The following precautions are judged suitable to prevent spread of HTLV-III/LAV and other microbial pathogens that might be present in tears. They do not apply to the procedures used by individuals in caring for their own lenses, since the concern is the possible virus transmission between individuals.

1. Health-care professionals performing eye examinations or other procedures involving contact with tears should wash their hands immediately after a procedure and between patients. Handwashing alone should be sufficient, but when practical and convenient, disposable gloves may be worn. The use of gloves is advisable when there are cuts, scratches, or dermatologic lesions on the hands. Use of other protective measures, such as masks, goggles, or gowns, is *not* indicated.
2. Instruments that come into direct contact with external surfaces of the eye should be wiped clean and then disinfected by: (a) a 5- to 10-minute exposure to a fresh solution of 3% hydrogen peroxide; or (b) a fresh solution containing 5,000 parts per million (mg/L) free available chlorine—a 1/10 dilution of common household bleach (sodium hypochlorite); or (c) 70% ethanol; or (d) 70% isopropanol. The device should be thoroughly rinsed in tap water and dried before reuse.
3. Contact lenses used in trial fit-

tings should be disinfected between each fitting by one of the following regimens:

- a. Disinfection of trial hard lenses with a commercially available hydrogen peroxide contact lens disinfecting system currently approved for soft contact lenses. (Other hydrogen peroxide preparations may contain preservatives that could discolor the lenses.) Alternatively, most trial hard lenses can be treated with the standard heat disinfection regimen used for soft lenses (78-80 C [172-176 F] for 10 minutes). Practitioners should check with hard lens suppliers to ascertain which lenses can be safely heat-treated.
- b. Rigid gas permeable (RGP) trial fitting lenses can be disinfected using the above hydrogen peroxide disinfection system. RGP lenses may warp if they are heat-disinfected.
- c. Soft trial fitting lenses can be disinfected using the same hydrogen peroxide system. Some soft lenses have also been approved for heat disinfection.

Other than hydrogen peroxide, the chemical disinfectants used in standard contact lens solutions have not yet been tested for their activity against HTLV-III/LAV. Until other disinfectants are shown to be suitable for disinfecting HTLV-III/LAV, contact lenses used in the eyes of patients suspected or known to be infected with HTLV-III/LAV are most safely handled by hydrogen peroxide disinfection.

The above recommendations are based on data from studies conducted at the National Institutes of Health and CDC on disinfection/inactivation of HTLV-III/LAV virus (2-4). Additional information regarding general hospital and laboratory precautions have been previously published (5-9). **Editorial Note:** All secretions and excretions of an infected person may contain lymphocytes, host cells for HTLV-III/LAV; therefore, thorough study of these fluids might be expected to sometimes yield this virus.

Despite positive cultures from a variety of body fluids of infected persons, however, spread from infected persons to household contacts who have no other identifiable risks for infection has not been documented. Furthermore, there is no evidence to date that HTLV-III/LAV has been transmitted through contact with the tears of infected individuals or through medical instruments used to examine AIDS patients.

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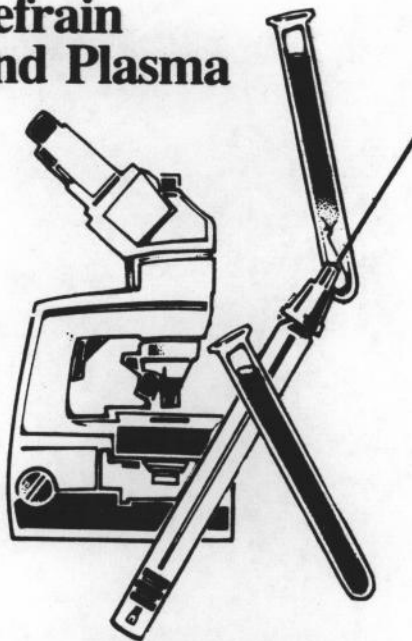
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Persons Who Should Refrain from Donating Blood and Plasma

Since March 1985, blood- and plasma-collection centers in the United States have used a two-phase screening procedure to decrease transmission of human T-lymphotropic virus type III (HTLV-III) through transfusion of blood or blood products. First, potential donors are informed that if they have a risk factor for AIDS they should not donate (1); second, the blood or plasma of persons accepted as donors is screened for antibody to HTLV-III (2,3). The low frequency of enzyme immunoassay (EIA)-positive tests among blood donors (3,4) shows that the deferral criteria have been effective. Interviews with the small number of blood donors found infected with HTLV-III, however, have shown that most have a risk factor for HTLV-III infection; homosexual contact was the most common risk factor identified (5). To further reduce the risk of HTLV-III infection from blood and plasma, the U.S. Food and Drug Administration (FDA) has reworded the donor-deferral recommendations to state that any man who has had sex with another man since 1977 should not donate blood or plasma. This applies even to men who may have had only a single contact and who do not consider themselves homosexual or bisexual.

Editorial Note: Recommendations to decrease transmission of HTLV-III through transfusion of blood or blood products were disseminated in March 1983 (1) and were rapidly adopted by blood and plasma centers throughout



the United States. These recommendations centered on informing all blood or plasma donors that people with a risk factor for AIDS should not donate and asked for voluntary compliance. In March 1985, the second phase of screening blood and plasma was instituted with licensure of test kits to detect antibody to HTLV-III (2,3). The test kits are both highly sensitive and specific (4), but donors with a risk factor for HTLV-III infection continue to be asked not to donate blood, since the two-phase screening procedure provides additional safety. This revised wording of the deferral recommendations is intended to inform persons who may have been infected with HTLV-III through occasional or intermittent homosexual activity that they should not donate blood or plasma, even if they

do not believe they are at risk of having been infected through their contacts.

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Oral Viral Lesion

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association with AIDS.

While careful histories and physical examinations alone will not identify persons with AIDS or related symptoms, oral findings, including this newly reported oral lesion, are important diagnostic tools for health-care providers in early identification and treatment of AIDS.

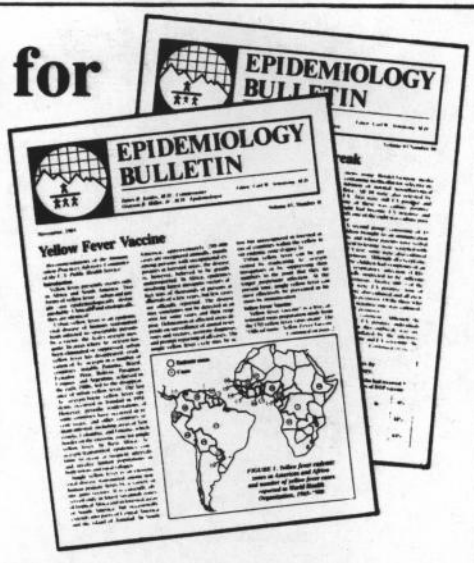
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Have an Idea for the *Bulletin*?

The editor welcomes any reports of cases, outbreaks, or public health problems of interest to the *Bulletin's* readers. Such accounts and any other comments or suggestions regarding the *Bulletin* should be addressed to: Editor, *Epidemiology Bulletin*, Office of Health Protection and Environmental Management, Room 700, 109 Governor Street, Richmond, Virginia 23219.



Cases of selected notifiable diseases, Virginia, for the period October 1 through October 31, 1985

Disease	State					Regions				
	This Month	Last Month	Total to Date		Mean 5 Year To Date	This Month				
			1985	1984		N.W.	N.	S.W.	C.	E.
Measles	0	2	27	5	78	0	0	0	0	0
Mumps	1	1	43	18	56	0	0	1	0	0
Pertussis	3	6	17	19	22	0	3	0	0	0
Rubella	0	0	2	0	12	0	0	0	0	0
Meningitis—Aseptic	75	79	312	224	220	12	9	21	12	21
*Bacterial	17	18	208	196	179	4	0	4	1	8
Hepatitis A (Infectious)	13	8	137	91	163	4	3	2	1	3
B (Serum)	27	53	459	426	441	2	5	2	8	10
Non-A, Non-B	9	3	74	80	56	1	1	2	1	4
Salmonellosis	128	130	1341	1083	1223	18	19	21	38	32
Shigellosis	7	8	72	180	347	0	7	0	0	0
Campylobacter Infections	77	54	637	519	306	11	10	10	11	35
Tuberculosis	70	52	367	373	446	2	11	16	15	26
Syphilis (Primary & Secondary)	26	22	251	351	488	0	5	3	5	13
Gonorrhea	1734	1655	16,110	16,709	17,894	—	—	—	—	—
Rocky Mountain Spotted Fever	4	0	23	47	75	2	0	1	1	0
Rabies in Animals	20	20	159	186	286	10	8	2	0	0
Meningococcal Infections	4	3	47	54	65	1	2	1	0	0
Influenza	20	1	968	1104	1612	14	0	3	0	3
Toxic Shock Syndrome	0	0	1	7	7	0	0	0	0	0
Reyes Syndrome	0	0	2	6	10	0	0	0	0	0
Legionellosis	4	1	16	25	18	0	1	1	0	2
Kawasaki's Disease	1	1	26	13	18	0	0	0	1	0
Other: Acquired Immunodeficiency Syndrome	8	17	80	30	—	0	7	1	0	0

Counties Reporting Animal Rabies: Augusta 2 skunks; Fauquier 1 fox; Louisa 1 skunk; Rockingham 1 raccoon, 3 skunks; Shenandoah 1 raccoon; Warren 1 raccoon; Fairfax 1 bat, 1 fox, 1 raccoon, 1 skunk; Loudoun 3 raccoons, 1 skunk; Botetourt 1 cat; Russell 1 skunk.

Occupational Illnesses: Carpal tunnel syndrome 6; Pneumoconiosis 6; Silicosis 5; Hearing loss 4; Asbestosis 3; Dermatoses 2; Mesothelioma 1; Phosphine poisoning 1; Spondylolisthesis 1.

*other than meningococcal

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