

Appendix A: RECOMMENDED BEHAVIOR CHANGES AND PRINCIPLES OF HEALTH-RELATED BEHAVIOR

In response to the AIDS epidemic, the Centers for Disease Control (CDC) and other public health officials have developed recommendations to reduce further HIV transmission. Researchers at the CDC and elsewhere have revised these guidelines as knowledge of HIV and its epidemiology have progressed. As background to the discussion of AIDS educational programs, this appendix briefly presents the major recommendations that have been made. Also relevant as background for AIDS education are general principles of health-related behavior that have been developed for other educational programs. The points that seem most relevant to AIDS education are summarized in the second section of this appendix.

RECOMMENDED BEHAVIOR CHANGES

Knowledge of how HIV is transmitted and studies of how people have become infected have identified behavior that increases and decreases the chance of infection. In general, one prevents HIV infection by avoiding contact with infected blood and other bodily fluids, especially semen and vaginal fluid. These actions prevent an uninfected person from contracting the infection and prevent the virus from spreading from an infected to an uninfected person. A goal of AIDS education is to prevent HIV transmission by promoting the adoption of these preventive behaviors:

Sexual behavior:

- o Reduce the number of sex partners that may be at high risk of HIV infection (48,88). Least risky is monogamy with one faithful partner or abstinence. Reducing the number of partners and contacts and knowing their sexual his-

tory will lower but not eliminate the risk of viral transmission.

- 0 Use condoms with a spermicide effective against HIV throughout sexual relations, unless both partners are known to be uninfected (70). The use of condoms appears to reduce but not eliminate viral transmission (88).
- 0 Avoid anal intercourse, because subsequent trauma and bleeding may facilitate transmission of the virus (48).
- 0 Avoid anal-oral and oral-genital contact (48).
- 0 Seek testing to determine infection status if one is at risk of infection because of past behavior (181). This advice applies particularly to women who may become pregnant. Part of a testing program entails counseling about positive and negative results and preventive behavior.
- 0 Use only sterilized instruments for skin piercing, such as ear-piercing, tattooing, and acupuncture (18 1,221).

Intravenous drug use:

- o Seek treatment for drug use so that IV injection is reduced or eliminated.
- o Do not share needles or other equipment that may have residues of infected blood (181).
- o Clean any shared needles or other equipment with bleach to kill the virus.

Blood transfusions:

- o Do not donate blood if one has clinical or laboratory evidence of HIV infection,
- 0 Do not donate blood if one is at high risk of HIV infection because of any of the following: a man who has had sex with another man since 1977; a person who is or has been an intravenous drug user; a person who emigrated since 1977 from a country where heterosexual activity seems to play a major role in

HIV transmission; a person with hemophilia who has received clotting factor concentrates; a person who has engaged in prostitution since 1977; and a person who has been the sexual partner of an infected person or a person in any of the above high-risk categories (179,181,198,199).

In addition to suggesting behavior to prevent HIV transmission, studies of the AIDS epidemic have identified behaviors that have not been associated with infection. Another goal of AIDS education is to relieve anxiety among people at low or no risk by conveying information about behaviors that have not transmitted the virus:

- o People have not become infected through casual contact, including routine activities connected with sharing a household or workplace with people with HIV infection (180).
- o People cannot become infected by donating blood, because new sterile equipment is used for each donor (176).
- o There is no evidence that insects spread HIV infection (174).

THEORETICAL BASES FOR AIDS HEALTH EDUCATION

Social scientists seeking to explain and modify individuals' voluntary health behavior have increasingly broadened their perspectives from individuals to encompass the social environment. Models run the gamut from those linking behavior with individual attitudes and beliefs to those explaining the diffusion of innovations, those incorporating the influence of social networks, and those based on marketing principles. Although no unified theory exists to guide a specific program of health education, several behavioral models contain elements relevant to the changes that are needed to check HIV transmission and to reduce anxiety and discrimination.

- o The more individuals perceive that they are at risk of contracting a condition, the more likely they are to engage in behavior to prevent it (101).
- o An even stronger factor in explaining preventive health behavior are the barriers that people perceive, such as physical, economic and psychological costs (14, 101).
- o Also important are the perceived benefits or effectiveness of the intervention (101). Receptive attitudes towards an intervention can be promoted by stressing potential benefits, such as peace of mind from using condoms (165).
- o Exposing people to cues about the availability of a health procedure and encouragement to use it has been associated with greater subsequent use (14).
- o After individuals have decided to adopt certain health behavior, they require the skills, both social and mechanical, to carry out the new behavior (85). Rehearsing or practicing the desired behavior can help to convey the required skills (11,160).
- o Individuals' perceptions of the social approval or disapproval accorded to specific actions influence their behavior (5). Support and approval from friends, community, and society at large reinforce people's intention to change their behavior (11,85).
- o The stronger individuals' beliefs in their ability to undertake or maintain a health-related behavior (self-efficacy), the more likely they are to undertake that behavior (11).
- o Using fear as punishment to weaken unhealthy behavior is unlikely to produce the desired effect. The use of fear is most likely to be effective if the desired behavior is reinforced by a reduction in the level of fear (102). This approach entails offsetting fear-arousing information by presenting people actions or skills that they can use to lower their risk (165).
- o People are more likely to act on information if they perceive the source as

credible, a belief that relates to the expertise and trustworthiness of the source material (14a, 144, 165). To be credible, messages must acknowledge the beliefs and values of the target audience. Prevention messages also gain credibility if they clearly acknowledge the disadvantages of the intervention (165). Health messages conveyed in the course of a patient's treatment acquire a medical imprimatur that may increase their credibility. By contrast, if people feel castigated, they are likely to distrust the bearers of the information and to ignore the message.

- o Evidence that behavior may change attitudes supports examining the possibility of altering behavior through structural interventions (14). The inconsistency between alterations in attitudes and behaviors undercuts using attitude change to measure behavior change (207).
- o People learn by modeling their behavior on that of others with whom they identify. Opinion leaders and peer counselors can serve as role models (11).

Several factors pose particular barriers to persuading people to alter the behaviors that transmit HIV. Although perhaps not unique to AIDS or HIV infection, these factors do make behavior change difficult to achieve.

First, the behaviors that are responsible for HIV transmission and that people are called upon to change relate to sexual, reproductive, and addictive activities. Since these activities in turn have profound psychological, physical, and social implications, people may face great distress in changing these behaviors. These are sensitive areas, often considered more appropriate for private decisionmaking than public policy (15). Nor is there a consensus on social values in these areas, especially regarding sexuality and reproduction. This heterogeneity hinders the coalescing of public opinion behind certain educational strategies and reduces social support to reinforce desired behavior change in individuals.

In addition, AIDS and HIV infection are highly stigmatized conditions (15). Perhaps this situation stems from the fact that most AIDS cases have been concentrated among groups considered marginal and discriminated against by society, namely homosexuals and IV drug users and more recently, prostitutes and prisoners. Even racial and ethnic prejudice may play a role in furthering the stigmatization of people with AIDS. The fact that blacks and Hispanics have a disproportionate share of AIDS cases may reinforce existing racial and ethnic prejudice. People who are infected or even suspected or being infected may face being ostracized by their families and friends, losing their jobs, having difficulty finding housing or selling their houses, and even obtaining medical care. Such discrimination poses a powerful barrier discouraging people with high-risk behaviors from determining whether they are infected and sharing this information with others.

Also impeding behavior change are the threat of what is known and the uncertainty of what is not known about HIV infection and AIDS (15). Since a high percentage of infected people have developed serious illnesses and died, those who acknowledge being infected face the prospect of an increasingly debilitating disease likely to end in dependence and death. Unlike most other sexually transmitted diseases, and certainly fatal ones, medicine so far can offer no cure, only palliation and perhaps postponement of the worst symptoms. Scientists have made phenomenal strides in only seven years in identifying the cause of AIDS and the mechanisms for viral transmission. Knowledge is constantly evolving, however, and much uncertainty remains. Both infected and uninfected people are being called on to make behavioral changes for life. The immediate benefits to be gained from changing behavior may be limited, especially for people who are already infected. Yet over time, eliminating risky behavior offers infected people the opportunity to protect their loved ones and offers uninfected people the enormous benefit of remaining uninfected.