

# **ENHANCING SPECIAL EDUCATORS' KNOWLEDGE AND UNDERSTANDING OF HIV/AIDS**

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## **ABSTRACT**

*HIV/AIDS continues to spread among children, youth, and young adults across all racial, ethnic, and cultural populations, including those with disabilities. This article considers information on HIV/AIDS such as individuals' health-risk behaviors, environmental circumstances, and perceptions that may contribute to HIV-infection; how disability characteristics, and cultural traits and values impact school-based HIV/AIDS prevention programs; and, culturally competent instructional considerations that acknowledge these variables.*

## INTRODUCTION

HIV/AIDS is a public health problem for which there is no medical cure. Current trends indicate the disease will be the leading global infectious killer within 20 years. In the United States, the cumulative number of people with AIDS is approaching one million, with about 40,000 new diagnoses annually among children, adolescents, and young adults. The Centers for Disease Control and Prevention (CDC), estimates that between 2000 and 2005, new AIDS cases increased 17% among women and 16% among men, across all racial and ethnic groups, due to heterosexual contact (42%), male-to-male sex (24%), and injection drug use (1%) (CDC, 2006)

HIV infection occurs through transmission of four bodily fluids: semen, vaginal fluid, blood, and breast milk. The primary cause of infection among children is vertical transmission from mother-to-child during gestation, labor and delivery, and breastfeeding. Infection in youth and young adults comes about most often through unprotected sex, injection drug use with contaminated needles, and, to a much lesser degree, blood transfusions (Kalichman, 1995).

In the United States, AIDS symptoms manifest about ten years after infection without treatment, during which time the virus replicates and destroys the immune system. Immune cell destruction, in turn, causes vulnerability to opportunistic infections and death. The most common opportunistic diseases include Kaposi's sarcoma, a rare skin cancer, pneumocystis carinii pneumonia, and in children, HIV-related encephalopathy (CDC 2008a, 2008c).

Medical, public health, and education professionals agree that safe behavior is the single most effective HIV/AIDS prevention strategy. It is necessary, therefore, to design prevention programs that target youth when they typically begin to engage in HIV-risk behaviors. Children, youth, and young adults who learn and use safe practices deter spread of the disease. This universal truth presents a potent opportunity for special educators to promote HIV/AIDS prevention because they play important roles in the lives of youngsters with disabilities, second perhaps, only to their parents, other family members, and peers (CDC 2008b). Qualified special education teachers possess (a) knowledge of subject matter; (b) skills and competencies to assess and teach students based on their developmental levels; (c) sensitivity to linguistic, cultural, and social conditions; and (d) commitment to professional growth and personal development (CEC 2004).

In this article, we address the extent of HIV/AIDS among children,

youth, and young adults, including those with disabilities; and, variables that contribute to HIV-risk behaviors among all populations. In addition, we provide an overview of HIV/AIDS knowledge and prevention skills needed to ensure the wellbeing of students, particularly those with disabilities. The overall purpose of this article is to provide extensive information on HIV/AIDS to enhance special educators' knowledge and understanding of the disease.

## **EXTENT OF HIV/AIDS AMONG CHILDREN, YOUTH, AND YOUNG ADULTS**

As of 2005, CDC reported an estimated 15,413 cumulative HIV/AIDS cases among children and youth 19 years of age and younger, since the beginning of the epidemic. During that same year, there were 1434 new HIV diagnoses within this age group, with 166 diagnoses among children less than 13 years old. Sixty-three percent of these children were African Americans. New HIV diagnoses do not necessarily represent new infections since individuals may live with the virus for a number of years prior to testing. In 2005, there were also 600 new AIDS diagnoses among children and youth 19 years of age and younger, of which 58 were in children less than 13 years, compared to 187 in 1999 and 799 in 1994 (CDC, 2006).

The steady decline in and virtual elimination of pediatric HIV infection and AIDS due to maternal transmission results from safer sex practices, drugs such as zidovudine (AZT), and rigorous testing among pregnant women to identify HIV status prior to giving birth. AZT, when taken during the second trimester of pregnancy and administered during labor, reduces the virus' presence in the mother's bloodstream and significantly diminishes chances of mother-to-child transmission (CDC, 2006; Santora, 2005).

## **HIV/AIDS AND CHILDREN WITH DISABILITIES**

There are steady increases in the number of school-aged children and youth with HIV/AIDS in the United States due to medical advances and treatment regimens, which slow progression of the disease and increase people's life spans (Beverly & Thomas, 1997; Mialky, Vagnoni, & Rutstein, 2001; Rehm & Franck, 2000). In 2005, an estimated 9,216 children and youth 19 years of age and younger were living with HIV/AIDS. However, as discussed below, it is difficult to identify an exact number of students in school settings due to confidentiality policies regarding disclosure of HIV/AIDS and other health conditions. Thus, it is equally complicated to determine

the exact prevalence of HIV/AIDS among students with disabilities for these same reasons. Moreover, CDC does not include disability as a variable for HIV/AIDS reporting agencies, and few disability service agencies track these data. Therefore, we can only infer the extent of HIV/AIDS among disability groups (Blanchett & Prater, 2006).

Inferences about HIV/AIDS among school-aged populations with disabilities are based on research studies reporting that sexual risk behaviors of students with learning disabilities, emotional disturbance, and mild to moderate mental retardation mirror those of peers without disabilities (McCombs & Moore, 2002). Approximately 51% of students with disabilities report sexual behaviors during high school that place them at risk of HIV infection. In addition, young adults with learning disabilities seldom or never used condoms during oral sex (49%), vaginal intercourse (38%), and anal intercourse (11%) (Blanchett, 2000).

Furthermore, young adults with learning disabilities have multiple sexual experiences with strangers (42%), and use drugs and alcohol before or during sexual activity (36%) (Blanchett, 2000). It also has been reported that they engage in early onset of sexual activity and do not use condoms, as means of conforming to peer behaviors. These findings are consistent with special education literature documenting susceptibility of students with disabilities to peer pressure and substance use (Borowsky, & Resnick, 1998; Hogan, McLellan, & Bauman, 2000; McCombs, & Moore, 2002).

When examining knowledge of HIV/AIDS and risk behaviors, studies suggest that students with learning disabilities (Bell, Feraios, & Bryan, 1991) and emotional disorders (Singh, Zemitzsch, Ellis, Best, & Singh, 1994) may have limited exposure to HIV/AIDS prevention education and, consequently possess misconceptions about HIV transmission. On the other hand, students with disabilities who participate in HIV/AIDS education have fewer misconceptions about transmission (Blanchett, 2000). Individuals with mental retardation, multiple disabilities, or cognitive forms of delay often are victims of sexual abuse and exploitation, which place them at risk of HIV-infection. Fortunately, individuals with learning and/or behavior disabilities are less likely to be victimized by sexual abuse (Borowsky, & Resnick, 1998).

Research investigating HIV/AIDS knowledge and risk behaviors of urban and rural adolescents from diverse ethnic communities (Bowler, Sheon, D'Angelo, & Vermund, 1992; Ford & Norris, 1993), does not indicate inclusion of youth and young adults with disabilities. We know, however, that a large percentage of students with disabilities are of diverse racial, ethnic, and cultural backgrounds. The Twenty-fifth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (U. S. Department of Education, 2005) specifies that of the students ages 3-21

receiving special education services, approximately 19% are Hispanics, 15% are African Americans, 4% are Asian Pacific Islanders, and 1% are American Indians/Alaskan Natives. When compared to the general school population, these data substantiate an overrepresentation of non-Caucasian children and youth served in special education programs (MacMillan & Reschley, 1998; Welner, 2005). In addition, as we discuss in the next section, CDC (2006) corroborates the disparate spread of HIV/AIDS most notably within diverse racial, ethnic, and cultural communities. Thus, we can assume that some diverse students with disabilities have HIV-infection since non-Caucasian students are overrepresented in school-based disabilities programs, and HIV/AIDS is spreading rapidly among these same populations.

### HIV/AIDS, RACE, AND ETHNICITY

HIV/AIDS affects African Americans and Hispanics disproportionately in comparison to other races and ethnicities. Collectively, they constitute 58% of the cumulative HIV/AIDS cases, since the epidemic's onset in the United States, in contrast to Caucasians who comprise 41% and Asian Pacific Islanders and American Indians/Alaska Natives who make up 1% of cumulative cases (CDC, 2006). HIV/AIDS within Asian Pacific Islanders and Indigenous populations is not always acknowledged as a significant threat due to small population sizes. The information in Table 1 illustrates the cumulative AIDS cases, percentage of US population, as well as new HIV diagnoses and new AIDS diagnoses, in 2005, by race and ethnicity.

At the end of 2005, an estimated 476,749 Americans were living with HIV/AIDS, of whom 44% were African American, 19% were Hispanic, 35% were Caucasian, and 1% collectively was Asian Pacific Islanders and American Indians/Alaska Natives (CDC, 2006). These estimates are based on 37 geographic areas with confidential name-based reporting. However, the number of people living with HIV/AIDS ranges between 1, 039,000 and 1,185,000 million people (Glynn & Rhodes, 2005).

Various factors influence the ability to determine accurately the extent of HIV/AIDS cases, including (a) underreporting and lack of detailed surveillance data, (b) people's non-awareness about their HIV-infection, and (c) changes in AIDS definitions and diagnoses. Underreporting and lack of surveillance data misconstrue masses of people with HIV/AIDS and mask a realistic picture about the scope of the epidemic. Underreporting occurs due to several reasons including differences in how states report prevalence. Some states report only AIDS cases and not HIV-infections. In addition, the lack of national standards for race and ethnicity in which data are aggregated within global federal census definitions (i.e., Asian Pacific Islander and American Indian/Alaska Native) lead to racial misclassifications. Moreover, cultural

Table 1 *Cumulative AIDS Cases, Percent of Population, HIV Diagnoses, and AIDS Diagnoses in 2005 by Race / Ethnicity*

<b>Race / Ethnicity</b>	<b>Cumulative AIDS Cases</b>	<b>Percent of US Population</b>	<b>HIV Diagnoses (2005)</b>	<b>AIDS Diagnoses (2005)</b>
African Americans	399,637 (42%)	12%	18,510 (49%)	22,030 (50%)
American Indians / Alaska Natives	3,251 (<1.0%)	2.0%	189 (<1.0%)	196 (<1.0%)
Asian Pacific Islanders	7,739 (<1.0%)	5.0%	429 (1.0%)	549 (1.0%)
Caucasians	386,552 (41%)	67%	11,758 (31%)	12,689 (29%)
Hispanics	156,026 (16%)	14%	6,944 (18%)	8,432 (19%)
Totals	953,205	100%	37,839 (100%)	43,896 (100%)

Adapted from: Centers for Disease Control and Prevention (2006). *HIV/AIDS Surveillance Report (Vol 17): Cases of HIV infection and AIDS in the United States, 2005* REV ED.

prohibitions, social taboos, language barriers, as well as people's lower education levels and lack of knowledge about HIV/AIDS contribute to underreporting (Faryna & Morales, 2000; Yep, 1993). Two other considerations affect the accuracy of reporting data: anonymous, home tests that are excluded from case reports, and HIV-positive people who are not aware of their status. About 25% of people with HIV infection have not been diagnosed with HIV (Glynn & Rhodes, 2005).

Finally, AIDS definitions and diagnoses throughout the years have changed from early views of HIV/AIDS as a gay man's disease resulting from unprotected sexual practices, to medical terms that included presence of at least two opportunistic infections, and eventually to low T-cell counts in lieu of infections to assist in diagnoses. The changes affected the number of HIV-positive people eligible for AIDS diagnoses and insurance and disability benefits.

## **Variables that Contribute to HIV-risk Behaviors**

### DISABILITY CONSIDERATIONS

Children, youth, and young adults with disabilities share the same HIV-risk behaviors as peers without disabilities. However, they are more vulnerable to HIV-infection and other sexually transmitted diseases, sexual abuse, and teen pregnancy than non-disabled peers. Their increased risk may be due to (a) lack of knowledge and information about their bodies and sexuality, (b) misinformation and inability to distinguish between reality and unreality, (c) limited social skills, (d) susceptibility to others' influences, (e) poor judgment in social situations, and (f) inadequate decision-making and problem-solving skills (Blanchett, 2000; Blanchett & Prater, 2006; Colson & Carlson, 1993). In addition, some data indicate the prevalence of HIV/AIDS may be greater for students with disabilities than their peers (Blanchett & Prater, 2006).

The risk of HIV-infection for students with disabilities may be compounded by lack of school-based prevention programs (Blanchett & Prater, 2006). Further, educators often disagree on who should deliver HIV/AIDS prevention education for students with and without disabilities. General educators (e.g., health teachers) may be more knowledgeable of HIV/AIDS prevention education content, while special educators have specific knowledge about characteristics of students with disabilities and appropriate instructional strategies for this population (Blanchett & Prater, 2006).

### HISTORICAL, ECONOMIC, SOCIAL, AND POLITICAL VARIABLES

People of diverse racial, ethnic, and cultural heritage and low socioeconomic status often struggle to overcome racial and class inequities. They may experience stereotyping, prejudice, and racism equivalent to physical, cultural, and psychological genocide. Moreover, they often are marginalized, devalued members of society and live in impoverished urban, rural, or remote settings, which advance lower education levels, general lack of wellbeing, and poor health. These factors heighten (a) their health-risk behaviors and circumscribed awareness about HIV/AIDS and other sexually transmitted diseases; (b) instances of drug and alcohol abuse; (c) delayed HIV-testing, counseling, and diagnoses; and (d) limited access to physicians practiced in HIV/AIDS treatment regimens (Cervero, 2005; Egan, 2005).

An estimated 84% of African Americans live in urban communities with elevated rates of poverty, unemployment, welfare dependency, alcohol and drug use, and sexually transmitted diseases, which fuel the spread of HIV/AIDS. For example, in Washington, DC, about 57% of the population is

African American (U. S. Census Bureau, 2005), nearly 2% of the population has AIDS, and an unknown higher number of people are HIV-positive. Greenspan (2006) attributes the following factors to the epidemic: (a) meager epidemiology and surveillance about the disease; (b) lack of needle exchange, drug treatment, HIV testing, and other health service programs; (c) insufficient acknowledgement of the disease by local government officials; (d) poor HIV prevention education in public schools; and (e) substandard HIV awareness and substance abuse services in prisons.

Poverty is also endemic among other racial and ethnic communities. Approximately 40% of Hispanics, 25 years and older have not completed high school and may be underemployed and unemployed. Their income levels are comparatively low, with 22% of all Hispanics living below the poverty level (Human Resources and Services Administration, 2005). Poverty, cultural, and language barriers complicate their ability to access HIV prevention information, adequate and appropriate health care facilities, and HIV/AIDS treatment programs.

An estimated 32% of American Indians/Alaska Natives live in extreme poverty with more than one-half having incomes less than 200% below the federal poverty level. Many live in substandard housing in reservation, remote village, and urban settings; face hunger and food insecurity; incur chronic physical and mental health issues; and lack health insurance and an adequate health care system. Adolescents and young adults in these settings experience high incidences of sexually transmitted diseases and alcohol and substance abuse, which elevate risk of HIV/AIDS through unprotected sexual contact and shared needles.

Similarly, recent Asian Pacific Islander immigrants who settle in isolated urban ghettos, struggle with health care, unemployment, economics, and education. Cambodians, Laotians, and Vietnamese, for example, may lack quality health treatment; fall below national income and education levels; and live in a world of poverty, violence, and drugs (Yin, 2000). Marijuana, crack cocaine, and heroin use often is widespread among Southeast Asian refugee youth who experience physical trauma, family separation, and acculturation difficulties. They may engage in HIV-risk behaviors such as sharing needles, simultaneous drug use and unprotected sex, and trading sex for drugs or money. They experience record cases of pneumocystis carinii pneumonia as their AIDS defining illness (Chen & Hawks, 1995; Eckholdt & Chin, 1997).

Social disintegration underlies intersecting epidemics of poverty, low education, domestic violence, gang activity, injection drug use, and HIV/AIDS (Levenson, 2004). Although parents strive to provide safe home and community environments for children, myriad situational factors cripple their efforts and influence health-risk behaviors (CDC, 2003). Youth and young



adults from these communities often attribute HIV-risk behaviors to a sense of fatalism. They perceive little or no personal control over their destinies, and live from moment to moment based on the notion that there will be no tomorrow.

## GENDER INEQUITIES

Powerful drug regimens have decreased AIDS-related deaths in recent years, yet cultural norms and taboos about sexuality thwart prevention efforts. Spread of HIV-infection extends across urban, suburban, rural, and remote geographic areas. The denial of some communities to join the fight against AIDS contributes to ongoing infection. This negative response is due, in part, to machismo cultural values, in which communities do not acknowledge men's health-risk behaviors (Diaz, 2000). Sexual promiscuity is more acceptable in men, thereby exposing them to heightened infection and increased possibility they will transmit the disease.

Women and girls may be unaware of their partner's multiple, unprotected sexual behaviors, which may include male-to-male sexual contact. Some men and boys across all racial, ethnic, and cultural groups identify as heterosexual and yet, engage in same sex behaviors while in heterosexual relationships (Bryant, 2004; Clay, 2002; Egan, 2005). Many of these men do not relate to HIV/AIDS prevention messages intended for gay men (CDC, 2000; Diaz, 2000; Egan, 2005). Their heterosexual identification is due to homophobia and social stigma associated with gay lifestyles.

Gender inequities, culture, and social status create problems in sexual communication, where it is unacceptable for women to negotiate condom use or ask about partners' sexual activities. Reluctance to initiate these discussions results from women's fear of abandonment and emotional, physical, or economic reprisals (Diaz, 2000; Raffaelli, & Suarez-Al-Adam, 1998; Suarez-Al-Adam, Raffaelli & O'Leary, 2000). Women also may be expected to share male sexual partners' injection drug needles concurrently with sexual activity, which diminishes their judgment and inhibitions, and decreases condom use (Flaskerud, 1995).

HIV/AIDS prevention campaigns traditionally targeted men. Thus, many young women, especially those of diverse racial and ethnic heritage and lower socioeconomic settings lack knowledge about HIV transmission through heterosexual exposure. They experience early debut of sexual intercourse, multiple sex partners, unintended pregnancies, and sexually transmitted diseases. Their lack of employment creates significant barriers to accessing medical insurance, health services, and medications. Poverty, preexisting health conditions, and injection drug use undermine their immune systems and increase risk of HIV-exposure (Flaskerud, 1995). Consequently, African

Americans, American Indians/Alaska Natives, Asian Pacific Islanders, and Hispanics account for 84% of all women with AIDS; however they represent only 29% of the total female population. African Americans comprise 64% of all women with AIDS, and are 23 times more likely to have AIDS than Caucasians. Hispanics comprise 15% of all women with AIDS are five times more likely to have AIDS than Caucasians.

#### PERCEPTIONS OF SUSCEPTIBILITY

Many people perceive the face of AIDS as a Western epidemic among gay and bisexual men and indigent drug users. They believe they are immune to HIV-infection, do not generalize prevention messages to their lifestyles, and, engage in unprotected vaginal and anal intercourse, multiple sex partners, same sex behaviors, and simultaneous sex, drug, and alcohol use.

Furthermore, many individuals view the threat of disease as inconsequential, and do not use condoms or worry about results of their actions. They underestimate their personal risk of and susceptibility to HIV/AIDS. Optimistic bias minimizes their perceptions about the reality of infection, likelihood of harm resulting from unprotected sex, and potential negative life events (Yep, 1993). Another consideration that affects people's perceptions of susceptibility to the disease concerns their evaluation of the prevention method's effectiveness. Individuals do not feel pressured to use a prevention method if they underrate its results (Fan, Conner, & Villarreal, 2004). Consequently, it is imperative to present prevention information appropriate to people's environmental and cultural contexts, and developmental abilities (Wilson & Miller, 2003).

### **HIV/AIDS PREVENTION EDUCATION**

HIV/AIDS prevention education and concomitant risk reduction are the most powerful tools to stem infection. However, attainment of this goal is not an easy task. Programs that address disease transmission through risky sexual practices, sharing injection drug needles, and contact with body fluids do not always change individuals' risk behaviors. The concept of a one-size-fits all HIV/AIDS prevention program does not work given the disparate characteristics of students with disabilities, and peoples' divergent belief systems about sexuality and sexual behavior, coupled with those who speak languages other than English. Thus, significant challenges confront HIV/AIDS prevention development and implementation. These challenges concern disability issues, curriculum and instruction, equitable pedagogy and cultural sensitivity, and legal considerations.

## INDIVIDUALS WITH DISABILITIES

Children and youth who receive special education services may not have equitable access to HIV/AIDS prevention that addresses their unique developmental, academic, and social learning characteristics and HIV-risk behaviors, despite educators' knowledge of the traits, which predispose them to infection. Preventive education is even more critical because students often (a) demonstrate misperceptions regarding their sexuality and sexual expressions; (b) lack understanding of the gravity of their health-risk behaviors; and (c) display naivety about their susceptibility to HIV/AIDS and other sexually transmitted diseases.

Students with disabilities who do participate in HIV/AIDS education may not use prevention strategies if the program lacks developmental appropriateness and does not address views about their vulnerability to infection. HIV/AIDS prevention educators, therefore, must be aware of students' (a) cognitive, academic, social, and sexual development, (b) education and comprehension levels, (c) ability to codify, interpret, and use prevention information; and, (d) perceptions of susceptibility to the disease.

## CURRICULAR AND INSTRUCTIONAL CONSIDERATIONS

Curricular considerations for HIV/AIDS prevention programs are grounded in the National Health Education Standards, which offer a clear vision of health literacy in which youth and young adults access, interpret, and understand health information and services to enhance their lives (Joint Committee on National Health Education Standards, 1995). The standards afford prospects for students to acquire new understandings, skills, and attitudes that promote healthy behaviors for themselves and others. Best practices reinforce sexual abstinence and/or condom use in reducing sexually transmitted diseases and unintended pregnancies. They also incorporate culturally and developmentally appropriate behavioral goals, teaching methods, and materials that help youth personalize the consequences of health-risk behaviors and address social pressures (Kirby, 1997, 2000; Lohrman & Wooley, 1998). The information in Table 2 identifies curricular content based on the National Health Education Standards. Pateman (2003) provides extensive discussion about the interface of the standards with HIV/AIDS prevention and applies them to developing educational goals for students at specific grade levels. In addition, Sileo, Prater, Pateman, and Sileo (2002) offer suggestions regarding application of the standards to HIV/AIDS prevention, including ideas, issues, and concepts related to good health as well as communication, reasoning, and investigation skills that depict healthy people.

HIV/AIDS prevention concepts should be integrated across the curriculum to reinforce prevention messages and ensure that children and youth view the

Table 2 *Curricular Content for HIV/AIDS Prevention Education Programs***Health Education Content Standards**

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|--|---|
| <ul style="list-style-type: none"> <li>➤ Core concepts and information about HIV infection, transmission, and prevention</li> <li>➤ Analysis of behavior influences and access to information, products, and services</li> <li>➤ Self-management of behaviors and exploration of personal values and beliefs</li> <li>➤ Communication, skill building, and behavior change strategies</li> </ul> | <ul style="list-style-type: none"> <li>➤ Universal precautions and infection control</li> <li>➤ Assessing affect of HIV-risk behaviors on self and others, and avoiding actions</li> <li>➤ Decision-making and goal setting for healthy living and risk reduction</li> <li>➤ Sexual communication, negotiation, and refusal strategies to foster risk reduction</li> <li>➤ Using condoms effectively and accessing testing and counseling services</li> </ul> |
|--|---|
- Health advocacy for self and others
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Adapted from: Joint Committee on National Health Education Standards. (1995). *National health education standards: Achieving health literacy*. Atlanta: American Cancer Society.

disease from various perspectives. Numerous occasions abound within integrated curricula to teach about HIV/AIDS. For example, HIV/AIDS educators may use students' interest in and understanding of hip-hop music to educate about HIV protective factors. The information in Table 3 illustrates applications of HIV/AIDS prevention education across the curriculum. See Pateman (2003) for additional examples of links between HIV/AIDS prevention and other curricular content. Integrated curricula also afford numerous opportunities to blend examples from racial, ethnic, and cultural perspectives to illustrate concepts, concerns, and issues about HIV/AIDS prevention. They help students construct knowledge and deepen their understandings about the interface of HIV/AIDS and diverse populations.

The American Association of Health Education (AAHE) and the American Association of Health, Physical Education, and Dance (AAHPERD) (Birch & Marti, 1995) developed a guide for HIV/AIDS prevention specifically for students with special needs. Instructional strategies emphasize the importance of teaching developmentally and age appropriate lessons as a foundation for developing and improving students' social skills. The guide also stresses use of multi-sensory strategies and role-play to ensure students' acquisition of knowledge and skills about HIV/AIDS prevention, and increase their likelihood of generalizing prevention concepts and skills. Other instructional strategies link to teachers' innovation in designing and implementing culturally sensitive and responsive strategies. The following discussion considers pedagogical equity as a basis for designing culturally competent HIV/AIDS prevention programs.

## **TEACHERS' ATTITUDES AND KNOWLEDGE**

HIV/AIDS prevention is most effective when it is a component of comprehensive health education, implemented district-wide for children and youth of all ages, and integrated across curricular areas. The program should align with students' developmental levels and health-risk behaviors and be taught by qualified teachers, who know about and are comfortable with the subject matter. Educators must create caring climates that foster compassion for students affected with HIV/AIDS; support their academic, social, and emotional wellbeing; and maintain confidentiality about the disease. They, therefore, must examine potential personal biases, attitudes, and values that interfere with teaching effectiveness and learn about the realities of HIV/AIDS as means to heighten their understanding of and tolerance for diversity (Sileo, 1998).

As with other social issues, increased knowledge helps minimize people's prejudices and discrimination against marginalized populations. As such, teachers must (a) acknowledge the importance of HIV/AIDS prevention; (b) realize the impact of students' learning characteristics and health-risk behaviors on instruction; (c) implement developmentally and culturally appropriate HIV/AIDS curriculum and instruction that considers issues of sexuality and disability; and (d) develop and maintain open, honest collegial relationships necessary for program implementation (Birch & Marti, 1995; Sileo 2005). Table 4 identifies common myths and facts about HIV/AIDS.

Teachers' knowledge should include (a) human rights, social, political, and economic repercussions that surround HIV/AIDS; (b) cultural attitudes, values, and beliefs that influence HIV-risk behaviors, transmission, prevention,

Table 3 *Curricular Integration*

Subject Area	HIV/AIDS Content Suggestions
➤ English / Language Arts	➤ Read fictional / non-fictional literature about living with HIV/AIDS and the affects on individuals and families ➤ Develop a poem / story about the HIV/AIDS epidemic and it's impact on society
➤ Fine Arts	➤ Create songs, dances, or AIDS quilt panels about a person who died from AIDS related illnesses ➤ Design a range of media to promote HIV/AIDS prevention messages
➤ Health	➤ Investigate the relationship between alcohol and substance use, decision-making, and HIV -risk behaviors ➤ Compare and contrast school-based approaches to HIV prevention education on a global perspective
➤ Mathematics	➤ Use surveillance data to calculate rates of HIV infection and AIDS cases among different racial, ethnic, and cultural populations ➤ Develop and administer a survey within school setting to identify students' knowledge and perceptions of susceptibility to HIV infection; analyze results and develop graphics for presentation
➤ Social Studies	➤ Investigate the recent spread of HIV/AIDS in different geographic regions worldwide (e.g., China, India, Eastern Europe, Russia) and countries' responses to the spreading epidemic ➤ Develop an HIV/AIDS timeline in the United States and trace government efforts for prevention and treatment

Table 3 *Curricular Integration continued*

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➤ Science	➤ Study biomedical aspects of how HIV invades the body, damages the immune system, and allows spread of opportunistic infections  ➤ Investigate efforts nationally and internationally to developing medical approaches to HIV prevention and treatment
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and treatment; (c) universal precautions to control infection; (d) educational, psychosocial, medical, and behavioral effects of the disease; and (e) religious and medical issues about disabilities, sexuality, death, and dying; (Evans, Melville & Cass, 1993; Sileo, 2005; Skripiak and Summerfield, 1996; Thomas, 1998).

### LEGAL CONSIDERATIONS

Teachers' knowledge should also extend to ethical and legal considerations concerning students' rights to a free, appropriate public education in inclusive settings, due process safeguards, and issues of confidentiality. Children and youth with HIV/AIDS have legal protections under the Individuals with Disabilities Education Improvement Act of 2004; and Section 504 of the Rehabilitation Act of 1974 and its reauthorization as the Americans with Disabilities Act of 1990. While all children with HIV/AIDS are different, many children and youth with HIV/AIDS qualify for special education services in the category of "other health impaired." These students' health issues, such as frequent absences, the inability to fight infections, daily medication regimes, and unfavorable reactions to medication, often adversely impact their educational performance. It is important for teachers to take these health issues into consideration when working with students and families to develop Individualized Education Programs and to determine the best placement for the student.

A primary legal issue concerns the right of confidentiality, addressed under the Family Educational Rights and Privacy Act of 1974, which states that individuals with a need to know should receive confidential information. As such, students and their families have a right to (a) maintain privacy about HIV and other health issues, (b) determine disclosure of HIV status, and (c) identify persons eligible to access information. The American Bar Association (as cited in Prater, Serna, Sileo & Katz, 1995) identifies three confidentiality guidelines for students with HIV/AIDS: (a) all HIV-related information is confidential, (b) confidentiality policies include children with

Table 4 *Facts and Myths About HIV/AIDS*

Fact	Myth
➤ HIV a blood borne disease and thus cannot be transmitted via casual contact.	➤ HIV is a communicable disease and can be spread though the air
➤ HIV/AIDS is transmitted via bodily fluids, such a blood, semen, breast milk, and vaginal secretions.	➤ HIV is spread through mucous, tears, urine, feces, and vomit.
➤ HIV is transmitted in three ways: having sex with someone infected with HIV/AIDS, sharing needles with some infected with HIV/AIDS, or being exposed via mother to child transmission (prenatal, perinatal, or through breast feeding).	➤ HIV can be spread by casual contact, hugging or kissing.
➤ Universal precautions should be used whenever body fluids are present	➤ Universal precautions should be used whenever blood is present but aren't necessary for urine, feces, or vomit.
➤ There is currently no cure for HIV/AIDS.	➤ HIV/AIDS can be cured if caught early
➤ HIV/AIDS does not discriminate among hetero- or homosexual populations.	➤ HIV/AIDS is restricted to the homosexual population.

HIV/AIDS and their family members, and (c) HIV-related information is confidential regardless of the source and whether it was obtained intentionally or unintentionally. School personnel who violate confidentiality issues may experience personal liability as well as criminal or civil suits.

Schools must ensure healthy, safe, and supportive school environments; safeguard protections for students' and family members' confidentiality rights; and serve as advocates and care coordinators for students and their families (Prater et al., 1995; Prater & Sileo, 2001). Best practices for school confidentiality consider (a) parental, guardian, or student control about disclosure of HIV and other health conditions; (b) disclosure of HIV status



to few, if any, school personnel; and (c) inclusion of information disclosed only by parents, guardians, or students in education and health records to which staff members have access (Beverly & Thomas, 1997; Crocker, Cohen, & Kastner, 1992; Lavin, Porter, Shaw, Weill, Crocker, & Palfrey, 1994; Olenik & Sherrill, 1994; Prater et al., 1995).

Confidentiality regarding students' HIV status helps ensure equitable access to education and prevents prejudice and discrimination (Olenik & Sherrill, 1994). Unauthorized disclosure of HIV-related information may impact negatively on students' privacy and provoke potential harassment and discrimination. Many people view HIV/AIDS as a social stigma associated with same sex orientation, unprotected sexual activity, and injection drug use. Consequently, students and family members may experience feelings of shame, guilt, and confusion, as well as a sense of isolation and abandonment. Prater et al. (1995) offer comprehensive discussions about confidentiality issues in educational settings.

## CONCLUSION

The steady increase in the number of school-aged children and youth with HIV/AIDS in the United States has a direct impact on public education. Teachers may be the most critical factors in ensuring effective prevention for all children and youth. Special educators, therefore, must be knowledgeable about the pandemic and translate their understandings into culturally competent, developmentally appropriate curricular and instructional practices. HIV/AIDS prevention education results in behavior change and risk reduction and ultimately saves millions of lives. The content of this article considered the prevalence and pervasiveness of HIV/AIDS among children and youth, the risk-behaviors that lead to HIV infection, and provided an overview of various HIV/AIDS prevention education programs that special educators can use when working with students with disabilities and others at-risk of infection.

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