APPENDIX G


Chronic Communicable Diseases and Risk Management in the Schools*

Committee on Quality Assurance
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BACKGROUND

Acquired Immune Deficiency Syndrome (AIDS) is not the only threat to the health of speech-language pathologists and audiologists and their clients in our schools. In fact, comparatively it is not even a significant threat. Hepatitis B virus (HBV), herpes simplex, cytomegalovirus (CMV), are other chronic communicable diseases affecting children and adults with greater frequency in educational settings (National Association of State Directors of Special Education, 1989).

In 1989, ASHA's Committee on Quality Assurance published a tutorial on the AIDS or Human Immunodeficiency Virus (HIV) to assist speech-language pathologists and audiologists to better understand current risks and to manage these risks while providing quality services to persons with communication impairments who have AIDS/HIV. This tutorial applies the principles described in "Report Update: AIDS/HIV: Implications for Speech-Language Pathologists and Audiologists" (Asha, 1990) and expands them to include chronic communicable disease prevention and management in various work settings including the schools, clinics, and day care centers.

Teachers, day care workers, and speech-language pathologists and audiologists employed in educational settings may not consider risks to health a part of their professional practice. However, because HIV, CMV,

Hepatitis B, and herpes simplex are diseases that tend to be chronic and can be transmitted to others, there are risks of transmission to adult caregivers, to other children, infants, and in the case of pregnant women, to the fetus and newborn. Three examples that illustrate why both the public and professional community may have concerns are:

1. CMV is a communicable disease transmitted through bodily fluids. It is prevalent in child-care facilities and educational environments. Initial contact with CMV during pregnancy can result in infants with severe hearing impairment, mental retardation, cerebral palsy, and/or visual impairment (Brady, 1986).

2. A report by the House Select Committee on Children, Youth and Families predicts the number of children under the age of 13 who have AIDS will increase 350% by 1991 to greater than 3,000 cases (House Select Committee on Children, Youth and Families, 1987).

3. Although only 2% of all persons diagnosed as having AIDS are less than 20-years-old, roughly 21% are between the ages of 20-29 (National AIDS Clearinghouse, 1990). Given the long incubation period between HIV infection and appearance of symptoms leading to a diagnosis of AIDS (i.e., half of those infected develop AIDS within 10 years), many may have acquired the infection as teenagers. HIV/AIDS is transmitted through blood or bodily fluids containing visible blood.

Although the Centers for Disease Control (CDC) have been active in providing guidelines for children with infectious diseases in school settings, some state educational agencies (SEAs) and local education agencies (LEAs) have not implemented infection control proce-
dures. Others throughout the country have been involved in divisive debates about the attendance of some children with infectious diseases, particularly those with HIV, in regular and special education classes and preschool day programs (Harvey & Decker, 1989).

Protocols for identifying infected children, providing them with educational programs, educating professional staff, students, parents, and community, should be available at state and local levels and reflect the social, psychological, legal, and ethical issues involved. Goals for this paper are to address some of the legal and professional issues, review myths and realities of chronic communicable diseases, and provide guidelines for audiologists and speech-language pathologists to assist them in implementing infection control procedures in the schools.

**Legal Issues**

Consideration of the concepts of least restrictive environment (LRE) and normalization or mainstreaming is a major challenge in the face of community concerns and public safety. Having a chronic communicable disease does not, in itself, result in a need for special education. Only when a student is "handicapped" are they protected by P.L. 94-142, which guarantees their right to an appropriate education in the LRE. Section 504 of the Rehabilitation Act of 1973 defines handicap as: (a) "a physical or mental impairment which substantially limits one or more of such person's major life activities," or (b) a "record of such an impairment," or (c) "regarded as having an impairment." This act, then, is used in preventing discrimination by institutions that receive federal financial assistance. Federal and state courts have held that the combination of these laws entitle children with chronic infectious diseases to a free, appropriate public education in the least restrictive environment.

Thus, the Education of the Handicapped Act and Section 504 of the Rehabilitation Act work together in cases involving children with contagious diseases and other disabilities. Now, P.L. 99-457 Part H, the Handicapped Infants and Toddlers Program, extends special education services to infants and toddlers ages birth to 3 years with a "known developmental disability" or, at each state's option, to those "at risk for a disability."

State and local laws often further define handicapped individuals and their rights. Whereas exclusion of children from group programs, whether special or regular, may be considered when "the child's physical condition or personal behavior would result in contact with other persons with the child's bodily fluids through uncontrolled drooling, biting, or similar problems," it is more common to protect professionals at risk (e.g., pregnant women) by excluding the professional rather than isolating the child (Blackman & Appel, 1987).

**Professional Issues**

As with any information from the educational record, strict confidentiality must be maintained when sharing client health information. When records must be shared with appropriate education/health professionals to assist in making placement decisions and service provision, written consent must be obtained from the parent or legal guardian. Implicit in obtaining this consent is the process of informing the parent or legal guardian of those individuals who will have access to these records. However, on a need-to-know basis, all staff caring for the infected client must be made aware of the client's condition, (if the condition is known) prior to the first contact so that all necessary precautions can be undertaken.

As a result of refusal to treat, states are beginning to enact antidiscrimination laws. These laws notify professionals in all settings that refusal to treat is not an option. When there is a known risk of transmission of an infectious disease from client to provider (e.g., exposure of pregnant women to CMV) or providers to client (e.g., transmission of common cold virus to a client with high susceptibility to infection), the client should be referred to another professional for services.

Regulations and codes of ethics regarding confidentiality and antidiscrimination vary from state to state. Thus, one should be knowledgeable of regulations in the state where practicing. In addition, certified speech-language pathologists and audiologists must comply with the ASHA Code of Ethics regarding confidentiality of a client's medical diagnosis and refusal to treat. Questions regarding legal issues or confidentiality can be referred to local Public Health Departments, ASHA's Governmental Affairs Department, state attorney general's offices, or state speech-language-hearing associations.

**WHAT IS KNOWN**

Table 1 gives an overview of pertinent information of four chronic communicable diseases. To prevent transmission of these diseases, it is recommended that infection control procedures be employed, as delineated at the end of this article.

**Hepatitis B**

Hepatitis B virus (HBV) can cause serious illness and is associated with liver cancer. Ninety percent of persons with HBV fully recover in 3 to 4 months. Ten percent remain positive for more than 6 months. Of those 10%, a majority are carriers of Hepatitis B for life. Symptoms include anorexia, fatigue, abdominal pain, nausea, vomiting, joint pains, and jaundice. Approximately 23,000 of HBV cases were reported to CDC in 1988. HBV is transmitted by blood, from mother to newborn, through sexual contact and through contact with an acutely infectious carrier (Centers for Disease Control, 1990). HBV among health care workers and educators can be prevented with the Hepatitis vaccine.
<table>
<thead>
<tr>
<th>Contagion</th>
<th>Population at risk</th>
<th>Body fluids' that can carry contagion</th>
<th>Transmission</th>
<th>Likelihood of transmission to providers</th>
<th>Extent of risk for those infected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B</td>
<td>All ages (less common in Children) * Highly prevalent in residents &amp; staff of custodial institutions 6 people in high-risk groups</td>
<td>Blood (cuts, nosebleeds, contaminated needles, menses) Semen and vaginal secretions</td>
<td>Bloodstream through cuts, abrasions, bites Direct sexual contact secretions</td>
<td>Moderate</td>
<td>High (if chronic) after exposure</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>Unborn children of infected mothers 6 Homosexuals</td>
<td>Blood (and body fluids containing visible blood)</td>
<td>Bloodstream Direct sexual contact</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>IV drug users</td>
<td>Semen and vaginal secretions Breast milk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMV</td>
<td>Unborn children of mothers infected for first time</td>
<td>Urine Feces</td>
<td>*Unknown</td>
<td>High (most people carry virus) Low (unless pregnant &amp; infected for the first time)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Adults w/immunodeficiency</td>
<td>Semen Vaginal secretions Breastmilk Blood transfusion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herpes</td>
<td>Unborn children of mothers Infected during birth procedures</td>
<td>Saliva</td>
<td>Sexual contact</td>
<td>Moderate for persons with active lesions (shortens outbreak)</td>
<td>* None</td>
</tr>
<tr>
<td></td>
<td>* All women who give birth</td>
<td>Sores Vaginal secretions</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

'Blood, semen: mucous, cerumen, tears, urine, breast milk, saliva
HIV Infection

The HIV virus attacks a person's immune system and damages the body's ability to combat disease. Since June 1981, health authorities in the U.S. have reported to the CDC more than 121,645 AIDS cases and more than 72,000 AIDS-related deaths. An estimated 1 to 1.5 million persons are infected with the HIV virus. AIDS ranks 15th among leading causes of death in the United States.

Although the majority of AIDS/HIV cases are still among homosexual/bisexual men, the percentage of cases from intravenous drug users, their sex partners, and their children is increasing.

A person with the AIDS/HIV virus may be asymptomatic for years and may transmit the disease during this asymptomatic period. When AIDS symptoms appear they often resemble other diseases (i.e., prolonged fever, lymph node enlargement, night sweats, prolonged diarrhea, unexplained weight loss, fungal infections, and persistent cough). Children may show the above mentioned symptoms as well as chronic lung infection, otitis media, rashes, and failure to thrive in the newborn. Neurological impairment may also be present. Ear, nose, and throat manifestations are the chief complaint for approximately half of the AIDS/HIV infected persons. HIV has been found in blood, semen, vaginal secretions, and other body fluids containing visible blood.

Cytomegalovirus (CMV)

Cytomegalovirus (CMV) is a common virus and does not pose a serious health problem to most people. CMV is contracted by most people when they are young and is transmitted through contact with bodily fluid (e.g., urine, genital secretions, saliva, eye and nose secretions, feces, breast milk, and through blood transfusions or during organ donations). Adult groups at risk are women of child-bearing age who contract the disease during pregnancy, those with immune deficiency disease, and immunosuppressed persons (i.e., those undergoing transplants, chemotherapy). The recent increase in use of day care is causing concern among public health professionals because studies have shown that women who work in day care centers and women with children are at increased risk for CMV (Adler, 1989). Because the virus often will not produce symptoms of illness, pregnant women may be unaware if they contract CMV. A "titer test," now available to determine if the CMV virus is present, is highly recommended for women who may become pregnant to determine if they are at risk.

Herpes Simplex Virus (HSV)

There are two types of herpes simplex virus (HSV). Type 1 is associated with oral-facial lesions (i.e., cold sores, fever blisters) and Type 2 is a genital infection. Two to 10% of the general population are shedding these viruses at any given time. One-third of people who have Type 2 HSV antibodies are unaware they have genital herpes.

For 1989-90, CDC projects between 200,000 to 500,000 new cases of genital herpes. Type 2 HSV can be transmitted to a neonate during vaginal delivery from a mother with active genital lesions, resulting in encephalitis, meningitis, or death. If a mother first becomes infected with Type 2 HSV late in pregnancy, infants are placed at higher risk.

The initial infection is followed by blisters erupting 1 to 2 weeks after exposure. Subsequently, the blisters dry and form scabs. Fever, headaches, and other signs of viral infections may be present. Once the lesions are healed, the virus becomes dormant and is not contagious. Recurrent phases are usually shorter and less severe. The HSV is contagious during the blister and wet ulcer stages and can be transmitted through saliva, urine and genital secretions or by contact with broken skin or mucous membranes. Although the risk is probably lower, HSV can also be spread during asymptomatic viral shedding. It can survive on inanimate objects for several hours and hence is considerably less fragile than the AIDS/HIV microorganism.

MYTHS AND REALITIES

This section confronts underlying assumptions that may affect our professional and personal habits/behavior. What is "real" about the risk of chronic communicable diseases often differs from what we have heard or have assumed. If we allow "myths" to guide our decisions and our behavior, we may place ourselves, our clients, and our colleagues at greater risk.

Myth

"AIDS is the only/the biggest threat."

Reality

Although AIDS/HIV infection has received the most publicity, Hepatitis B is more easily transmitted than AIDS. Other chronic infectious diseases also may have serious effects on lifestyle or unborn children. Chronic diseases need not be symptomatic to be infectious. Confidentiality policies may prevent your knowing that a client is infected.

"If there were a problem, I would know about it."

"I don't work with children at risk."

0 You don't have to be working with clients who drool, wear diapers, bite, scratch or have other behavior
problems, to be at risk. Performing a routine oral peripheral exam puts you at risk. Common occurrences such as a cut, nosebleed, loss of a baby tooth, a draining ear, may also put you at risk.

"Infection control procedures and universal precautions cannot be implemented in my setting."

Simple precautions such as hand washing, use of latex gloves for oral exams, and disinfecting work surfaces can be easily implemented (see next section).

"I don't have time to do this!"

Other materials are easily available through your local pharmacy.

Infection control procedures can take less than a minute per session. You can't afford not to. If you don't implement infection control procedures you risk contracting a serious, chronic, infectious disease.

SUGGESTED PRECAUTIONS

ASHA's Committee on Quality Assurance has adapted CDC's Universal Precautions to meet the needs of speech-language pathologists and audiologists in educational settings. It is the committee's recommendation that infection control procedures described below be implemented to: (a) prevent transmission of chronic infectious diseases; (b) protect the health of clients receiving speech-language pathology and audiology services, professionals providing speech-language pathology and audiology services and other health and education workers, family members and so on; and, (c) ensure all persons' rights to privacy. One should, of course, be cognizant of and follow the infection control policies and procedures of local and state educational agencies.

The following checklists can be removed, individually laminated, and displayed in your setting.

RISK MANAGEMENT

Definitions of risk: The body fluids of all persons should be considered potentially infectious agents. The term body fluids includes: blood, semen, drainage from scrapes and cuts, feces, urine vomitus, respiratory secretions (nasal discharge), and saliva. Contact with body fluids presents a risk of infection with a variety of germs that cause chronic infectious diseases.

Administrative Considerations: A Checklist

School policy in place for risk management.

Person designated responsible for implementation of policy.

Committee established at the building level for identifying risk management policy and procedures, as follows:

- Identifying risk management needs
- Developing risk management procedures for implementing precautions
- Implementing precautions
- Assessing effectiveness of precautions
- Modifying precaution policy, as indicated

Mechanism established for purchase of required materials to implement infection control procedures.

INFECTION CONTROL SUPPLY CHECKLISTS

A. The following materials are needed to implement proper infection control procedures.

- Latex gloves
- Alcohol/antiseptic wipes
- Soap
- Access to sink/running water
- Paper towels
- Disinfection solution (1 part household bleach to 10 parts water)
- Spray bottle (to mix water and disinfectant solution)
- Tissue
- Plastic bags that seal (e.g., Ziploc)
- Trash bags
- Household bleach
- Hand lotion
- Absorbent powder for bodily secretions

B. In addition, these infection control materials should be used when implementing procedures that could expose the professional to blood, semen, or other bodily secretions that contain visible blood (e.g., oral peripheral examinations, procedures involving tracheostomy tubes, etc.)

- Mask
- Goggles
- Gowns
- Red trash bags (for disposal of Materials that could be harmful if handled casually)
SUMMARY

This paper provides information about four chronic communicable diseases. Both legal and professional considerations are discussed. Guidelines for speech-language pathologists and audiologists, particularly applicable to those who work in public and private schools, day care centers, and other institutional environments, are suggested. The goal of the paper is to increase awareness and to encourage use of appropriate risk management procedures. Speech-language pathologists and audiologists are encouraged to share this information with their administrators and colleagues. The role of the speech language pathologist and audiologist in the schools includes protection of their clients, themselves, and coworkers.

ACKNOWLEDGMENTS

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REFERENCES


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Requests for reprints may be sent to Carol M. Frattah, Ph.D., American Speech-Language-Hearing Association, 10801 Rockville Pike, Rockville, MD 20852.

Decreasing the possibility of transmitting disease through treatment materials.

<table>
<thead>
<tr>
<th>What to Disinfect</th>
<th>When to Disinfect</th>
<th>How to Disinfect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation and treatment materials (e.g., toys, games, storage boxes, therapy materials).</td>
<td>Clean tabletop and materials after each use.</td>
<td>Use soap and water or a 1 to 10 solution of household bleach to water, spray, and wipe thoroughly. Use disposable materials (e.g., latex gloves, etc.) when possible.</td>
</tr>
<tr>
<td>Work surfaces.</td>
<td>If materials, work surfaces, electronic equipment or seating surfaces contain visible blood, use Universal Precautions.</td>
<td></td>
</tr>
<tr>
<td>Electronic equipment and accessories.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seating surfaces.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials, supplies and instruments to examine oral mechanism.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Toys made of fabric and fur should be avoided due to the tendency to harbor microorganisms.
Decreasing the possibility of transmitting disease via skin contact.

**What to Do**

- Wash hands (effective if skin is intact).
  * Before and after seeing each client.
  * After removing gloves.
  * Immediately if in contact with potentially contaminating blood or body fluids.

- Use gloves (to give protective barrier) if your skin or client's skin is broken.
  * Before touching blood or other body fluids, mucous membranes, or non-intact skin of all clients.
  * When performing an examination of the oral speech mechanism using laryngeal mirrors, middle ear testing, handling or fabricating earmolds and other prostheses.
  * When you have a cut or abrasion.
  * When client has a cut or abrasion.

**How to Do It**

- Dry hands thoroughly with a paper or disposable towel to help eliminate germs.
- Put on hand lotion so hands do not become chapped.
- Put gloves on.

- If a glove is torn or other injury occurs, remove gloves, wash hands thoroughly and use new gloves.

After removing gloves, wash hands immediately. See instructions above.
Discard gloves. Change gloves after each client.

Decreasing the possibility of transmitting disease by disposing of materials and body fluids appropriately.

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**What to Dispose of**

**When to Dispose of It**

- Dressing and tissues.
  - Immediately.

**How to Dispose of It**

- Place used dressing and tissues (e.g., diapers, gauze, towelettes, alcohol wipes, gloves) in plastic bag and tie securely.
- Discard bags carefully.

- Urine, feces, sperm, vaginal secretions, Maua-z.
  - Wear gloves.

- Flush urine and feces down the toilet.
- If it is necessary to use a portable urinal, potty chair, etc., empty it into the toilet and thoroughly clean and sanitize before replacing it or returning it to storage.