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REPORT OF THE SECOND PUBLIC HEALTH SERVICE AIDS PREVENTION AND CONTROL CONFERENCE

Report of the Workgroup on Prevention: Information, Education, and Behavior Change

Background and Progress Since Coolfont

Infection by the HIV is a public health crisis of the most critical nature. The cumulative reported total of more than 74,000 AIDS cases by late September 1988 is only a foreshadowing of the continuing HIV epidemic. It is estimated that 1 million to 1.5 million persons are already infected with the virus, and at least 40 percent of them are expected to develop AIDS within the next 8 years. Moreover, there is currently no fully satisfactory treatment for AIDS, no cure, and no vaccine.

Prevention, therefore, becomes a public health imperative. The overarching goal of prevention efforts is to interrupt the transmission of HIV; that goal requires changing behaviors of people who are currently infected or likely to be exposed and sustaining behaviors of those not at risk. The specific behaviors that put people at risk for HIV infection are known; with a few exceptions, people become infected with HIV through specific sexual behaviors and needle-sharing. The challenge to public health is motivating and assisting people to change these high-risk behaviors and to maintain safe behaviors.

At the Coolfont Conference in 1986, the Public Health Service mounted an ambitious plan to combat HIV infection and the spread of AIDS *(1)*. Discussions at Coolfont centered around information and education as the first step in preventing HIV transmission. Accurate information about HIV--how it spreads and ways to prevent it--provides people with a sound basis for changing their high-risk behavior or maintaining their no- or low-risk behavior.

The concept of informing people--the general public as well as persons at particular risk of acquiring the infection--is fundamental to prevention policy. Educational efforts in the past 2 years have definitely raised the level of knowledge about AIDS and HIV; the recent national mailing to all U.S. households *(2)* is but one example.

PHS response to the Coolfont recommendations has been considerably more comprehensive than simply providing information. The PHS *Information and Education Plan to Prevent and Control AIDS (3)* was developed and published in March 1987. With that plan as a blueprint, PHS has in place the basic elements of a comprehensive plan to prevent the spread of HIV infection.

In the area of information and education, the PHS initiated a major media campaign ("America Responds to AIDS"), established a National Clearinghouse for AIDS Information (34 million items had been mailed by September 1988), and expanded the National AIDS Hotline (which now handles more than 100,000 calls per month).

Recognizing that AIDS education for young people raises a number of sensitive issues, PHS published *Guidelines for Effective School Health Education to Prevent the Spread of AIDS (4)*. In addition, PHS launched programs to provide technical and funding assistance to State education agencies and to those local communities with the highest incidence of AIDS. PHS also provided technical assistance to help train elementary and secondary school teachers in presenting AIDS information.

Further PHS efforts encouraged the expansion and enhancement of resources so that States and local communities could better cope with AIDS and HIV transmission. Significant Federal funding supported health education/risk-reduction initiatives through cooperative agreements with 61 State and local health departments, as well as demonstration projects in 36 cities with large populations of intravenous drug abusers.

Responding to the needs of minorities, especially blacks and Hispanics, who are affected disproportionately by HIV infection, PHS has provided financial assistance to State and local health departments and minority organizations for national, regional and local minority initiatives in information and education. In addition, funds were provided to selected areas for the prevention of perinatal transmission, especially in minority communities where seroprevalence rates for women of reproductive age are highest. PHS also sponsored a Centers for Disease Control conference on AIDS in minority populations in the United States, provided training and technical support for minority groups involved in HIV prevention, and developed culturally sensitive AIDS information.

Additional important components of an HIV prevention strategy include testing for HIV infection, counseling about risk status and/or test results, and notifying partners of infected persons. In 1987, PHS funded the testing of 520,000 people for HIV antibody, and more than 968,000 counseling sessions. PHS also published *Guidelines for Counseling and Antibody Testing to Prevent HIV Infection and AIDS (5)*. PHS has provided training for

health care workers through its regional AIDS Education and Training Centers and local technology transfer conferences. More than 8,500 health professionals and more than 3,000 counselors in drug programs have received training about AIDS and HIV.

Finally, PHS funded selected research and demonstration projects to fill gaps in knowledge about risk behavior and behavior change related to HIV infection and to assess the effectiveness of various approaches in changing high-risk behavior.

These prevention activities are beginning to bear fruit, and there is reason to be hopeful about the impact of information and education efforts. Some educational programs that have promoted abstinence from high-risk behavior--or at the least, modification of these behaviors--have had an impact. For example, a significant proportion of homosexual men in San Francisco have modified their high-risk sexual practices, and some programs designed to reach addicts have succeeded in altering needle-sharing behavior.

These successes have been tempered, however, by a number of frustrations and barriers. Discrimination against persons with HIV infection and concerns about confidentiality continue to be an issue in prevention efforts. Also, the lesson reinforced again and again since Coolfont is that knowledge alone will not bring about change in behavior. In addition to having knowledge about AIDS and HIV, people must have the means and skills to change their behavior--and, in many situations, they need the support and approval of their peers and of the community.

The urgent nature of the HIV epidemic demands that existing knowledge about risk reduction be applied to develop new interventions and strengthen existing programs. At the same time, there is also an urgent need to develop a program of behavioral research to expand this body of knowledge. This behavioral research should ask:

- How do people behave with respect to sex and drug use?
- What kind of interventions effectively change those behaviors that transmit HIV?
- How can we best implement these interventions?

In many cases, traditional public health approaches will not be effective in motivating people to modify their sexual or drug use practices. Interventions must be designed that are "community-specific" and tailored to the needs of the individuals at risk as identified by their race, ethnicity, sex, drug use, sexual orientation, and socioeconomic status. Interventions also must be evaluated for effectiveness. Information about successful approaches should be widely disseminated so people can adapt them to their own communities.

Issues, Goals, and Objectives

Two years after Coolfont, it is appropriate to redefine our priorities and strengthen our prevention initiatives. Successful initiatives should be expanded and new approaches carefully evaluated.

The new goals and objectives outlined in this report both refine and expand the Coolfont recommendations, enlarging the focus from information and education to the more comprehensive one of prevention. The new initiatives or emphases in this report reflect changing seroprevalence patterns as well as our emerging understanding of the social/cultural aspects of risk-producing behavior.

Ten priority issues have been identified. Eight have to do with categories of intervention, one addresses the importance of effective evaluation, and another highlights the needs for behavioral research to illuminate the many unexplored areas in behavior related to HIV transmission. These priority issues are not meant to be ranked; each warrants full consideration.

Issue: Counseling, Testing, and Partner Notification

Current efforts in counseling, testing, and partner notification fall short of the need. Counseling and testing services in health and social service programs that serve high-risk populations are inadequate, and efforts to conduct partner notification are hampered by a dearth of trained personnel. The negative attitude toward testing among many persons at high risk also affects public health efforts in this area. It is not clear how knowledge of serostatus affects subsequent behavior regarding possible HIV transmission. The development of therapies beneficial for HIV-infected individuals without AIDS will markedly increase the demand for counseling and testing services.

Goal: Prevent the spread of HIV infection by expanding efforts throughout the health and social service systems to reach and counsel persons at risk, provide HIV antibody testing, and facilitate confidential notification of sexual and needle-sharing partners, giving consideration to the special

needs and sensitivities of subpopulations, including racial/ethnic minorities.

Objectives:

- Assist State and local health departments in fully implementing the PHS *Guidelines for Counseling and Antibody Testing to Prevent HIV Infection and AIDS (5).*
- Require, as a condition of funding, that each State have a plan for partner notification.
- Update and fully implement quality assurance procedures for HIV antibody counseling provided through public programs.
- Communicate to the public the key role of counseling, testing, and partner notification in contributing to the prevention of HIV transmission.
- Promote measures to protect people with HIV infection from discrimination and to strengthen the confidentiality of personal information regarding HIV infection status.
- Where on-site testing is not available, conduct risk assessment, risk-reduction counseling, and referral for HIV antibody testing.
- Increase the number of physicians who are trained and willing to provide proper counseling, HIV antibody testing, and partner notification.
- Monitor the progress of testing and counseling programs in reducing the number of HIV-infected people who are unaware of their infection.
- Evaluate the effectiveness of counseling and testing programs in reducing the subsequent high-risk behavior of seropositive and seronegative people.
- Further assess and improve the effectiveness of various strategies for counseling, testing, and partner notification, and assess the effects of imparting information on HIV status among different subgroups of the population.
- Assess how partner notification affects risk-reduction activities.

Issue: IV Drug Abuse-Associated Transmission

Intravenous (IV) drug abuse contributes significantly to the spread of HIV infection. Over one quarter of all AIDS cases are associated with IV drug abuse, but that represents only the beginning of the problem: today, in communities with large IV drug-abusing populations, HIV-positive rates among drug abusers reach as high as 60 percent. There are an estimated 1.1 million to 1.3 million IV drug abusers in this country, all of whom are potentially at risk for HIV infection, as are their sexual partners and children.

Goal: Prevent spread of HIV infection among IV drug abusers and their sexual partners, especially in minority communities with high incidence of HIV infection and IV drug usage, by getting drug abusers to stop taking drugs or, if that fails, getting them to modify their sexual and needle-sharing practices.

Objectives:

- Expand support to assist community agencies in their efforts to test and treat IV drug abusers and their sexual partners and to provide counseling on AIDS and HIV infection and drug abuse curtailment, using case managers who integrate treatment and prevention services, as well as other innovative approaches.
- Develop research projects and demonstration programs to assess the costs and effectiveness of a wide range of preventive interventions (e.g., drug treatment programs, use of former addicts as outreach workers, bleach).
- Disseminate tested community education programs to up to 50 sites to educate communities about the need to expand existing, and develop new, drug treatment programs, and provide technical assistance in initiating and evaluating such programs.
- Develop programs to help young people acquire skills that will help them avoid substance abuse which may put them at risk for HIV transmission, by building their self-esteem and giving them meaningful opportunities for advancement.
- Improve channels of communication to IV drug abusers and their sexual partners, emphasizing the specific behaviors that increase or decrease risk of HIV infection.
- Develop strategies that target special needs of minorities, women, and young people.
- Strengthen the capability of substance abuse prevention programs within comprehensive health programs to effect risk-reducing behavior changes among those young people beginning to explore the use of drugs, as well as those who are currently using drugs.

- Encourage self-help groups to foster and sustain behavior that avoids drug abuse and reduces risk of infection.

- Provide safer sex and drug risk-reduction programs to IV drug abusers who are incarcerated, and also coordinate drug treatment and risk-reduction counseling on and after release.

- Conduct additional seroprevalence surveys among IV drug abusers and their sexual partners to better identify the need for prevention programs and evaluate their effectiveness.

- Conduct epidemiologic and ethnographic studies of drug use behavior by different racial/ethnic groups and geographic areas to understand existing differences in seroprevalence and to target prevention efforts.

Issue: Perinatal Transmission of HIV

As of late September 1988, more than 1,100 cases of AIDS had been reported in children, and two to three times that many are estimated to be infected with HIV. The vast majority of the children with AIDS (78 percent) come from families where one or both parents were IV drug abusers. The burden of pediatric HIV infection falls disproportionately on minorities; of the reported pediatric AIDS cases, 53 percent have occurred among blacks and 23 percent among Hispanics.

Goal: Prevent perinatal transmission of HIV with a comprehensive drug abuse and risk reduction program that includes information, education, and counseling and testing, with special emphasis on minority adult and adolescent women and men who are IV drug abusers and the sexual partners of these women and men.

Objectives:

- Where feasible, require all federally funded programs that target adult and adolescent females of reproductive age to provide information and counseling on the risks of perinatal transmission of HIV. Such programs would include family planning clinics, prenatal and obstetrical clinics, maternal and child health and WIC (Women, Infants, and Children) programs, sexually transmitted disease clinics, comprehensive health centers, and drug treatment programs.

- Initiate studies to better define risk behaviors of adult and adolescent women of reproductive age and to determine what is needed to change risk-producing behavior and to maintain safe behaviors.

- Increase integration of health services to improve access to care and improve followup. For example, provide family planning counselors at drug abuse clinics to maximize opportunities for high-risk persons to receive contraceptive followup.

- Enhance capabilities and provide financial and technical assistance to help community-based organizations develop prevention programs.

- Determine the content and format that will make counseling effective for and acceptable to women at increased risk for HIV infection and their sexual partners. For example, counseling for minority women who practice high risk behaviors and their male sexual partners should be culturally specific.

Issue: Sexual Transmission

Sexual transmission accounts for approximately three quarters of all reported AIDS cases. Of these patients, more than 90 percent identified themselves as homosexual or bisexual (although some of these individuals are also IV drug abusers.)

Although intensive educational efforts have reduced HIV transmission in some settings, there is a continuing and urgent need to reduce the occurrence of high-risk sexual behaviors and to ensure that low-risk behaviors are sustained. In addition, the recent increase in genital ulcer diseases, which are thought to contribute to sexual transmission of HIV infection, is a cause for concern.

Goal: Prevent sexual transmission of HIV through the reduction of high-risk behaviors and maintenance of low-risk behaviors, and by preventing and controlling genital ulcer diseases.

Objectives:

- Expand current research on the development and evaluation of HIV intervention programs for maintenance of long-term behavior change that lowers or eliminates risk of infection with HIV. The research should target:

  - men who engage in sex with other men;

  - men who engage in bisexual or male-to-male sex but who do not identify with and are not reached by prevention efforts targeted to the homosexual community;

- women who have sexual partners who place them at risk of HIV transmission; and,

- people with sexually transmitted diseases, especially those with genital ulcer diseases.

- Implement a national survey of sexual behavior in the United States.

- Improve the effectiveness of sexually transmitted disease prevention programs in the United States, eliminating or reducing risk for HIV infection among their patient populations.

- Ensure that reliable data on AIDS-related knowledge, attitudes, and behavior (i.e., sexual and drug abuse practices) among the general population and selected subpopulations--data that have been collected in a standardized fashion--are available for purposes of program planning and evaluation at the national level and in each area where PHS has cooperative agreements with State and local health departments.

- Develop and evaluate strategies to advise people of the risk-reducing benefits of practicing sexual abstinence before marriage and of sustaining a mutually monogamous relationship with an uninfected spouse after marriage.

- Develop educational approaches to teach people how to assess their own risk of sexually acquiring or transmitting HIV, how to obtain practical information, and how to develop psychosocial skills to protect themselves from sexual transmission of HIV. These educational approaches should also aim to motivate people to use such knowledge and skills.

- Explore the options and outcomes of legally defining AIDS as a sexually transmitted disease.

- Support and coordinate research and testing efforts to determine the effectiveness of condoms and spermicides in preventing HIV transmission.

Issue: Informing the General Public about AIDS

An informed public is the foundation upon which prevention programs are built. Programs targeted to the public should: (1) raise the level of knowledge about HIV transmission and prevention; (2) encourage adoption and maintenance of appropriate behavior; (3) discourage risk-taking behavior; (4) clarify misinformation and reduce fears; (5) create an environment of compassion for people infected with HIV; (6) provide a resource for those who want further information; and, (7) increase awareness of and support for drug abuse prevention and treatment, sexually transmitted disease control programs, and information and education programs relating to AIDS and HIV transmission.

Goal: Strengthen the level of knowledge about the prevention of AIDS and HIV transmission among the general public, with special attention to women and minorities, so as to reduce misinformation, allay unfounded fears, and increase levels of support for AIDS prevention and control.

Objectives:

- Continue the national public information campaign ("America Responds to AIDS") which includes the general public kickoff, the national mailout ("Understanding AIDS"), information for women at risk and sexually active adults, and information for parents and teens.

- Initiate a program to enhance local resources and to involve community leaders and organizations in developing a community response to the problems of the HIV epidemic.

- Complete projects designed to identify specific factors that will enhance the effectiveness of mass media programs in reaching the general public and/or specified target populations.

- Develop information programs that create a supportive environment for AIDS education and compassion for persons with HIV infection or AIDS.

- Target information and education programs to reach people who are at risk in different cultural groups and at various locations where people gather (workplace, recreational centers, housing projects, neighborhood or community centers).

Issue: HIV Transmission Among Minorities

Certain minorities are exposed to a disproportionate risk for acquiring HIV infection. Blacks comprise 12 percent of the U.S. population, yet account for 26 percent of AIDS cases. Hispanics comprise 7 percent of the U.S. population, but account for 15 percent of AIDS cases. As in other populations, both IV drug abuse and sexual behaviors contribute significantly to HIV transmission in minority communities. (Sexual transmission is problematic especially because homosexual and bisexual activities may not be acknowledged by these populations.)

Goal: Ensure adequate and appropriate resources to prevent the transmission of HIV infection in minority populations.

Objectives:

- In collaboration with State and local health departments and national minority organizations, have in place a national program to support effective HIV prevention programs targeting minority populations practicing high-risk behavior. Program components should include:
  - technical assistance to communities in the development, implementation, and evaluation of culturally relevant and sensitive prevention programs; and,
  - support of community-based organizations on a timely basis, with as little paperwork as possible, to ensure adequate and appropriate prevention activities.
- Facilitate the design of effective education and intervention programs by planning and conducting serial AIDS-related knowledge, attitudes, and behavior surveys among minority populations in at least the 10 most heavily impacted areas where PHS has cooperative agreements with State and local health departments.
- Develop and publish guidelines for the design and implementation of HIV prevention programs for minority populations practicing high-risk behavior.

Issue: Education of School and College-Age Youth

School and college-age youth may engage in sexual activity and illicit drug use. If prevention efforts do not reach these young people, many may develop potentially hazardous, lifelong patterns of behavior. Too few schools have effective health education programs, and many teachers are inadequately prepared to provide appropriate instruction about preventing HIV infection.

Goal: Ensure that school and college-age youth, especially female and minority youth in areas of high incidence, have the knowledge and skills necessary to adopt safe and appropriate behaviors related to sex and drugs.

Objectives:

- Implement a plan to encourage all States to create or expand school health education programs about AIDS. The PHS *Guidelines for Effective School Health Education to Prevent the Spread of AIDS (4)* will serve as a guiding reference.
- Recommend and implement national, State, and local strategies to identify and reach children and youth who are out of school.
- Implement a program to provide assistance to all States in establishing programs of college health education to prevent the spread of HIV infection among college students.
- Support research on the ramifications of counseling, testing, and partner notification for young people. Issues to address include legal aspects such as parental consent; the impact of knowledge of serostatus, positive or negative, on subsequent behavior; and partner notification.
- Establish a system to track behavioral risk patterns and their determinants among school- and college-age youth over time.
- Support cross-cultural studies to determine the comparative effectiveness of various modes of educational interventions, including such alternative strategies as peer counseling, to reach school- and college-age youth.
- Assist education agencies in enabling teachers to implement comprehensive school health education, including AIDS, and ensure their appropriate training.

Issue: Educating Health Workers and Other Caregivers

Health workers and other caregivers play an important role in preventing HIV infection, but many have limited experience with HIV-infected persons and a high level of anxiety about dealing with them. Also, too few health workers and caregivers have the technical knowledge and skills to meet the demand for the services needed by HIV-infected individuals. Further, current mechanisms are inadequate to inform caregivers in a timely way about advances in diagnosis, treatment, and prevention of HIV infection.

Goal: Develop a health and social service work force capable of: (1) providing culturally sensitive risk-reduction counseling, testing, and partner notification in a sensitive fashion to all groups, particularly racial/ethnic minority populations with increased levels of infection; (2) providing comprehensive care to HIV-infected persons; and, (3) protecting itself from risk of infection in delivering this care.

Objectives:

- Continue efforts to ensure that the nation has an adequate cadre of people who have the skills to care effectively for persons with HIV infection. Such efforts include:
  - assessing the need for adequate numbers of caregivers in different disciplines;
  - encouraging the training of at least 40,000 health workers, including primary care physicians, to identify, conduct risk assessment for, and counsel individuals at risk for HIV infection and to manage the counseling and followup of those who test positive for HIV;
  - encouraging the training of at least 40,000 caregivers to work effectively with all individuals whose behavior puts them at risk for HIV infection (e.g., homosexual/bisexual men, intravenous drug abusers);
  - developing incentives to encourage people to enter the health care field and care for persons with HIV infection; and,
  - devising and recommending a system of interventions to reduce caregivers' stress and the occurrence of burnout.
- Encourage the education of all health workers about the significance and implications of ordering HIV antibody tests and increase their knowledge about appropriate test protocols, interpretation of HIV antibody test results, and followup counseling, as well as related legal and ethical issues, including confidentiality.
- Encourage the training of at least 10,000 first responder and emergency personnel in appropriate care and recommended procedures that reduce the risk of HIV transmission.
- Develop a coalition/partnership with at least one major organization representing each health profession, to develop and implement programs to train and inform health workers about prevention strategies.
- Increase programs to train and inform health care workers about efficacious therapies as they become available.
- Support full implementation of the PHS *Recommendations for Prevention of HIV Transmission in Health Care Settings (6)*, which give health professionals in various disciplines the knowledge and tools to reduce to an absolute minimum the risk of contracting HIV.
- Assess caregivers' knowledge, attitudes, and values related to AIDS and persons infected or at risk.
- Rapidly disseminate current HIV-related information to health workers through electronic means as well as more traditional approaches.
- Evaluate the effectiveness of selected educational programs (e.g., AIDS Education and Training Center programs) for health care workers.

Issue: Medical Devices for the Diagnosis, Treatment, or Prevention of HIV Infection or AIDS

Goal: Facilitate the availability of safe and effective medical devices for diagnosis, treatment, or prevention of HIV infection or AIDS.

Objectives:

- Provide information and regulatory guidance to developers of medical devices related to HIV infection or disease.

Assign priority status to premarket review of such medical devices.

Issues: Behavior Change Research

Behavioral interventions to reduce HIV transmission must be based on knowledge gained from systematic research of risk behaviors and behavior change. At present, too little is known about patterns and determinants of sexual and drug-using behaviors in the general public and in groups at particular risk for HIV infection. Research is also needed to assess the effectiveness of techniques used in other health education interventions for the prevention of AIDS. Other studies should address the applicability of findings from natural experiments that have occurred since the onset of the AIDS epidemic, and test the relevance of existing behavioral and motivational theories for HIV prevention efforts. Further, existing methodologies are inadequate to measure behavior and behavior change within the context of HIV infection and AIDS.

Goal: Establish a behavioral research base sufficient for developing effective HIV prevention efforts.

Objectives:

- Foster collaborative efforts across PHS agencies to achieve the behavior change research objec-

tives outlined in this report. Four major strategies are recommended:

- Develop and disseminate requests for applications (RFAs) to solicit and stimulate needed research in behavior change;
- Conduct technical reviews and workshops for leading scientists in relevant research areas to define existing knowledge related to behavior change and to specify areas that require further investigation;
- Disseminate current information and descriptions of research needs through the publication of monographs and summaries in scientific journals and through collaborative meetings of investigators working in behavioral research on AIDS; and,
- With the help of outside experts, monitor progress in behavior change research.

- Develop detailed behavior change research strategies for each PHS agency.
- Identify determinants of high-risk behavior (e.g., values, attitudes) and determinants of maintaining low-risk behavior (e.g., use of condoms).
- Study the social contexts in which risk-taking behavior occurs and how they affect desired behaviors.
- Study patterns of drug use behaviors and sexual practices to determine how individuals initiate these risk behaviors.
- Conduct research to better understand the impact of affective states, depression, social isolation, and disinhibitors such as alcohol and drugs on risk behavior.
- Support the integration of behavioral research into ongoing treatment studies to expand knowledge of risk behaviors and behavioral change.
- Develop and improve accurate methodologies to assess behavioral determinants.
- Use a range of research settings (field and laboratory) and designs (experimental and non-experimental) to better understand determinants of behavior change. Take advantage of ongoing observational or epidemiologic studies to study aspects of behavior change.
- To better identify persons at high risk, study clusters of behaviors that predispose people to acquire or transmit HIV infection.
- Assess the impact on individual behavior of receiving a diagnosis of AIDS, learning of HIV seropositivity, and receiving pre- and post-test counseling, to determine whether the impact varies by risk factor or demographic characteristics.
- Support intervention research guided by different theories about approaches to behavior change, e.g., programs that emphasize the acquisition of skills that reduce the risk of HIV infection.
- Determine the extent to which behavior change research from other health areas can be applied to behavior change related to HIV transmission.
- Identify, adapt, and test successful strategies from communications research to assess their applicability to AIDS prevention programs.
- Design and assess strategies to reduce recidivism (e.g., booster sessions) in reinforcing successful changes to low-risk behaviors.
- Design and assess behavioral strategies to ensure compliance with treatment protocols and regimens.
- Develop more effective methods to monitor patterns of risk behaviors and behavioral change.
- Ensure that behavioral intervention research includes the study of process variables as well as outcomes, and that it makes possible comparisons across programs, communities, and risk groups so that reasons for success or failure can be identified.
- Develop and evaluate more accurate methods of collecting self-reported behavior change data to maximize validity.
- Identify and determine efficacy of channels and mechanisms -- both conventional and unconventional -- for delivering AIDS prevention messages to specific subgroups of persons at risk. These approaches should include at least mass media, social institutions (churches, schools, clinics, etc.), informal networks (drug subculture, gay networks), and peer-to-peer communication.

Issue: Program Evaluation

In the past few years, efforts have been concentrated on implementing and expanding prevention programs to reduce the rate of transmission. Emphasis now must be placed on developing a systematic plan for evaluating these services, in order to know which interventions actually work. Evaluation research in the context of HIV is in the early stages, but the technology for conducting rigorous evaluation does exist.

Goal: Assess the effectiveness of HIV prevention programs.

Objectives:

- Develop a plan that will establish evaluation priorities for prevention programs.
- Develop a comprehensive framework and methodology for evaluating the effectiveness of programs to prevent HIV transmission. This framework should be based on principles of cost-effectiveness and quality of care and should include ways to identify and measure both process objectives such as numbers of programs in place, and outcome objectives, such as changes in behavior and changes in seroprevalence. The framework should include the development of methodologies to monitor and measure behavior change accurately over time and to trace this change to a particular intervention.
- Establish standards for evaluating programs in terms of both process and outcomes, and support training of evaluators to use these standards.
- Apply evaluation techniques that have already been proven useful.
- Assess the impact of educational materials currently in use, including those outside the health education realm, e.g., those used in media campaigns.
- Evaluate effectiveness of community-based interventions in changing seroprevalence rates or measures such as sexually transmitted disease rates.
- Compare the effectiveness of HIV prevention efforts that are combined with existing community health programs (e.g., sexually transmitted disease clinics, family planning clinics) with the effectiveness of prevention programs conducted independently.
- Evaluate the quality and cost-effectiveness of interventions to prevent HIV transmission in low-prevalence areas and compare it to the cost-effectiveness of such interventions in high-prevalence areas.
- Evaluate the cost-effectiveness and efficacy of various channels for delivering HIV prevention programs targeted to specific risk behaviors.

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