Adolescents and Human Immunodeficiency Virus Infection:
The Role of the Pediatrician in Prevention and Intervention

Task Force on Pediatric AIDS

The incidence of human immunodeficiency virus (HIV) infection among adolescents is both significant and rising, and concern about this disease is increasingly evident among adolescents, their parents, and health professionals. Such concern evolves from multiple factors including not only the number of adolescents who have been reported to have the acquired immunodeficiency syndrome (AIDS), but also the uncertainty as to how many youths have been infected with the virus but remain asymptomatic; the risk of becoming infected through either heterosexual behavior, homosexual behavior, or substance abuse; and the need to implement effective preventive strategies.

EPIDEMIOLOGY

By the end of December 1992, a total of 946 cases of AIDS in persons aged 13 through 19 had been reported to the Centers for Disease Control. Although adolescents account for less than 1% of the total reported cases of AIDS, 20% of total cases occur in young adults aged 20 through 29.1

The long latency period between infection with HIV and the emergence of clinical AIDS, often in excess of 5 years, suggests that many of these young adults were first infected during their adolescence. For others, who become infected as young adults, the sexual or drug use behaviors that placed them at risk for infection had their onset during adolescence.

Although national cross-sectional seroprevalence studies have not been conducted, data from selected populations of adolescents provide some information about the rate of infection among segments of the adolescent population. Since October 1985, the Department of Defense has tested applicants for military service for HIV infection. The prevalence rate for 17- to 19-year-olds screened between October 1985 and March 1989 was 0.34 per 1000.2 The rate was more than 10-fold higher among nearly 70,000 Job Corps applicants screened between October 1987 and November 1988, with 3.9 per 1000 being infected. Among nearly 14,000 students using health services at 17 college campuses, the seroprevalence rate was 1.7 per 1000.3 While at another extreme, the rate among homeless youth seen at a shelter in New York City was 88 per 1000.4 Although these data cannot be reliably generalized to the entire adolescent population, they do provide insight into the extent of the problem among adolescents and young adults.

To date, for those who have manifested AIDS during their adolescence, males have outnumbered females in a ratio of 4:1, compared to an adult male-female ratio of 9:1. The receipt of blood or blood products prior to 1985 accounts for nearly 40% of all cases of AIDS in adolescents. Hemophilia and other coagulation disorders are associated with approximately three fourths of these cases, which occur predominantly in males. However, as a result of the success of current methods of testing donated blood for the presence of HIV, this risk factor represents a decreasing proportion of young people with AIDS. Homosexual and bisexual contact in males, representing one fourth of cases among 13- through 19-year-olds, is the next most frequent risk behavior, followed by heterosexual contact in males and females (approximately 14%) and injection drug abuse (approximately 13%). Among adolescent females, heterosexual contact is the most frequent risk factor (approximately 45%), followed by injection drug abuse (approximately 27%). Female sexual partners of high-risk males comprise approximately 12% of all adolescents with AIDS, representing a significantly higher proportion of cases secondary to heterosexual transmission than has been reported for adults (approximately 2.5%). Male and female prostitution, especially among homeless and runaway youth, should be acknowledged as a factor increasing the risk of HIV acquisition.

Both the increased proportion of adolescent females with AIDS secondary to heterosexual transmission and the lower male-female ratio encountered in adolescents (∼4:1 vs ∼9:1 in adults) remain, in part, unexplained. These differences may be secondary to the fact that the initial wave of this epidemic impacted most heavily on adult homosexual males and that the current trend of the epidemic, which now includes adolescents, evidences a more equal distribution among the sexes. That adolescent girls are more likely to have older sex partners, who are hence more likely to be infected, also places them at increased risk. In addition, there is an association between adolescent crack/cocaine abuse and the risk of acquiring HIV infection. This risk almost certainly relates to sexual practices involved in obtaining drugs or money for drugs.5

These data demonstrate that behaviors common to adolescents, including emerging sexuality, substance abuse, running away, and homelessness, may place them at risk for HIV infection. Preventing such in-
General advice would be applicable to all adolescents with a history of sexually transmitted infections, including both male and female prostitutes; part of adolescent health care.

Counseling the Adolescent

Information regarding sexually transmitted diseases, including HIV infection and AIDS, should be included as an important component of the anticipatory guidance provided by pediatricians to their adolescent patients. The majority of young people will have had a first sexual intercourse experience either during their adolescent years or as young adults. The risk of exposure to HIV for a particular adolescent will vary with geographic location, sexual practices, and other high-risk behaviors. However, there is no way that a person can be certain that a potential sexual partner is not infected with HIV because of prior sexual experiences, injection drug abuse, or blood transfusion. Hence there is never certainty that a partner is free from HIV infection.

Every adolescent contemplating or engaging in sexual intercourse will need to be concerned and knowledgeable about HIV infection. This new threat of exposure to a fatal sexually transmitted disease adds to the necessity of discussing sexuality with adolescent patients. Abstinence from sexual intercourse is the safest course of action. Alternatives to sexual intercourse should be discussed with the adolescent contemplating or engaged in sexual behavior. Many adolescents will not refrain from sexual intercourse. It is very difficult to predict which adolescents will or will not remain abstinent, and, therefore, safer sex practices including condom use should be addressed with these young people.

Addressing the consequences of drug abuse has become a mandatory part of the health care of adolescents. Drug abuse is common and carries a significant risk of transmission of HIV through needle-sharing practices. A young person engaged in injection drug abuse is unlikely to forget that experience because of the fear of HIV infection, but the pediatrician should nevertheless include AIDS on the list of risks inherent to such behavior.

Such counseling on issues of sexuality, drug abuse, and risk reduction may be more effective when done by those of similar race, social class, gender, or age of the patient, utilizing community resources where possible.

Counseling Adolescents at High Risk

Some adolescents are at particularly high risk of contracting HIV infection, because of either behaviors or circumstances that increase the likelihood that they have been or will be exposed to the virus. These include drug abusers; homosexual and bisexual youth, including both male and female prostitutes; and adolescents with a history of sexually transmitted diseases, in particular herpes or syphilis; adolescents with multiple sexual partners; and those whose sexual partners have engaged in high-risk behaviors. Also at risk of having contracted HIV infection are young people who have a history of transfusion of blood or blood products prior to April 1985. General advice would be applicable to all adolescents at high risk, while other recommendations would be specific to the behavior or condition that places the young person at risk.

All adolescents at high risk should be given the most recent information about AIDS, including etiology, routes of transmission, and the consequences of HIV infection. Discussion will also need to address the availability and implications of testing for the presence of HIV, the current status of our knowledge regarding the course and treatment of this disease, measures they can use to protect themselves from acquiring this infection, and the reality that if they are infected they are capable of transmitting this disease to others including their sex partners and their offspring.

The issues surrounding testing for HIV infection need to focus on the advantages and disadvantages of determining an adolescent's serostatus. Among the advantages of such a determination would be that a negative HIV test result can reduce the anxiety associated with risk status (it should be recognized, however, that antibodies may not appear for several months following infection). For many, a positive result will be better than not knowing. Knowing a positive result will facilitate reasoned planning of future behavior that affects not only the welfare of the adolescent but also the potential for spreading the disease. In addition, new advances in the treatment of AIDS such as antiretroviral drugs and pneumocystis prophylaxis offer benefit to the infected person. The discussion of drawbacks should include the psychological stress that most individuals encounter in dealing with knowing that they are infected with HIV and the almost certain need for additional counseling in such cases. In addition, the adolescent must be told that although efforts will be made to protect confidentiality, it cannot be guaranteed, and that a young person who is known to be HIV seropositive may very well face social, educational, economic, and vocational consequences. These problems, which might diminish the willingness of an adolescent to seek testing, should be balanced by the potential benefits of knowing one's HIV status.

All high-risk adolescents and those who either have AIDS or are known to be HIV seropositive should be made aware that they can transmit this potentially fatal infection to others. Even those at high risk but with a negative test for HIV may in the future show evidence of the virus, particularly if they continue to engage in the high-risk behavior, and at that point they would be capable of spreading the disease. Counsel should include emphasis on the adolescent's obligation to protect others and to inform sexual partners who are being or who may already have been exposed. The protection of others would include abstinence from sexual intercourse or the use of safer sex practices, including the proper use of condoms. HIV-seropositive adolescents may exhibit either reluctance or refusal to inform their sexual partners of their serostatus. In such cases the pediatrician should offer assistance in informing the sexual partner or offer the assistance of public health officials expert in contact tracing. In some cases, when faced with persistent refusal, the pediatrician...
may have an obligation to disclose over the objections of the patient (see "Consent and Confidentiality" section below).

Other aspects of counseling would be directed to the behavior that places the adolescent at risk. The AIDS epidemic provides additional import and poignancy to the need for drug abusers to be offered treatment for their addiction, and young people who might otherwise refuse therapeutic intervention may now accept such advice because of a fear of HIV infection. Discussion of the dangers of sharing needles and methods for sterilizing needles may be appropriate for the adolescent who continues injection drug abuse despite all efforts to interrupt this behavior. Sexually active adolescents should be informed of the risk of continued exposure so they might opt to alter their sexual behavior by abstaining from sexual intercourse, or sustaining monogamous relationships, and using condoms and engaging in "safer sex." Adolescents at risk because of prior treatment with blood products should understand that heat treatment of factor VIII and HIV testing of such blood products has greatly reduced the risk from transfusions given after April 1985.

Adolescents with a sexually transmitted disease, in particular herpes or syphilis, should be informed about the association between these conditions and the transmission of HIV. Although the basis for this association is unclear, and may relate to either the behaviors that led to the sexually transmitted disease (promiscuity, prostitution, intimacy with a high-risk partner) or genital lesions predisposing to the transmission of HIV, the adolescent should be counseled about behavioral changes that would minimize future risk of HIV and other sexually transmitted diseases.

Some adolescents will have sexual partners who are either known to be HIV seropositive or who have engaged in high-risk behaviors. The counseling alternatives in such circumstances would include suggesting termination of the relationship or minimizing risk through practicing "safer sex." At the least, these young people need be made aware of the risk of sexual transmission of HIV infection and how to avoid infection. Female adolescents should be made aware of the risks of transmission of HIV to their offspring and the consequences of perinatal infection.

CONSENT AND CONFIDENTIALITY

Adults (in general, individuals 18 years of age or older) may consent to their own medical care. Similarly, emancipated minors (individuals younger than the age of 18 but self-supporting, married, parents themselves, or members of the armed services) may consent to their own health care without the need for parental involvement. In addition, public health statutes and legal precedents allow for the medical evaluation and treatment of minors for certain categorical illnesses, in particular sexually transmitted diseases, without parental knowledge or consent. To date, however, HIV infection has not been clearly defined as a condition for which evaluation or treatment of a minor may proceed without parental consent.

At times, an adolescent may not wish to involve a parent in decisions relative to either evaluation or treatment for HIV infection. Such reluctance may arise from a desire not to inform family members about HIV status or not to reveal the behaviors that placed the adolescent at risk for infection including substance abuse and homosexual or heterosexual activity. Although it is often best to involve the family in the health care of the adolescent, such is not always the case. Deference to parental opinion or parental wishes to be informed should not interfere with needed evaluation or treatment of the adolescent. For the adolescent who is able to understand the implications of testing and treatment, and hence capable of informed consent, in the absence of local laws to the contrary, it would be best to proceed on the basis of this consent alone, rather than insisting on parental involvement. Similarly, the consent of the capable adolescent should be obtained prior to the release of any information concerning HIV status.

Individuals with HIV infection or AIDS, and their family members, have been the subject of educational, economic, and vocational discrimination, social ostracism, and even physical violence. In addition, since the disease can be transmitted through sexual intercourse, the individual identified as having HIV infection may lose his or her sexual partner and/or have difficulty finding new ones. Because of the psychosocial and socioeconomic implications of this disease, it is understandable that many at risk would opt to avoid HIV testing, or if tested, would request strict confidentiality regarding all aspects of their condition.

Questions about whether a pediatrician should disclose or receive information about a patient's HIV status without the consent of the patient may arise in several contexts including disclosure by obstetricians to pediatricians, mandated reporting to health departments, reporting to institutional authorities and employers, the care of accused or convicted sex offenders, instances of accidental needle-sticks involving known HIV seropositive patients, and issues of charting HIV status. Although each of these contexts may at times involve an adolescent patient, they are not specific to young people and are beyond the scope of this paper. A concern most relevant to the care of HIV-seropositive adolescents is the limits of confidentiality as they would apply to sexual partners.

A difficult question is whether to disclose HIV status to the sexual partner of a patient who is known to be HIV seropositive and who persistently refuses to agree to such disclosure. There should be little debate about the desirability of using all reasonable means to persuade an infected patient to inform his or her partner on a voluntary basis. Debate arises primarily over the patient who persistently refuses to inform or to allow others to inform his or her partner, for the understandable reason that the relationship may be terminated, as well as because of fears of wider disclosure.
In the context of whether or not to inform sexual partners, there has been considerable discussion of the “Tarasoff” rule—a legal principle that requires psychotherapists in some states to report patients who intend to kill an identifiable third person—and its relevance to disclosure of HIV infection. The Tarasoff cases are not analogous to patients with HIV infection for two reasons. The former involve clearly criminal behavior—the intentional killing of another person. In addition, the victims in the Tarasoff cases have no way of protecting themselves. While potential victims of HIV infection may be unaware of their partner’s HIV status, most can protect themselves by taking precautions that have been widely promulgated, and recommended for all sexual relations, particularly when the HIV status of the partner is unknown. Certainly, the physician’s duty to disclose will be higher when he or she is also the physician for the unsuspecting partner. There is also a stronger argument for disclosure when the relationship is a stable one, in which the partner has little reason to suspect that his or her mate is at risk for HIV infection. When a physician believes there is a duty to disclose a patient’s HIV status to the patient’s sexual partner without the consent of the patient, it would be preferable to use the health department for such notification. Health departments are more likely to have the time and experience in contact tracing and notification, as well as familiarity with relevant law.

Whether a physician has an ethical duty to a patient depends on several factors, particularly the following:

- Whether he or she has contracted (promised) to care for that person
- Whether there are laws that create such a duty
- Whether commonly accepted codes of ethics identify such a duty

The only clear legal duty in the clinical setting of HIV infection is to the primary patient. The situation will be more complicated if the unsuspecting sexual partner is also a patient of the same physician. Absent that, the duty to a third party is unclear, in contrast to the clear duty to the primary patient.

In summary, several factors should be considered in deciding whether to disclose a patient’s HIV status to a sexual partner without the consent of the patient:

A. Whether the physician has an established relationship or other preexisting duty to the partner at risk.
B. Whether the partner has reasonable cause to suspect the risk or take precautions even without specific warning.
C. The likelihood that the partner is, in fact, at risk. If, for example, appropriate precautions are being used, the risk of transmission may be low.
D. Relevant law, which may prohibit or require such disclosures. Principles of confidentiality may preclude such disclosures, whereas the possibility of a suit for negligence may require it.
E. Possible effects on future patients, either of the particular physician or patients in general. The realization that physicians will disclose such information without consent will presumably deter many individuals from seeking HIV testing or counseling.

Physicians who intend to disclose to patients’ sexual partners should consider their duty to inform their patients prior to testing that test results will be disclosed to partners, and under what circumstances.

CONCLUSIONS AND RECOMMENDATIONS

1. Information regarding HIV infection and AIDS should be regarded as an important component of the anticipatory guidance provided by pediatricians to their adolescent patients. This guidance should include information about transmission, implications of infection, and strategies for prevention including abstinence from behaviors that place adolescents at risk and safer sex practices for those who opt to be sexually active.
2. Young people at risk for HIV infection should be offered diagnostic testing in addition to other educational and counseling services.
3. Parental involvement in adolescent health care is a desirable goal; however, the consent of the adolescent alone should be sufficient to provide evaluation and treatment for suspected or confirmed HIV infection.
4. The maintenance of confidentiality regarding HIV status is of great importance. Respecting this confidentiality, the pediatrician should use all reasonable means to persuade an infected adolescent to inform his or her sexual partner on a voluntary basis. Involuntary disclosure is a complex question that should be decided on the basis of local law, the relationship between the physician and the patient, the relationship of the physician to the patient’s sexual partner, and the degree of perceived risk to the unsuspecting sexual partner.

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