

Connecticut Epidemiologist

STATE OF CONNECTICUT DEPARTMENT OF HEALTH SERVICES

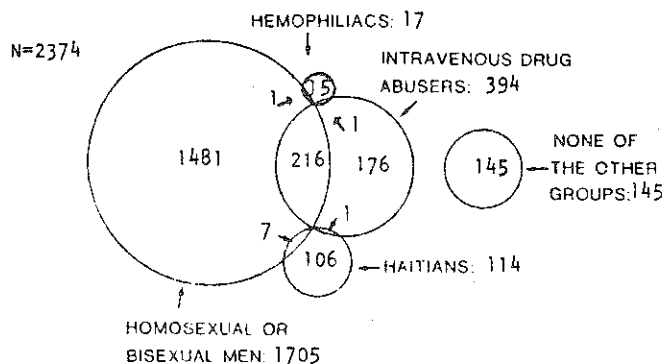
Douglas S. Lloyd, M.D., M.P.H., Commissioner

Vol. 2 No. 10

AIDS UPDATE

Since CDC began national surveillance for AIDS in June of 1981, 2,374 cases have been reported from the U.S. and Puerto Rico and 123 have been reported from other countries. The majority of these cases occurred in homosexual or bisexual men (71.8%). A small proportion of cases (6.1%) have occurred in people who don't belong to any of the currently recognized populations at risk (see Figure 1). Connecticut has reported 29 cases as of October 25, 1983. Epidemiologic information on these cases is summarized in Table 1.

Figure 1
(updated as of 10/3/83)
Overlap of groups at increased risk for AIDS



PEDIATRIC AIDS

Children represent another population in which an AIDS-like syndrome has emerged. Thirty pediatric cases of AIDS have been reported nationally (3). AIDS in children was addressed at a recent monthly New York City Health Department Task Force meeting attended by William Sabella, the Connecticut AIDS Coordinator. The majority of the pediatric cases discussed occurred among children of parents who do not necessarily have AIDS, but who belong to a risk group (e.g., IV drug using parents)(see Table 2).

The problems associated with diagnosing pediatric AIDS arise from the fact that an acquired immune deficiency in infants may not be easily distinguishable from pediatric disorders of genetic developmental or congenital origin. Currently, the CDC definition for AIDS in children is similar to that for adults, with the following additions:

Table 1
CONNECTICUT CASES
AIDS Update - October 25, 1983

Number Cases Reported	29
Mean Age	38
Sex (Males)	27
Race:	
White	18
Black	5
Hispanic	5
Haitian	1
Sexual Orientation:	
Homosexual or Bisexual	18
IV Drug Use	6
Hemophiliac	2
Haitian	1
Unknown or no apparent risk group	2
Opportunistic Infection (OI):	
PCP* without KS**	19
KS without PCP	4
KS and PCP	3
OI without KS or PCP	3
Connecticut Counties:	
Fairfield	12
New Haven	11
Hartford	4
Middlesex	1
Litchfield	1

*PCP = *Pneumocystis carinii* pneumonia
**KS = Kaposi's Sarcoma

Table 2
Risk Factors in AIDS-like Syndrome in Infants*

	No. Patients
IV drug user mothers	8
IV drug user fathers	8
Transfusions related	6
Haitain parents	8
	<u>30</u>

*Data from Dr. Polly Thomas - NYC Health Department

Case Definition A

CDC Surveillance Criteria for Pediatric AIDS

A diagnosis of "Pediatric AIDS" will be considered in the following circumstance:

The occurrence of biopsy-proven Kaposi's sarcoma and/or biopsy or culture-proven life-threatening opportunistic infection in an infant or child, providing the following conditions are excluded:

1. Recent therapy with immunosuppressive agents
2. Lymphoproliferative disease.
3. Established Immunodeficiency Disease
 - a. Severe combined immunodeficiency (low serum immunoglobulins and severe loss of cell-mediated immunity, lymphopenia and low T cell numbers).
 - b. DiGeorge syndrome (hypocalcemia, morphologic abnormalities of the face and great vessels, T-cell defect, absence of thymus and thymic hormones).
 - c. Wiskott-Aldrich syndrome.
 - d. Neutropenia or neutrophil function abnormality.
 - e. Agammaglobulinemia or hypogammaglobulinemia with raised IgM.

Patients who meet this definition, but develop Pneumocystis carinii pneumonia shortly after a premature birth or under conditions of starvation will be considered, but placed in a different category.

New York City is also conducting surveillance of children with an AIDS related complex-like illness (ARC). These cases, which include children who have an immune deficiency with no other underlying cause for the deficiency and who may not have developed an opportunistic infection must meet the following case definition for ARC in children:

Case Definition B AIDS Related Complex

In a child with no recognized cancer, immunosuppressive drugs, or well-described congenital immune disease:

A. Clinical:

1. hepatomegaly (with or without splenomegaly) persisting longer than two months.
2. lymphadenopathy (palpable nodes in at least three sites not shrinking in size after two months).
3. failure to thrive.
4. at least two of the following:
 - persistent oral thrush
 - persistent pneumonitis without discoverable pathogen.
 - history of bacterial sepsis or meningitis.

B. Laboratory:

1. low T Helper cell numbers
2. inverted OKT4:T8 ratio
3. elevated IgG
4. depressed mitogen proliferation responses
5. anergy in vitro to antigen to which child is known to have been exposed.

T cell imbalance similar to that reported in adults with AIDS, lack of thymic dysplasia on biopsy and very high levels of serum immunoglobulins, are features which can distinguish the possible AIDS baby from a baby with a genetic or congenital type of immunodeficiency (1).

Congenital infections resulting in immunodeficiency such as CMV, rubella, and EBV can also be confused with a diagnosis of an immune deficiency in infants. An infant with AIDS-like disease, unlike an infant with an acute congenital infection, tends to have onset of disease at about 6 months of age, rather than during the prenatal or perinatal period, and the immune deficiency suffered is progressive and more severe than the often transient, mild immunodeficiency seen in congenital infections (1).

Speculation as to the transmission of AIDS to infants continues. Evidence gathered to date suggests that the syndrome may be acquired in utero or perinatally. Current data does not support routine close household contact as a means of transmission (1).

In summary, some infants manifest an immune deficiency in which the clinical presentation is similar to AIDS and not characteristic of well-described congenital immune deficiencies. Because of the potential epidemiologic significance of these observations, these children and their families are being studied closely. These children may indeed have AIDS and may have acquired the syndrome from asymptomatic parents. However, at the present time, no definitive conclusion can be drawn from the available information.

LEGIONNAIRES' DISEASE - AN OPPORTUNISTIC INFECTION?

The emergence of Legionnaires' Disease (LD) as yet another opportunistic infection in AIDS patients was also discussed at the NYC-AIDS Task Force meeting. At least nine AIDS patients at one hospital in NYC developed LD. The infection appears to be largely community-acquired in both the gay and IV-drug-using populations. Laboratory criteria used to define a patient as having LD, given the problems of interpreting serological tests in immunodeficient patients, included visualization of 15 organisms per tissue or 25 organisms per washing or smear (3). Although the CDC does not yet include LD infection in the case definition of AIDS, LD may be an important differential diagnosis to consider when dealing with an AIDS patient suffering from pneumonia.

CONNECTICUT ACTIVITIES

Commissioner Lloyd has declared AIDS a reportable disease in Connecticut as of October 12, 1983, circular letter #18-26. Reporting of AIDS is now mandatory in 45 states. The CDC relies on a passive surveillance system for the reporting of AIDS cases. However, many of the individual states, including Connecticut, have developed active surveillance for AIDS. The AIDS coordinator for Connecticut has established surveillance networks among Connecticut hospital infectious disease physicians and infection control practitioners as well as with state agencies likely to see and deal with potential AIDS patients, such as the Connecticut Alcohol and Drug Abuse Commission (CADAC), the Department of Corrections, and the Department of Child and Youth Services. In addition, a medical advisory board established by Commissioner Lloyd convened in August to provide a forum in which a consensus could be reached by the medical community and public health officials on the critical issues facing these groups.

INFECTION CONTROL ISSUES

The MMWR of September 2, 1983, addressed the issue of AIDS precautions for health care workers and allied professionals. "The epidemiology of AIDS is consistent with the hypothesis that it is caused by a transmissible infectious agent. AIDS appears to be transmitted by intimate sexual contact or by percutaneous inoculation of blood or blood products. There has been no evidence of transmission by casual contact or airborne spread, nor have there been cases of AIDS in health-care or laboratory personnel that can be definitely ascribed to specific occupational exposures." (4)

Precautions and recommendations are provided for those who provide dental care, perform postmortem examinations, work as morticians, and for those

persons working with patients who meet the CDC definition of AIDS. Recommended precautions should also be taken with patients with chronic, generalized lymphadenopathy, unexplained weight loss, and/or prolonged unexplained fever when the patient's history suggests an epidemiologic risk for AIDS, and all hospitalized patients with possible AIDS.

Infection Control Guidelines have also been developed by a task force at the University of California, San Francisco. (5,6) The State of Connecticut Department of Health Services will continue to develop guidelines as needed for various agencies and concerned groups.

An AIDS update videotape sent from the CDC will be made available to those institutions wishing to borrow it. If interested, contact Bill Sabella at 566-5058.

References

1. Rubinstein A. Acquired immunodeficiency syndrome in infants. *Am J Dis Child* 1983; 137:825-827.

2. Jaffe HW, Bregman DJ, Selik RM. Acquired Immune Deficiency Syndrome in the United States: the first 1,000 cases. *J Infect Dis* 1983; 148: 393-345.

3. New York City Health Department Task Force Meeting (pending publication). August 31, 1983.

4. Centers for Disease Control. Acquired Immunodeficiency Syndrome (AIDS): Precautions for health-care workers and allied professionals. *MMWR* 1983; 32:450.

5. Conte JE, Hadley WK, Sande M. (Task Force on the Acquired Immunodeficiency Syndrome) Infection Control Guidelines for patients with the acquire immune deficiency syndrome (AIDS). Special Report, *NEJM* 1983; 309: 740-44.

6. AIDS - An Epidemic of Fear. *Infect Control Digest* 1983; 4, (8): 1-4.

ENTEROVIRAL ACTIVITY SUMMER 1983

Each summer, the incidence of infection with enteroviruses rises sharply. Increased enteroviral activity is frequently reflected in the number of cases of aseptic meningitis reported during the summer months. Ninety-nine cases of aseptic meningitis have been reported to the Epidemiology Section for 1983. Seventy percent of these cases occurred during July (25), August (36), and September (8). Although appropriate viral specimens are not always collected, enteroviruses were identified as the etiologic agent in 19 cases of aseptic meningitis and two cases of encephalitis. Eleven isolates were identified as ECHO virus and 10 were Coxsackie viruses.

Cases were most frequently reported from Fairfield County; Stamford - 18, Danbury - 10, Green-

wich - 9, and Bridgeport - 5. The occurrence of aseptic meningitis was considerably less in the other major cities; Hartford - 2, New Haven - 3, and Waterbury - 2. Since the surveillance relies heavily upon hospital based reporting and laboratory reports, the distribution of cases may represent an artifact of patterns of reporting and/or laboratory usage at various hospitals (Table 1).

The active surveillance system for rash illnesses was also used to identify clusters of enteroviral activity. When illnesses suggestive of enteroviral infection were identified, physicians were requested to submit throat and rectal swabs to the State Laboratory for viral isolates. Laboratories isolating enteroviruses were urged to submit isolates for identification. A total of 35 isolates of ECHO viruses

Table 1
Isolation of Enteroviruses vs. Cases of Aseptic Meningitis
by Age Group

Age	Coxsackie	Echo	Aseptic Meningitis*
1 yr.	2 (20%)	4 (36%)	18 (19%)
1-5	3 (30%)	0	5 (5%)
6-10	1 (10%)	2 (18%)	9 (10%)
11-15	1 (10%)	2 (18%)	15 (16%)
16-20	0	1 (9%)	8 (9%)
21-30	0	1 (9%)	22 (23%)
31-40	1 (10%)	0	9 (10%)
41-50	1 (10%)	0	2 (2%)
50	1 (10%)	0	4 (4%)
Unk.	0	1 (9%)	2 (2%)
TOTAL	10	11	94

*Excluding 5 cases with onset prior to April 1, 1983.

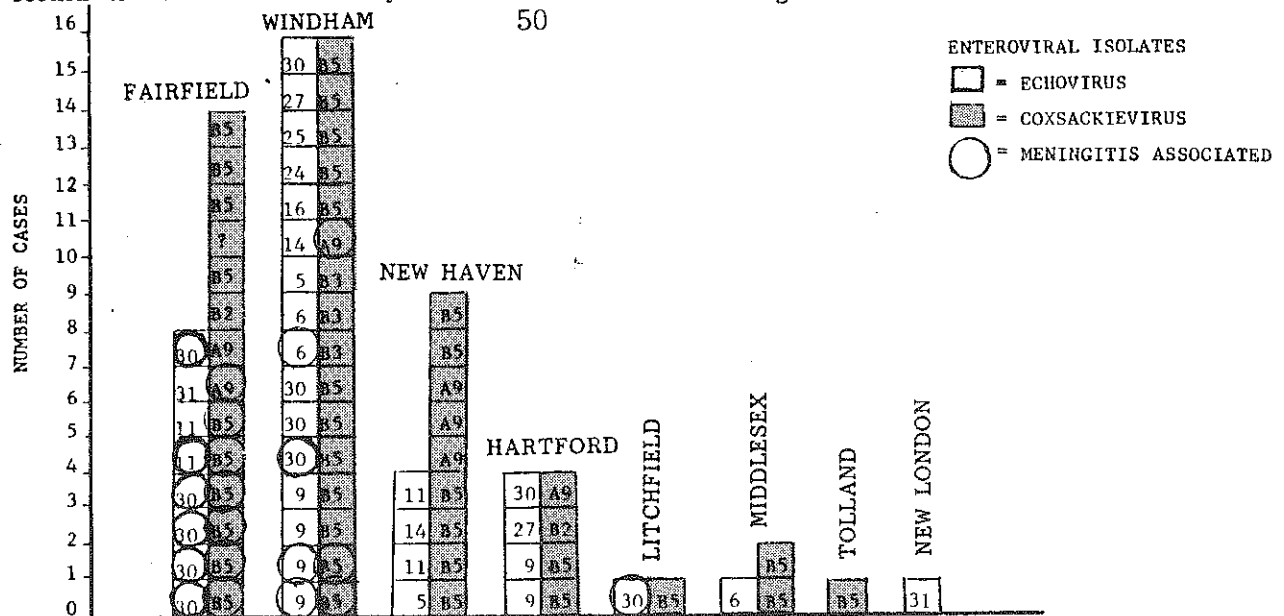
REPORTED MORBIDITY - OCTOBER, 1983

	AMEBIASIS	BOTULISM	BRUCELLOSIS	ENCEPHALITIS (TOTAL)	Primary	Post	FOODBORNE OUTBREAKS	GONORRHEA	HEPATITIS A	HEPATITIS B	HEPATITIS NON A NON B	HEPATITIS UNSPECIFIED	LEGIONELLOSIS	LEPROSY	MALARIA	MEASLES	MENINGITIS (All Types)	Aseptic	Hemophilus influenzae	Meningococcal	Other	MUMPS	PERTUSSIS	PSITTACOSIS	RABIES IN ANIMALS	REYE'S SYNDROME	ROCKY MT. SPOTTED FEVER	RUBELLA	SALMONELLA	SHIGELLA	SYPHILIS	TUBERCULOSIS (TOTAL)	Pulmonary	Other	TYPHOID FEVER
TOTAL OCT. 1983	6	0	0	3	3	0	2	114	4	42	1	1	2	0	1	1	36	28	3	1	4	1	4	1	0	0	0	0	84	3	12	23	18	5	1
CUMULATIVE 1983	26	1	0	23	23	0	11	823	65	351	42	13	29	1	10	9	257	127	37	47	46	17	5	2	6	0	3	0	822	158	154	156	123	33	1
CUMULATIVE 1982	28	1	3	26	22	4	23	724	64	360	21	40	46	1	14	6	190	64	37	46	49	20	5	1	6	1	2	4	767	878	129	108	79	29	2

and 47 isolates of Coxsackie virus were reported by the virology section of the State Laboratory. The

distribution of enteroviral isolates by county is summarized in Figure 1.

Figure 1
ENTEROVIRAL ISOLATES BY COUNTY,
CONNECTICUT, 1983



Ellen E. Jones, M.D., P.M.R.
Patricia J. Checko, M.P.H., Editor
Leonard Gilmartin, Coordinator, Public Health Education Section

EPIDEMIOLOGY SECTION
PREVENTABLE DISEASES DIVISION
State of Connecticut Department of Health Services
79 Elm Street
Hartford, CT 06106

Bulk Rate
U.S. Postage
PAID
Permit No. 4313
Hartford, Conn.