DOCUMENT RESUME

ED 297 493 EC 210 344

TITLE	Management of Chronic Infectious Diseases in School Children.
INSTITUTION	Illinois State Board of Education, Springfield.; Illinois State Dept. of Public Health, Springfield.
PUB DATE	Sep 86
NOTE	29p.
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Acquired Immune Deficiency Syndrome; *Administrative Policy; *Cleaning; *Communicable Diseases; *Disease Control; Elementary Secondary Education; Policy Formation; Prevention; Program Development; Program Implementation; Rubella; Sanitation; *School Administration; School Maintenance; *School Policy
IDENTIFIERS	Cytomegalovirus; Hepatitis; Herpes Simplex; Illinois

ABSTRACT

This document contains guidelines for developing policies and procedures related to chronic infectious diseases, as recommended by the Illinois Task Force on School Management of Infectious Disease. It is designed to help school personnel understand how infectious diseases can be transmitted, and to assist school districts in the development and implementation of school programs that will meet the needs of students who have chronic infectious diseases while preventing the spread of such diseases in the school setting. A chapter on general management of infectious disease focuses on: establishing prevention procedures; maintaining a safe, clean, and healthful school environment; cleaning up body fluid spills; developing special procedures for early childhood, day care, and special classroom settings; and selecting an appropriate disinfectant. Specific diseases covered include: congenital rubella syndrome, hepatitis B, cytomegalovirus (CMV) infections, acquired immunodeficiency syndrome (AIDS) and AIDS related complex (ARC), and herpes simplex. Each disease is described along with its mode of transmission, its prevention, and the management of infectious students in the classroom. (JDD)

Management of

CHRONIC INFECTIOUS DISEASES IN SCHOOL CHILDREN

Illinois State Board of Education

and

Illinois Department of Public Health

MANAGEMENT OF

CHRONIC INFECTIOUS DISEASES IN SCHOOL CHILDREN

Illinois State Board of Education

and

Illinois Department of Public Health

September, 1986

FOREWORD

The highest priority of this State is meeting the educational and health needs of our children. This priority is second to none and the reason for producing this publication.

The growing concern about infectious diseases is having a great impact upon our schools, businesses, and public institutions. This document is designed to assist local school boards and their personnel in establishing procedures and policies that will not compromise the safety of a classroom nor a child's right to an education.

A Task Force has devoted time and expertise to developing recommendations that will help establish prudent, reasonable, and practical guidelines for school personnel to follow when working with children who have infectious diseases.

If you have questions or concerns, contact the Illinois Department of Public Health's Disease Control, 217/782-2016 or the School Health Section, 217/782-4733; your local health department; or the State Board of Education's Department of Special Education, 217/782-6601.

ACKNOWLEDGEMENTS

In May of 1985, the Illinois State Board of Education organized a Task Force on School Management of Infectious Disease. The legal, social, educational and health issues surrounding the provision of educational services to students with the following chronic forms of infectious diseases were discussed.

1. Herpes Simplex
2. Acquired Immune Deficiency Syndrome (AIDS)
3. Cytomegalovirus (CMV)
4. Hepatitis B Carriers
5. Congenital Rubella Syndrome

This task force was charged with the responsibility of providing public school personnel with information necessary for them to meet the educational needs of students afflicted with one of these chronic infectious diseases and at the same time, to maintain a safe and healthy environment for all students.

Task Force Members

John Berger, Communicable Disease Coordinator, McLean County Health Department; Representing Illinois Public Health Association

Adeline Black, R.N., School Nurse, Palatine C C School District #15; Representing Illinois Association of School Nurses

M. Kathleen Buetow, M.D., Dr P H., Pediatrician, Carle Clinic, Urbana, Acting Head, Department of Pediatrics, U.I.C.O.M.-U.C.P., Chairperson, Infectious Diseases, Illinois Academy of Pediatrics

Rene Christensen, Severe Profound Handicapped Consultant, Department of Special Education, Illinois State Board of Education

*Corinne Cloppas, R.N., School Health Consultant, Illinois Department of Public Health, Representing Illinois School Health Association

Jonah Deppe, Early Childhood Program Project Coordinator, Department of Special Education, Illinois State Board of Education

Marion Dodd, Representing Illinois Association for Citizens with Learning Disabilities

*Lenora Dyxin, Health Chairperson, Illinois Congress of Parents and Teachers

Joy Erickson, R.N., School Nurse, Unit School District #46, Elgin, Representing Illinois Association of School Nurses

Eileen Flood, R.N., School Nurse, Cooperative Association for Special Education, Representing Illinois Association of School Nurses

Lesley P. Graham, Ph.D., Associate Professor, Bradley University, College of Education and Health Sciences, Representing Illinois Council for Exceptional Children

Paulette Harar, M.D., Director Pediatric Rehabilitation, Rehabilitation Institute of Chicago

Earl Hartman, Principal, South Park Elementary School; Representing Illinois Principals Association

Chlao Heinichen, R.N., Nurse-Epidemiologist, DuPage County Health Department, Representing Illinois Public Health Association

Sally Hoerr, Representing Illinois Alliance for Exceptional Children

Suzanne W Humphrey, Representing Illinois Association of School Boards

Alice Kelly, R N., President, Illinois Alliance for Exceptional Children

*Penny Ludwinski, D V.M., Communicable Disease Coordinator, Champaign-Urbana Public Health District, Representing Illinois Public Health Association

Neil E MacGregor, Director, Argo, Evergreen Park, Reavis, Oak Lawn Area Department of Special Education; Representing Illinois Administrators of Special Education

Lynn Moore, Early Childhood Consultant, Department of Special Education, Illinois State Board of Education

Dennis Murphy, M.D., Pediatrician, President, St. Charles C U School District #303 School Board

*Donna Nordvig, R N., School Nurse, Rockford School District #205, Representing Illinois Education Association

*William Peters, Director, DeKalb County Special Education Association, Representing Illinois Administrators of Special Education

Douglas J Polk, Attorney-at-Law, Vedder, Price et al.

*Audry Quinn, R.N., School Nurse, Special Education District of Lake County

Helen Ramirez, R.N., School Nurse, City of Chicago School District #299, Representing Illinois Federation of Teachers

Dr Kenneth Randle, Director, Niles Township, Department of Special Education, Representing Illinois Administrators of Special Education

Dephane (Jeri) Rose, R.N., Director of School Nurses, City of Chicago School District #299

Ruthann Sanders, R.N., School Nurse, Dolton School District #148, Representing Illinois Association of School Nurses

Dr Howard Smucker, Representing Illinois Association of School Administrators

Thelma Woods, R.N., Communicable Disease Coordinator, Peoria City, County Health Department, Representing Illinois Public Health Association

*Member of the Writing Committee

The contributions of both time and expertise from members of the Task Force and their respective organizations and agencies are greatly appreciated. We also want to acknowledge the California State Department of Education and the State of Connecticut, Department of Education and Department of Health Services whose publications on infectious diseases were of great assistance to the Task Force in the development of this document.

Task Force Executive Director
Joseph Fisher, Assistant Superintendent
Department of Special Education
Illinois State Board of Education

Task Force Technical Director
*Carl Langkop, Administrator
Communicable Disease Program
Division of Infectious Diseases
Illinois Department of Public Health

Task Force Technical Consultant
*Dr. Linda Edwards, R.N.,
School Health Coordinator
Division of Health Promotion and Screening
Illinois Department of Public Health

Task Force Coordinator
*Bettye J. Endicott, R.N., School Health/
School Nursing Consultant
Department of Special Education
Illinois State Board of Education

*Member of the Writing Committee

TABLE OF CONTENTS

INTRODUCTION

Most individuals who contract a communicable disease have a definite period of time in which they are considered to be contagious. When they have fully recovered from the communicable disease, they are no longer able to transmit the infection to others. In some instances, either disease-specific or for other reasons, some individuals may remain capable of transmitting disease for long periods of time after they have recovered from the acute phase of an illness. These individuals are said to have chronic infectious diseases.

In recent months it has become apparent that school personnel and parents have many questions regarding the risks of exposure to communicable diseases within the school settings and the appropriate management of students with chronic infectious diseases. This document has been designed to provide answers to some of these questions, to help school personnel understand how infectious diseases* can be transmitted, and to assist school districts in the development and implementation of school programs that will meet the needs of students who have chronic infectious diseases and prevent the spread of such diseases in the school setting.

The most effective means of school management of infectious diseases is to develop a plan before it is needed. In many instances, school districts will be informed of the enrollment of a student who is known to have a chronic infectious disease. However, there remains a risk that some students are or will be enrolled in school who are unknown carriers of infectious diseases. For this reason, school districts should not wait until a student with a chronic infectious disease enrolls in the school to plan a program. It is strongly recommended that school districts establish policies and procedures to reduce the risk of spreading disease, regardless of the presence or absence of a student known to have an infectious disease.

The Illinois State Board of Education and the Illinois Department of Public Health place a high priority on the need to prevent the spread of infectious diseases in schools. By encouraging the use of the information and procedures described in this document, it is hoped that the health and regular school attendance of students can be improved so that they may attain their maximum potential for learning.

*The chronic infectious diseases covered in this manual have been limited to Acquired Immunodeficiency Syndrome (AIDS), Congenital Rubella Syndrome (CRS), Cytomegalovirus (CMV), Hepatitis B and Herpes Simplex.

CHAPTER ONE

DEVELOPMENT OF AN INFECTIOUS DISEASE PROGRAM

POLICIES AND PROCEDURES

An infectious disease program should include the following components. 1) policies and procedures related to identification, placement, and school management of students with infectious diseases, 2) an infectious disease review team which consists of the school medical advisor, the school nurse and the school administrator and is generally responsible for planning and managing the educational program for the individual student with an infectious disease, 3) maintenance of routine hygienic procedures to assure a clean, safe, healthful school environment, and 4) a health education/health counseling program to educate school staff, students and parents.

The first step in establishing an infectious disease program is the development of appropriate policies and procedures The school board is legally responsible for the formulation and adoption of all school policies In view of the scope of the infectious disease program, it is recommended that school officials establish a task force consisting of the school administrator, the school medical advisor, the school nurse and representatives from the school board, local health department, teaching staff, PTA or PTO, custodial staff, food service staff, etc., to assist in the development of the infectious disease program and to serve in an advisory capacity to the school board in the development of policies to implement the program

The school board should make public its policies on management of students who have chronic infectious diseases. Copies of the school board policies should be distributed to all parents in the district and to all school staff.

Legal Considerations Related to Chronic Infectious Diseases

Federal and state courts have held that children affected with chronic infectious diseases are entitled to a free, appropriate public education in the least restrictive environment and are covered by the substantive and procedural protections incorporated in the statutes (c.f *White v Western School Corp*, #IP 85-1192-C, U.S.D.C., S.D. Ind., Indianapolis Div., *Comm High Sch Dist i55 v Denz*, 463 N.E. 2d 998; *Ely v Howard County Bd of Ed.*, 3 EHLR 553: 288 D.C. M.D. 1982; *New York State Ass'n for Retarded Children v Carey*, 612 F 2d 644 (1979)

Students who have chronic infectious diseases may, but do not necessarily, require special education or adaptive programming. Each student should be individually evaluated to determine the most appropriate educational placement.

Guidelines for Development of Policies and Procedures Related to Infectious Diseases

The following guidelines are intended to provide local school districts with a framework for developing policies and procedures related to infectious diseases.

1 All children in Illinois, including those with chronic infectious diseases, have a right to a free public education. Students with chronic infectious diseases are eligible for all rights, privileges and services provided by law and the local policy of each school district

2 The school should respect the right to privacy of the individual, therefore, knowledge that a student has an infectious disease should be confined to those persons with a direct need to know (e.g. principal, school nurse and student's teacher) Those persons should be provided with appropriate information concerning such precautions as may be necessary and should be aware of confidentiality requirements.

3 Students known to have chronic infectious diseases should be individually evaluated in order to determine if their behavior or physical condition poses a high risk of spread of disease The school infectious disease review team should work with local, regional or state health officials, the family physician, the student, the student's teacher and the student's parents to establish the most appropriate education program for a student identified as having an infectious disease. Policies and procedures should be in place to protect the infected student's right to an appropriate education, as well as to ensure a safe classroom environment for all students.

4 As a consequence of the evaluation, there should be a specific plan for the education of the student. This individual student plan should identify the student's educational program, the health-related conditions of the placement (For example, the student is to be educated in a regular classroom with other students except when certain conditions related to the infectious disease are present.), specific health instructions, and other relevant information.

5 In most cases, students with chronic infectious diseases should be allowed to attend school in a regular classroom setting Adaptations of classroom environment or curricular offerings should be provided as needed by the student Note Although most of the case law relating to students with chronic infectious disease is in the area of special education, this does not mean that a student with such a disease should automatically be considered for special education placement Unless the student is otherwise in need of special education services, such programs should be considered only as a resource for meeting special needs of the individual child—for example, temporary services in the home or hospital

6 Under certain circumstances, it may be necessary to provide the student with a chronic infectious disease with an alternative school program or to remove the student from the school setting for a period of time.

a. Certain changes in the student's health condition may require temporary removal from his/her regular program. Generally, if the student develops a temporary condition which poses a risk of transmission of disease to others (for example, if the student develops open lesions), the student should be removed from the regular program until he or she may be safely returned to the classroom. The decision to remove the student from school should be based upon public health recommendations specific to the transmissibility of disease. Readmission should occur only with medical documentation and after consultation with the school nurse.

b. Under the following circumstances a student with an chronic infectious disease may pose an ongoing risk of transmission to others if the student lacks toilet training, has open sores that cannot be covered, or demonstrates behavior (e.g. biting) which could result in direct inoculation of potentially infected body fluids into the bloodstream. If any of these circumstances exist, the review team should consult with the student's physician and the local health authorities regarding the risks involved to determine whether the student should be educated in an educational environment separate from other students. The school district policies should specifically identify the decision making process for such placements.

c. Exclusion from the school should not be construed as the only response to reduce risk of transmission. The school district should be flexible in its response and attempt to use the least restrictive means to accommodate the student's needs.

7. State health regulations regarding the health-related exclusion of students who have acute contagious diseases are specific regarding the length of time a student must remain out of school. Recommendations concerning the removal of students who have chronic infectious diseases are not as clearly defined, therefore, the length of time the student with a chronic infectious disease should be kept out of school should be determined on a case-by-case basis.

8. Each student should have the right to due process. If the parents or guardians disagree with the student's educational placement or change of placement due to factors described in #6 above, there should be a process by which such objections can be considered including, at a minimum, notice and an opportunity to be heard. Parents or guardians should be offered the opportunity to be heard within ten (10) days of their request. Written policies should be in place to guarantee this process.

9. The maintenance of confidentiality is of the upmost importance; school board meetings to discuss matters relating to an individual student should be closed in accord with the *Open Meetings Act*, Illinois Revised Statutes, Chapter 102, par. 41 *et seq.*

10. In some instances, students who have an immunodeficiency may need to be removed from the classroom for their own protection (for example, if there is an outbreak of a contagious disease). The decision to remove the student from school should be made by the student's physician and parent/guardian in consultation with the school nurse.

11. Individual health conditions permitting, a student who is removed from the school should be provided with a continuing education program until it is determined that the student can be safely returned to the classroom. If it is expected that the student will be out of the school setting for more than 10 school days, 23 Illinois Administrative Code 226.115 and 226.350 *et seq.* regarding home and hospital programs may apply. The school district should do everything possible to ensure that the student's educational progress is maintained.

12. The school nurse should routinely monitor all students identified as having infectious diseases.

a. Students in classroom attendance should be monitored continuously in order to determine if their behavior or medical condition has altered in such a way as to affect their transmissibility status.

b. When a student is removed from normal school attendance as described in #6, the student should be placed on a monitoring schedule appropriate to the infectious disease and the condition precipitating the removal or change, for the purpose of alternative educational programming or reintegrating the student into the public school setting.

c. Students with infectious disease should be educated in the least restrictive environment possible, and even those children whose behavior or physical condition precludes school attendance should be continually evaluated for return to the classroom.

13. Routine and standard procedures of cleanliness and hygiene should be used to clean up after any student has an accident or injury at school. Blood or other body fluids (saliva, vomitus, feces, urine) emanating from any student, including ones known to have infectious diseases, should be treated cautiously. The district policies for managing infectious disease should ensure that all school staff are instructed regarding the hygienic procedures necessary to maintain a safe, clean school environment. See Chapter Three, Section II for more details regarding the procedures to be used.

IMPLEMENTING AND MAINTAINING THE INFECTIOUS DISEASE PROGRAM

An effective program requires the full participation and support of all school officials, local health department officials, local physicians, parents and all school staff. After the infectious disease program and policies have been developed, the school administrator should delegate to the appropriate school staff the responsibility for implementing and maintaining the program. In delegating the specific tasks, the school administrator must be sure that each staff person fully understand his or her responsibility in implementing the program.

The school nurse is the most appropriate person to coordinate the school's infectious disease program. The coordinator of the infectious disease program should

1. interpret infectious disease policies and procedures to school personnel, parents and students;
2. provide health education and health counseling regarding infectious diseases.
3. orient, instruct and supervise the maintenance of hygenic procedures as described in Chapter Three;
4. develop the health component of the student's educational plan,
5. monitor and assess students with infectious diseases,
6. recommend modification of the school program of infected students as needed;
7. serve as the advocate for the infected student,
8. act as the liaison between the school, home, community health agencies and the private medical sector; and
9. keep up with current information, rules and regulations, policies and procedures relating to infectious diseases.

The spread of infectious diseases can be controlled by individual behavior Extreme measures to isolate students with chronic infectious disease are not necessary. Many irrational fears can be mitigated through planned health education and health counseling programs. The school infectious disease task force should plan for an ongoing education program for school staff, students and parents. The educational programs should include information regarding the mode of transmission and the methods of preventing the spread of infectious diseases. See Chapter Two for more details regarding specific, chronic infectious diseases.

CHAPTER TWO
INFECTIOUS DISEASES

An understanding of the different types of infectious diseases is essential in planning and implementing an effective infectious disease management program. This chapter provides a brief description of the chronic infectious diseases, the ways the diseases are transmitted to others, the methods of preventing the diseases and suggestions on how to manage students who have infectious diseases in the school setting.

Decisions regarding the educational and care setting for an infected student should be based on the behavioral, neurological and physical condition of the particular student and the expected type of interaction with others in that setting. The decisions are best made using the infectious disease review team, which should include the student where appropriate, the student's parent or guardian, the student's physician, the school nurse, local public health authorities, and personnel associated with the proposed care or educational setting. In each case, risks and benefits to both the infected student and others in the setting should be weighed.

For infected students including preschool and neurologically handicapped students who lack control of body secretions or who display behavior such as biting and students who have uncoverable, oozing lesions, the review team shall consider recommending a more restricted environment.

CONGENITAL RUBELLA SYNDROME (CRS)

Congenital rubella syndrome (CRS) is a severe disease caused by rubella virus infection usually contracted by a woman who is in her first trimester of pregnancy. Approximately 25 percent of such infections will result in disease in the developing fetus that is recognizable at birth. Of the remaining 75 percent who appear normal at birth, 55 percent may be found to be affected by age two. The incidence of fetal infection is much less when infections occur later in pregnancy. Fetuses exposed after 16 weeks of gestation have a 10-20 percent risk of infection. Infections beyond the 20th week of gestation rarely result in defects. Affected children may have mental retardation, cataracts, glaucoma, heart defects, hearing defects, and bone defects. Rubella infections acquired after birth result in a mild disease with a rash, a low fever, swollen lymph nodes and painful joints

In past years, rubella infections occurred often, primarily in young children, but now they occur infrequently due to the widespread use of rubella vaccine Cases that occur now are equally distributed among young children, adolescents, and teenagers Infection with this virus provides lifelong immunity, as does vaccination with rubella vaccine. Between 15 and 25 percent of adults are not immune to rubella infection

Mode of Transmission

Rubella is a highly contagious viral infection which is spread through direct and indirect contact with an individual who has the disease or a CRS child who continues to shed the virus (primarily during the first eighteen months of life).

Prevention

All children, unless they have a medical condition that would cause abnormalities in the immune system, should be immunized against rubella by age 15 months. Adult women of childbearing age whose occupations bring them in frequent contact with children should be immunized against rubella if they are susceptible. Rubella vaccine should not be given to pregnant women, and other adult women who receive the vaccine should not become pregnant for the next three months because of theoretical risks to the developing fetus. As in the case of children, adults who have abnormalities in their immune systems should not be immunized against rubella.

The CRS Student in the Classroom

Routine hygienic procedures should be used in providing care for all students. However, immunization against rubella is the primary means for prevention of spread of disease for those who are in contact with students who have congenital rubella syndrome Unimmunized, susceptible children are not at risk of serious disease, but may transmit the disease to susceptible, pregnant women (their mothers, teachers, etc.).

Children with CRS should be considered infectious during their first eighteen months of life Approximately 10 to 20 percent of CRS infants carry the virus at age six months, and by age 20 months, approximately three percent continue to carry the virus. When CRS children carry the rubella virus, it is present in urine oral secretions and nasal secretions. Contact with these secretions can result in infection of another child or adult if they have never before had rubella or if they have never been immunized. Precautions to prevent transmission become very important as school programs are expanded to include younger children.

Hepatitis B is a viral infection of the liver. When it produces illness, the person will have a loss of appetite, tenderness in the upper right abdomen, extreme fatigue, and often jaundice. Approximately 50 percent of adults and approximately 90 percent of young children who are infected with this virus will not develop symptoms. Most persons infected with this virus recover completely, but six to ten percent become chronic carriers. Persons with abnormalities in their immune systems and persons with Down's syndrome, if exposed to the virus, are more likely to become chronic carriers than other exposed persons. In fact, persons with Down's syndrome have a carrier rate that may be as high as 50 percent.

Specific blood tests will determine if a person is a chronic hepatitis B carrier. The hepatitis B surface antigen (HBsAg) test must be positive on two occasions at least six months apart before a person can be identified as a chronic hepatitis B carrier.

Mode of Transmission

Blood, saliva, vaginal secretions, and semen are the only body fluids known to be capable of transmitting hepatitis B. One of these infectious body fluids must make contact with broken skin or a mucous membrane before transmission can occur. If a hepatitis B carrier has an accident and bleeds and the person caring for that injury has a hangnail or other broken skin which comes into contact with the blood, the person caring for the injured carrier may develop hepatitis B. Also, if a hepatitis B carrier bites another person, the bite victim may develop hepatitis B. Transmission of the hepatitis B virus following exposure does not always occur. An accidental prick with a needle used to treat a hepatitis B carrier is a higher-risk type of contact than those described above, yet only five percent of such needle pricks results in transmission of the hepatitis B virus.

When a person is exposed to hepatitis B by direct contact with one of the known infectious body fluids as described above, preventive treatment must be given. The school nurse, the local public health authority, or a physician should be contacted promptly. Arrangements will be made through the exposed person's private physician for administration of hepatitis B vaccine and hepatitis B immune globulin to prevent the development of infection.

Prevention

A vaccine is now available to protect high risk individuals against hepatitis B. This vaccine in combination with hepatitis B immune globulin has greatly reduced the risk of accidental transmission of hepatitis B. Standard hygienic procedures should also be employed to reduce the risk of transmission of this disease.

The Hepatitis B Carrier in the Classroom

Most hepatitis B carriers, except spontaneous biters and those who are physically aggressive, can be safely admitted to classrooms. Care must be taken to prevent injury which might cause bleeding to the carrier. The carrier should not engage in rough games involving physical contact and should not work with sharp objects. Sewing would not be an acceptable handicraft for a hepatitis B carrier. The carrier should not be in a classroom with a combative child. The classroom teacher should be prepared to identify situations in which there is environmental contamination with one of these infectious body fluids and to assure that the affected area is promptly decontaminated. Routine hygienic procedures as described in Chapter Three are essential to the prevention of spread of the hepatitis B virus. Particular attention should be taken when cleaning up blood, saliva, vaginal secretions or semen. (See Chapter Three, Section II.)

Hepatitis B vaccine may be indicated for classroom contacts of some, but not all, hepatitis B carriers. For example, classroom contacts of a carrier who is profoundly retarded and exhibits biting behavior should probably receive hepatitis B vaccine. Conversely, classroom contacts of a neurologically normal carrier who has no behavioral problems would probably not be recommended for hepatitis B vaccine. Each hepatitis B carrier's circumstances should be reviewed individually to determine the need for vaccination of classroom contacts. Public health authorities and the school infectious disease review team should collaborate in this evaluation.

Most children and adults who are infected with this virus will exhibit no symptoms The few who develop symptoms will usually have an illness resembling infectious mononucleosis with fever, swollen lymph nodes, and sore throat. These infections do not result in serious long-term effects Rarely, children and adults infected with this virus will experience pneumonia or will have liver abnormalities which may include jaundice Serious disease can occur when a child or adult with an impaired immune system is infected or when a developing fetus is infected

Children and adults at increased risk for severe disease are those who have serious medical conditions that cause impairment of the immune system such as leukemia or those who are receiving medical treatments that suppress the immune system, such as patients undergoing cancer chemotherapy or radiation therapy and organ-transplant recipients.

The most severe infections occur in developing fetuses. When a pregnant woman who has never before been infected with this virus is exposed, she may transmit the infection to her fetus Even though the most severe infections (congenital) occur before birth, only ten percent of such infections result in disease. Many children affected congenitally will have mental retardation and may have abnormalities of any of the body's systems.

This viral infection occurs frequently. In the United States, up to 40 percent of the adult population has been exposed. Most infections are believed to occur before age 2

Following initial infection with this virus, children may remain infectious for months to years Although studies are not known to have been conducted on school-aged children, studies of preschool-aged children show that 5 to 30 percent can be expected to be shedding the virus at any point in time

Mode of Transmission

Urine and saliva are infectious for a variable period of time following initial infection The virus can be transmitted to a susceptible person when one of these infectious fluids makes contact with a break in the skin or a mucous membrane of the eye, nose, or mouth. For this reason, it is recommended that pregnant women not provide direct care to children who are known CMV shedders

Prevention

Currently, there is no vaccine to protect against CMV infections Because CMV is ubiquitous, there is risk of transmission of this virus in all settings where there is close contact with and among infants and children, regardless of the known presence or absence of a child known to be excreting the virus The most effective method of preventing transmission is the practice of thorough hand washing after touching objects known to be exposed to potentially infectious fluids (urine and saliva) and before eating, smoking, drinking or any other activity that would bring hands in contact with the eyes, nose, or mouth.

The CMV Student in the Classroom

Routine hygienic procedures as described in Chapter Three are necessary to prevent the spread of CMV. It is recommended that pregnant caretakers (teachers, health aides, etc.) should not provide direct care for the known, congenital CMV children

ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) AND AIDS-RELATED COMPLEX (ARC)

The Acquired Immunodeficiency Syndrome (AIDS) is a serious disease caused by infection with the human T-lymphotropic virus type III (HTLV-III). Persons with AIDS have developed a defect in the functioning of their immune systems as a result of HTLV-III infection. These persons are extremely susceptible to certain types of opportunistic infections and to certain rare forms of cancer. No treatment is currently available to reverse the immune system deficiency.

AIDS patients must be diagnosed as having an opportunistic infection such as *Pneumocystis carina* pneumonia, a rare form of cancer known as Kaposi's sarcoma, or other opportunistic diseases highly suggestive of faulty immune systems (see Appendix A) Not all persons infected with the HTLV-III virus develop AIDS In some infected persons, the infection leads to detectable, but apparently less severe, abnormalities of the immune system that do not result in the development of the diseases listed in Appendix A. This condition is called the AIDS-related complex (ARC). (See Appendix B.) Some persons with ARC will develop AIDS and others will not The percentage who will develop AIDS remains unknown Because ARC patients are infected with the HTLV-III virus, they may be capable of transmitting infection to others. The same precautions to prevent spread of HTLV-III infection apply to both AIDS and ARC patients.

Persons at increased risk for AIDS/ARC include homosexual or bisexual men, abusers of intravenous drugs, patients with hemophilia, sexual partners of the above groups, and sexual partners of AIDS cases Additionally, a small number of cases have occurred in blood-transfusion recipients, and some infants have acquired the disease from their infected mothers before birth, at the time of birth, or during the first few months of life *possibly* from breast milk HTLV-III virus has been found in blood, semen, saliva, and tears of AIDS patients Saliva and tears contain the virus only occasionally, and when present, the virus is found in low concentrations compared to the concentrations found in blood and semen.

Mode of Transmission

The virus can be transmitted from one person to another in several ways, but each way involves direct inoculation or introduction of an infectious body fluid from the infected person to another person. This exposure can occur with intimate sexual contact, sharing of hypodermic needles, blood transfusion, or contact between mother and infant as described above. There is no evidence that transmission occurs by casual contact with an AIDS patient or by the airborne route. Studies have been conducted on household contacts of AIDS patients who are hemophiliacs, AIDS patients who acquired their infection through blood transfusion, and pediatric AIDS patients The only household contacts in these studies who have evidence of exposure to this virus are sexual contacts of the AIDS case. Other household members, including siblings of AIDS patients, have neither developed AIDS nor shown laboratory evidence of transmission of the virus All evidence regarding the transmission of AIDS indicates that casual person to person contact appears to pose no risk for transmitting the HTLV-III virus

Prevention

There is no currently available vaccine that prevents HTLV-III infection The HTLV-III antibody screening test for blood and a newly developed heat treatment of blood products necessary for the treatment of hemophilia have drastically reduced the risk of infection through blood transfusion and prescribed blood products

Since all of the evidence that is currently available indicates that the HTLV III virus is *not* spread through casual contact, the primary means for preventing infection is to avoid those high-risk activities that are known to place individuals at risk of exposure to the virus. Mandatory testing for the HTLV III antibody as a condition for school entry is *not* recommended

The HTLV-III-Infected Student in the Classroom

Decisions regarding the appropriate educational setting for the HTLV III- infected student, including those diagnosed with AIDS or ARC and those who are asymptomatic with laboratory evidence of HTLV-'II infection, should be based upon the physical condition and behavior of the student. For most infected students, casual person-to-person contact with other students appears to pose no risk. However, infected students who are neurologically handicapped and lack control of their body secretions or display biting behavior and those students who have uncoverable, oozing lesions are recommended to be excluded from school until more is known about transmission of the HTLV-III virus in these settings. No restrictions should be imposed on students who have family or household members who are infected with AIDS unless the students are also infected.

Routine hygienic procedures as described in Chapter Three, are necessary for the prevention of spread of the HTLV-III virus. Particular attention must be taken when cleaning up blood and other body fluids that may contain the virus. (See Chapter Three, Section II.) AIDS or ARC students must not attend school when they have a cough, fever, or diarrhea. Students with AIDS or ARC may need to be removed from the classroom when certain potentially lethal infections (e.g., chicken pox or measles) are occurring at school. The decision to exclude an infected student should be made by the student s physician and parent or guardian, in consultation with the school nurse.

HERPES SIMPLEX

Herpes infections are caused by two subtypes, herpes simplex virus type 1 (HSV 1) and herpes simplex virus type 2 (HSV-2). Although HSV-1 is most often associated with cold sores and fever blisters and HSV 2 is most often the cause of genital herpes, either virus can cause infection in either anatomical site. Twenty-five percent of genital herpes infections are caused by type 1, and 10 percent of oral herpes infections are caused by type 2. Although much public attention has been drawn to type 2 genital herpes infections, there is little distinction between the symptoms produced by these viruses, and their methods of control are the same.

Initial infection with these viruses is sometimes followed by recurrent episodes in subsequent months or years. Infections with these viruses are common, with 50-90 percent of adults showing evidence of past infections. The majority of primary infections produce no symptoms. Of those who do develop symptoms (10-50 percent), there will be an illness comprised of fever and malaise lasting for approximately one week and a vesicular lesion or lesions (raised sore) on the lip, mouth, throat, eye, external genitalia, or vagina four to five days following exposure. Secretions from these lesions are most infectious during the 24 hours after they appear and remain infectious for about two weeks. Some people, particularly those with genital infections, have recurrent episodes which are similar, but milder, than the original infections. Many recurrent infections are limited to appearance of the fever-blister-type sore. Secretions from recurrent infections are infectious for about 7 days

Regardless of the recurrence of symptoms, some people who have been infected with either of these viruses are periodically infectious. The saliva is periodically infectious in some people who have oral infections, and genital secretions are periodically infectious in some persons whose infections are at that anatomical site

At any given time, an estimated 2-10 percent of the population is shedding either of these herpes viruses.

Mode of Transmission

Contact with secretions from herpes sores, saliva, and genital secretions can transmit herpes infections. The viruses are not highly contagious and direct contact with infectious secretions is required. Intact skin is believed to be an effective barrier, but broken skin and mucous membranes can allow the virus to enter a susceptible person's body.

The virus can be transmitted to the newborn from the mother with active genital lesions, resulting in disseminated infection, encephalitis and death. Newborns can also be infected by contact with other persons who have active herpes sores Newborns infected at birth have a 62 percent death rate. Of the survivors 45 percent will suffer permanent damage such as mental retardation.

Prevention

Currently there is no vaccine available to protect against herpes infection Thorough handwashing is essential for the prevention of herpes virus transmission Hands should be washed after handling a child with active lesions and before using the toilet Obviously, hands should always be washed after using the toilet When a child has active lesions close physical contact with other children should be limited Towels, clothing, and eating utensils used by a child with active lesions should be kept separate to prevent contact by others Toys and other items exposed to the saliva of a child with active sores should be washed before another child has contact with them.

The Herpes Simplex Student in the Classroom

Routine hygienic procedures, as described in Chapter Three, are essential to the prevention of herpes infection. The herpes simplex student should be excluded from school attendance when large areas of active lesions which can not be covered with a protective dressing are present The student should remain out of school until the lesions are dry and crusted Students who have minor lesions and students who have lesions which can be covered may remain in school.

CHAPTER THREE

PROCEDURES FOR SCHOOL MANAGEMENT OF INFECTIOUS DISEASE

Prevention of infectious diseases depends on basic principles of cleanliness and hygiene The transmission of these infectious diseases may be prevented by using standard procedures to maintain both personal and classroom cleanliness and by monitoring the actions of suspected and known infected students *THE PROCEDURES LISTED IN THIS CHAPTER SHOULD BE EMPLOYED AT ALL TIMES WHEN PROVIDING CARE FOR ALL STUDENTS, REGARDLESS OF THEIR INFECTIOUS-DISEASE STATUS.*

Teaching and supervising staff who perform these preventive measures for the control of infectious diseases is a school nursing function which does not require a physician's authorization Personnel responsible for carrying out these procedures include the infectious disease review team, teachers, teachers aides, care workers, custodial staff, food handlers, volunteers and anyone who may have direct contact with the students, equipment and supplies, including eating utensils and play objects. Responsibility also extends to such areas as contaminated floors, walls, toilets, sinks, and changing surfaces, as well as contaminated clothing or cleaning equipment such as mops

I. Guidelines for Establishing Infectious Disease Prevention Procedures

A. Transmission of infectious diseases may occur more readily where close personal contact is involved in student care Preschool and kindergarten settings, as well as special facilities for handicapped students, need special attention for the prevention of infectious diseases

B. Preventing the spread of infection requires that personal and environmental cleanliness techniques be practiced at all times in every school setting.

C Prior to the enrollment or continued attendance in the regular or special classroom of an infected student, the school nurse shall develop specific procedures appropriate to the student's age and the stage of development for the specific disease The school nurse should carry out the following procedures.

1. Conduct a health and developmental assessment, including a review of the student's medical records Collaborate with parents and physician to ensure that the records are complete

2. Identify students and school personnel who may be at risk, such as those who are chronically ill, pregnant, capable of childbearing or taking immunosuppressant medication

3. Identify appropriate personal and environmental cleanliness techniques in accordance with student and staff needs.

4 If the regular education program cannot be modified and the student is identified as an individual with exceptional needs, write appropriate health objectives for the student's Individualized Educational Program (IEP)

5 Orient and train all staff members, including custodians, substitute teachers, volunteers, and bus drivers Orientation and training must be ongoing and must be scheduled to include new personnel

6 Maintain ongoing communication with parents and the primary physician regarding the student's status

7 Verify the school district's efforts to prevent the spread of infection and to protect the health of employees and students by documenting the training and supervision of employees.

II. Guidelines for Maintaining a Safe Healthful School Environment *THESE GUIDELINES AND PROCEDURES SHOULD BE FOLLOWED REGARDLESS OF THE PRESENCE OR ABSENCE OF A STUDENT KNOWN TO HAVE AN INFECTIOUS DISEASE.*

A All facilities should make provisions for personal and environmental cleanliness.

1 Allow sufficient time for hand washing after using the toilet and before eating meals and snacks

2 Provide ready access to hand-washing facilities. These should include hot and cold running water and liquid soap in a workable dispenser

3 Provide disposable paper towels The use of cloth towels is discouraged, however, if cloth towels are used, discard them with other contaminated linens after each use

4. Maintain storage areas for linens, utensils, equipment, and disposable items. These areas must be separate from areas used for storage of soiled items.

5 Keep soiled disposable items in covered waste receptacles lined with disposable plastic bags. At the end of each day, the plastic bags are to be sealed and discarded. *DO NOT REUSE*

B Hand washing is the most important technique for preventing the spread of disease and should be done frequently. Proper hand washing requires the use of soap and water and vigorous washing under a stream of running water for at least 10 seconds Rinse under running water. Use paper towels to thoroughly dry hands.

1 Before putting on lab coat or smock (or large blouse or shirt to cover street clothes) in preparation for working with the students

2. Before drinking, eating, or smoking

3 Before handling clean utensils or equipment

4. Before and after handling food

5 Before and after assisting or training the student in toileting and feeding

6. After going to the bathroom

7 After contact with body secretions, such a blood (including menstrual flow), urine, feces, mucus, saliva, semen, tears, drainage from wounds, etc

8. After handling soiled diapers, menstrual pads, garments, or equipment

9 After caring for any student, especially those with nose, mouth, eye, or ear discharge

10 After removing disposable gloves

11 After removing lab coat or smock when leaving the work area

C. All staff members should practice specific hygienic principles designed to protect themselves and others from infection

1 Maintain optimum health through effective daily health practices such as adequate nutrition, rest, exercise, and appropriate medical supervision

2 If a careprovider has a cut or an open lesion on his/her hands, disposable gloves must always be worn when providing direct care for any student where there is contact with bodily excretion or secretions

3 Avoid rubbing or touching eyes

4. Refrain from kissing or being kissed by students

5. Wash hands frequently

6 Avoid the use of jewelry such as rings, dangling bracelets and earrings during working hours

7. Use one's own personal care items such as combs, fingernail files, nail clippers, lipsticks, and toothbrushes

8. Keep fingernails clean and trimmed short

III. Procedures for Cleaning Up Body Fluid Spills (blood, feces, urine, semen, vaginal secretions, vomitus) *THESE PROCEDURES SHOULD BE USED FOR ALL STUDENTS REGARDLESS OF THEIR INFECTIOUS-DISEASE STATUS.*

A. Wear disposable gloves. When disposable gloves are not available or unanticipated contact occurs, hands and other affected areas should be washed with soap and water immediately after contact.

B Clean and disinfect all soiled hard, washable surfaces immediately removing soil before applying a disinfectant

1 Use paper towels or tissues to wipe up small, soiled areas After soil is removed, use clean paper towels and soap and water to clean area

2 Disinfect area with a dilution of 1:10 household bleach solution or another disinfectant (See Section VI for selection of a disinfectant.)

3. Apply sanitary absorbent agent for larger soiled areas After soil is absorbed, vacuum or sweep up all material

4 Disinfect area with a clean mop (See Section VI for selection of a disinfectant.)

C Clean and disinfect soiled rugs and carpets immediately

1 Apply sanitary absorbent agent, let dry and vacuum.

2. Apply rug shampoo (a germicidal detergent) with a brush and revacuum.

D Clean equipment and dispose of all disposable materials

1 Soiled tissue and flushable waste can be flushed in toilet Discard paper towels, vacuum bag or sweepings in a waste receptacle lined with a plastic bag.

2 Rinse broom and dust pan in disinfectant solution

3 Soak mop in disinfectant solution and rinse thoroughly or wash in hot-water cycle after soaking in disinfectant

4 Disinfectant solution should be promptly disposed of down a drain

E. Clothing and other nondisposable items (e.g., sheets, towels) soaked with body fluids should be rinsed and placed in a plastic bag to be sent home or laundered

F Remove disposable gloves and discard in waste receptacle

G Wash hands

H Plastic bags holding contaminated waste should be secured and disposed of daily

I Large waste containers (dumpsters or other containers which are impervious to animals) containing potentially contaminated waste should be located in a safe area away from the playground or other areas used by students.

IV Special Procedures for Early Childhood, Day Care, and Special Classroom Settings *THESE PROCEDURES SHOULD BE USED FOR ALL STUDENTS REGARDLESS OF THEIR INFECTIOUS-DISEASE STATUS*

A. Guidelines for Diapering

1. Purpose: To avoid cross-contamination when diapering.

2. Equipment

   a. Changing table, student's own bed, cot, mat; or safe, firm, nonporous surface (clean and sanitized).

   b. Readily accessible hand-washing facility, including hot and cold running water, liquid soap in workable dispenser and disposable paper towels.

   c. Supplies for cleaning student's skin, disposable baby wipes, soap, water and cotton balls or soft tissue.

   d. Plastic bags for student's soiled clothing.

   e. Covered waste receptacle inaccessible to students lined with a disposable plastic bag for disposable diapers.

   f. The use of cloth diapers is discouraged However, if cloth diapers are used, a covered receptacle lined with a disposable plastic bag should be used for each student. Soiled cloth diapers should be stored in an area inaccessible to the students.

   g. Plastic bag ties or masking tape for sealing disposable plastic bags at time of discard.

   h. Disposable plastic gloves (medium or large size, nonsterile) for use with cloth diapers

   i. Disinfectant for cleaning changing surface (see Section VI).

3. Procedure

   a. Wash hands

   b. Place student on clean changing surface.

   c. Remove soiled diaper and place in appropriate receptacle.

   d. If other clothing is soiled, remove, rinse and place it directly in a plastic bag that can be marked with student's name, secured and sent home at the end of the day.

   e. Cleanse the perineum and buttocks thoroughly with disposable baby wipes or soap and water.

   f. Rinse well and dry skin prior to applying clean diaper.

   g. Wash student's hands.

   h. Wash own hands.

   i. Return student to class activity.

   j Wear disposable plastic gloves to rinse and wring out in toilet any cloth diaper soiled with feces.

   k After rinsing, place the cloth diaper in the appropriate receptacle

   l Remove gloves and discard them in the appropriate receptacle

   m. Wash hands

   n Report abnormal conditions to the appropriate personnel, school nurse or school administrator

   o Use disinfectant to clean changing area and other contaminated surfaces (see Section VI)

B. Guidelines for Classroom Cleanliness

1 Purpose To prevent the transmission of infectious disease

2. Equipment

   a Lab coat or smock (large blouse or shirt to cover street clothes)

   b. Covered waste receptacles with disposable plastic bags.

   c Plastic bags that can be labeled and sealed for individual's soiled laundry.

   d Disposable plastic gloves (medium or large size, nonsterile) if needed.

   e Disinfectant (see Section VI)

   f Hand-washing facility, including hot and cold running water, liquid soap in workable dispenser and disposable paper towels.

   g Washer and dryer if disposable linens are not available

   h Dishwasher (if disposable eating utensils are not available)

3. Procedure

   a Wash hands

   b If a lab coat or smock is worn

      (1) Use a clean garment each day.

      (2) Always hang the garment right side out when leaving the work area for breaks or lunch.

   c If there are open cuts, abrasions, or weeping lesions on hands, wear disposable plastic gloves.

      (1) Use a new pair of gloves in each situation in which hand washing is indicated.

      (2) Discard used gloves in plastic bag in covered waste receptacle.

d. Store and handle clean clothing and linens separately from soiled clothing and linens.

(1) Immediately place each student's soiled clothing and linens in an individually labeled plastic bag, which is to be sealed and sent home at the end of the day.

(2) Immediately place all soiled school linens in a plastic bag in a covered waste receptacle. Launder linens daily.

C. Techniques for Storing, Cleaning, and Disposing of Classroom Equipment, Supplies, and Other Items

1. Immediately after use, discard any soiled disposable items by placing them in a plastic bag in a covered waste receptacle.

2. Store each student's personal grooming items (combs, brushes, toothbrushes) separately.

3. In handling disposable diapers, at least once a day, seal and discard the disposable plastic bag used to line the covered receptacle.

4. When laundry facilities are available at school, launder diapers, sheets or other cloth items soiled in the school setting daily.

a. Launder diapers or other items soaked with body fluids separately.

b. Presoak heavily soiled items.

c. Follow the manufacturer's directions on the label to determine the amount of detergent to be added.

d. If the material is bleachable, add 1/2 cup of household bleach to the wash cycle

e. If the material is not colorfast, add 1/2 cup nonclorox bleach (e.g., Chlorox II, Borateam, etc.) to wash cycle.

f. Use hot cycle on washer and dryer.

5. Seal and discard the soiled plastic bag used to line the covered waste receptacle at least once a day.

6. Establish a routine cleaning and disinfecting schedule.

a. Clean protective floor pads, bolsters, wedges, and so forth after each nonambulatory student has been removed and at the end of each day.

b. Wash all toys with soap and water and rinse thoroughly as needed and at the end of each day.

c. Clean all equipment at the end of each day.

d. If a rug or carpet becomes soiled, clean it immediately (as described in Section III. C).

e Clean changing [illegible], bathtubs, sinks, portable potties, and toilet seats after each use. Rinse with clear water and wipe dry.

V. Guidelines for Maintaining a Clean School Environment *THESE GUIDELINES AND PROCEDURES SHOULD BE FOLLOWED REGARDLESS OF THE PRESENCE OR ABSENCE OF A STUDENT KNOWN TO HAVE AN INFECTIOUS DISEASE*

A. Clean the following areas and items daily.

1 Classrooms, bathrooms, and kitchen
2. Floors
3. Sinks and faucet handles
4. Cabinet drawer handles
5 Doorknobs
6 Soap dispenser spigots and/or bar soap containers
7. Walls behind sinks
8. Toilets

B. Vacuum carpets daily. If a rug or carpet is soiled, it should be disinfected immediately. (See Section III.C.)

C. Clean waste receptacles at least weekly.

D. Empty soap dispensers, wash and air-dry monthly.

E. Steam-clean carpets quarterly.

F. If heavy nondisposable gloves are worn when a disinfectant is being used, they must be washed and air-dried after each use. They must be stored in the room of use in the area reserved for soiled articles.

G Techniques for Handling Food and Utensils.

1 Maintain a clean area of the kitchen for serving food.

2. Maintain a separate area of the kitchen for cleanup.

3. All leftover food, dishes, and utensils should be treated as if they were contaminated.

4 Scrape food from soiled dishes and/or place disposable dishes in plastic-lined, covered waste receptacle

5. Pour liquids into sink drain

6 Rinse dishes and utensils with warm water before placing them in the dishwasher.

7 Clean sinks, counter tops, tables, chairs, trays, and any other areas where foods or liquids have been discarded or spilled; use approved disinfectant (See Section VI.)

8. Wash hands prior to removing clean dishes from the dishwasher and storing them in a "clean" area of the kitchen.

VI. Selecting an Appropriate Disinfectant

A. Any liquid or bar soap is acceptable for routine hand washing.

B. Select and stock a sanitary absorbent agent for cleaning body fluid spills.

C. Select an intermediate-level disinfectant which will kill vegetative bacteria, fungi, tubercle bacillus and virus. Aerosol sprays are not recommended because of possible inhalant problems and flammability.

1. Select an agent that is registered by the U.S. Environmental Protection Agency (EPA) for use as a disinfectant in schools.

2. Select an agent that belongs to one of the following classes of disinfectants.

a. Ethyl or isopropyl alcohol (70-90 percent)

b. Quaternary ammonium germicidal detergent solution (2 percent aqueous solution)

c Iodophor germicidal detergent (500 ppm available iodine)

d Phenolic germicidal detergent solution (1 percent aqueous solution)

e Sodium hypochlorite (1:10 dilution of household bleach) This solution must be made fresh daily.

3 *Use all products according to the manufacturer's instructions.*

4. Store all disinfectants in a safe area inaccessible to students.

APPENDIX A

The Case Definition of AIDS Used by CDC for National Reporting (CDC-reportable AIDS)

For the limited purposes of national reporting of some of the severe late manifestations of infection with human T lymphotropic virus, type III/lymphadenopathy associated virus (HTLV III/LAV) in the United States, CDC defines a case of "acquired immunodeficiency syndrome" (AIDS) as an illness characterized by

I one or more of the opportunistic diseases listed below (diagnosed by methods considered reliable) that are at least moderately indicative of underlying cellular immunodeficiency, and

II absence of all known underlying causes of cellular immunodeficiency (other than HTLV-III/LAV infection) and absence of all other causes of reduced resistance reported to be associated with at least one of those opportunistic diseases.

Despite having the above, patients are excluded as AIDS cases if they have negative result(s) on testing for serum antibody to HTLV III/LAV*, do not have a positive culture for HTLV III/LAV, and have both a normal or high number of T-helper (OKT4 or LEU3) lymphocytes and a normal or high ratio of T helper to T suppressor (OKT8 or LEU2) lymphocytes. In the absence of test results, patients satisfying all other criteria in this definition are included as cases.

This general case definition may be made more explicit by specifying:

I the particular diseases considered at least moderately indicative of cellular immunodeficiency, which are used as indicators of AIDS, and

II the known causes of cellular immunodeficiency, or other causes of reduced resistance reported to be associated with particular diseases, which would disqualify a patient as an AIDS case.

This specification is as follows:

I. DISEASES AT LEAST MODERATELY INDICATIVE OF UNDERLYING CELLULAR IMMUNODEFICIENCY

In the following list of diseases the required diagnostic methods with positive results are shown in parentheses. "Microscopy" may include cytology.

A. Protozoal and Helminthic Infections:

1 Cryptosporidiosis, intestinal, causing diarrhea for over 1 month (on histology or stool microscopy)

2 Pneumocystis carinii pneumonia (on histology, or microscopy of a "touch" preparation, bronchial washings, or sputum)

3. Strongyloidosis, causing pneumonia, central nervous system infection, or infection disseminated beyond the gastrointestinal tract (on histology)

4 Toxoplasmosis, causing infection in internal organs other than liver, spleen, or lymph nodes (on histology or microscopy of a "touch" preparation)

B. Fungal Infections:

1 Candidiasis, causing esophagitis (on histology, or microscopy of a "wet" preparation from the esophagus, or endoscopic or autopsy findings of white plaques on an erythematous mucosal base, but not by culture alone)

2 Cryptococcosis, causing central nervous system or other infection disseminated beyond lungs and lymph nodes (on culture, antigen detection, histology, or India ink preparation of CSF)

C. Bacterial Infections:

1 Mycobacterium avium or intracellulare (Mycobacterium avium complex), or Mycobacterium kansasii, causing infection disseminated beyond lungs and lymph nodes (on culture)

D. Viral Infections:

1 Cytomegalovirus causing infection in internal organs other than liver, spleen, or lymph nodes (on histology or cytology, but not by culture or serum antibody titer)

* A single negative test for HTLV III/LAV may be applied here if it is an antibody test by ELISA, immunofluorescent, or Western Blot methods, because such tests are very sensitive. Viral cultures are less sensitive but more specific, and so may be relied on if positive but not if negative. If multiple antibody tests have inconsistent results, the result applied to the case definition should be that of the majority. A positive culture, however, would overrule negative antibody tests.

2. Herpes simplex virus, causing chronic mucocutaneous infection with ulcers persisting more than 1 month, or pulmonary, gastrointestinal tract beyond mouth, throat, or rectum, or disseminated infection, but not encephalitis alone (on culture, histology, or cytology)

3. Progressive multifocal leukoencephalopathy presumed to be caused by Papovavirus (on histology)

E. Cancer:

1. Kaposi's sarcoma (on histology)

2. Lymphoma limited to the brain (on histology)

F. Other Opportunistic Infections with Positive Tests for HTLV-III/LAV*:

In the absence of the above opportunistic diseases, any of the following diseases is considered indicative of AIDS if the patient had a positive test for HTLV-III/LAV*.

1. disseminated histoplasmosis (on culture, histology, or cytology)

2. bronchial or pulmonary candidiasis (on microscopy or visualization grossly of characteristic white plaques on the bronchial mucosa, but not by culture alone)

3. isosporiasis, causing chronic diarrhea over 1 month (on histology or stool microscopy)

G. Chronic lymphoid interstitial pneumonitis:

In the absence of the above opportunistic diseases, a histologically confirmed diagnosis of chronic (persisting over 2 months) lymphoid interstitial pneumonitis in a child (under 13 years of age) is indicative of AIDS unless test(s) for HTLV-III/LAV are negative* The histologic examination of lung tissue must show diffuse interstitial and peribronchiolar infiltration by lymphocytyes, plasma cells with Russell bodies, plasmacytoid lymphocytes and immunoblasts. Histologic and culture evaluation must not identify a pathogenic organism as the cause of this pneumonia.

H. Non-Hodgkin's Lymphoma with Positive Test for HTLV-III/LAV*:

If the patient had a positive test for HTLV III/LAV*, then the following histologic types of lymphoma are indicative of AIDS, regardless of anatomic site

1. Small noncleaved lymphoma (Burkitt's tumor or Burkitt like lymphoma), but not small cleaved lymphoma.

2. Immunoblastic sarcoma (or immunoblastic lymphoma) of B-cell or unknown immunologic phenotype (not of T-cell type) Other terms which may be equivalent include: diffuse undifferentiated non-Hodgkin's lymphoma, large cell lymphoma (cleaved or noncleaved), diffuse histiocytic lymphoma, reticulum cell sarcoma, and high-grade lymphoma.

Lymphomas should not be accepted as indicative of AIDS if they are described in any of the following ways: low grade, of T-cell type (immunologic phenotype), small cleaved lymphoma, lymphocyte lymphoma (regardless of whether well or poorly differentiated), lymphoblastic lymphoma, plasmacytoid lymphocytic lymphoma, lymphocytic leukemia (acute or chronic), or Hodgkin's disease (or Hodgkin's lymphoma)

* a positive test for HTLV III/LAV may consist of a reactive test for antibody to HTLV III, LAV or a positive culture (isolation of HTLV-III/LAV from a culture of the patient's peripheral blood lymphocytes). If multiple antibody tests have inconsistent results, the result applied to the case definition should be that of the majority done by the ELISA, immunofluorescent, or Western Blot methods. A positive culture, however, would overrule negative antibody tests.

II. KNOWN CAUSES OF REDUCED RESISTANCE:

Known causes of reduced resistance to diseases indicative of immunodeficiency are listed in the left column, while the diseases that may be attributable to these causes (rather than to the immunodeficiency caused by HTLV-III/LAV infections are listed on the right

Known Causes of Reduced Resistance	Diseases Possibly Attributable to the Known Causes of Reduced Resistance
1 Systemic corticosteroid therapy	Any infection diagnosed during or within 1 month after discontinuation of the corticosteroid therapy, unless symptoms specific for an infected anatomic site (e.g., dyspnea for pneumonia, headache for encephalitis, diarrhea for colitis) began before the corticosteroid therapy or any cancer diagnosed during or within 1 month after discontinuation of more than 4 months of long-term corticosteroid therapy, unless symptoms specific for the anatomic sites of the cancer (as described above) began before the long-term corticosteroid therapy
2 Other immunosuppressive or cytotoxic therapy	Any infection diagnosed during or within 1 year after discontinuation of the immunosuppressive therapy, unless symptoms specific for an infected anatomic site (as described above) began before the therapy or any cancer diagnosed during or within 1 year after discontinuation of more than 4 months of long-term immunosuppressive therapy, unless symptoms specific for the anatomic sites of the cancer (as described above) began before the long-term therapy
3. Cancer of lymphoreticular or histiocytic tissue such as lymphoma (except for lymphoma localized to the brain), Hodgkin's disease, lymphocytic leukemia, or multiple myeloma	Any infection or cancer, if diagnosed after or within 3 months before the diagnosis of the cancer of lymphoreticular or histiocytic tissue
4. Age 60 years or older at diagnosis	Kaposi's sarcoma, but not if the patient has a positive test for HTLV-III/LAV
5. Age under 28 days (neonatal) at diagnosis	Toxoplasmosis or herpes simplex virus infection, as described above
6 Age under 6 months at diagnosis	Cytomegalovirus infection, as described above
7 An immunodeficiency atypical of AIDS, such as one involving hypogammaglobulinemia or angio immunoblastic lymphadenopathy, or an immunodeficiency of which the cause appears to be a genetic or developmental defect, rather than HTLV-III/LAV infection	Any infection or cancer diagnosed during such immunodeficiency
8 Exogenous malnutrition (starvation due to food deprivation, not malnutrition due to malabsorption or illness)	Any infection or cancer diagnosed during or within 1 month after discontinuation of starvation

APPENDIX B

DEFINITION OF AIDS-RELATED COMPLEX

At least 2 of the following *clinical* signs/symptoms lasting 3 or more months *PLUS* 2 or more of the following *laboratory* abnormalities, occurring in a patient having no underlying infectious cause for the symptoms and who is in a cohort at increased risk for developing AIDS.

Clinical:

1) Fever: > 100° F, intermittent or continuous for at least 3 months, in the absence of other identifiable causes.
2) Weight Loss: > 10% or > 15 lbs.
3 Lymphadenopathy: persistent for at least 3 months, involving 2 extra-inguinal node bearing areas.
4. Diarrhea: intermittent or continuous > 3 months, in the absence of other identifiable causes.
5. Fatigue to the point of decreased physical or mental function.
6 Night Sweats: intermittent or continuous, > 3 months, in the absence of other identifiable causes.

Laboratory:

1) Depressed helper T-cells. (> 2 standard deviations below mean).
2) Depressed helper/suppressor ratio. (> 2 standard deviations below mean).
3) At least one of the following: leukopenia, thrombocytopenia, absolute lymphopenia or anemia.
4) Elevated serum globulins.
5) Depressed blastogenesis (pokeweed and PHA).
6) Abnormal skin tests (using Multi-Test or equivalent).

APPENDIX C

Glossary

Carrier — A person who harbors a specific pathogenic organism in the absence of discernible symptoms or signs of the disease and who is potentially capable of spreading the organism to others.

Chronic — Long, drawn out; applied to a disease that is not acute

Communicable Disease — 1) A disease which may be transmitted directly or indirectly from one individual to another. 2) One due to an infectious agent or toxic products produced by it.

Direct Care — Any service provided where direct contact is made with the student's body fluids

Exclusion — For public health protection, action taken by school and health authorities to prohibit a student from attending school until the risk of spread of disease has been diminished.

Fever — An elevation of body temperature of 1.4° above the normal.

Incontinence — Inability to retain urine, semen, or feces through loss of sphincter control or cerebral or spinal lesions.

Infectious Disease — Any disease caused by growth of pathogenic microorganisms, serum, or toxic materials introduced into the body

Immunodeficient — A deficiency in immune response, mediated either by humoral antibody or by immune lymphoid cells.

Transmission of Infectious Agents — Any mechanism for infecting a susceptible person

A Direct transmission — Immediate transfer which takes place as a result of dropped spray from sneezing, coughing, spitting, singing, talking (usually within three feet) and exposure to open skin lesions, mucous membranes, blood and possibly other body fluids of an infected person

B Indirect transmission — Transfer which occurs when an object carries the virus to a suitable portal of entry (mucous membranes, break in skin, digestive tract). Objects may be toys, clothing, cooking or eating utensils, water, food, milk, pencils and other school supplies

APPENDIX D

Bibliography

American Academy of Pediatrics Committee on School Health Committee on Infectious Diseases 1986 School Attendance of Children and Adolescents with Human T-Lymphotropic Virus III/Lymphadenopathy Associated Virus Infection *Pediatrics* Vol. 77 No. 3 (March).

California, State of. 1983. *Techniques for Preventing the Spread of Infectious Disease* Sacramento California State Department of Education.

Connecticut, State of. 1985. *Prevention of Disease Transmission in Schools* Hartford Department of Education and Department of Health Services.

U.S. Department of Health and Human Services/Public Health Services. 1981 *Guidelines for the Prevention and Control of Nosocomial Infections.* Atlanta. Center for Disease Control

_____. 1984. *CDC Guidelines for Isolation Precautions in Hospitals and CDC Guidelines for Infection Control in Hospital Personnel.* Atlanta. Center for Disease Control.

_____. 1985. Education and Foster Care of Children Infected with Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus. *Morbidity and Mortality Weekly Report* (August 30)

_____. 1985. Recommendations for Preventing Transmissions of Infection With Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus in the Workplace. *Morbidity and Mortality Weekly Report* (November 15)

Illinois State Board of Education

100 North First Street
Springfield, Illinois 62777

Walter W. Naumer, Jr., Chairman
Illinois State Board of Education

Ted Sanders
State Superintendent of Education

EXCELLENT SCHOOLS: THE ILLINOIS ADVANTAGE

BULK RATE
US POSTAGE
PAID
Permit No
805
Springfield, IL

An Equal Opportunity/Affirmative Action Employer
Printed by the Authority of the State of Illinois
January 1987 15M 7-188B-61 No. 408