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Message: Todd-

Here is the information we discussed over the phone earlier today.
Unfortunately the staff person overseeing the adolescent initiative is not in today and I do not have information on that project.

Good luck, if you need anything else, do not hesitate to give me a call at the number listed above.

Division Training & Technical Assistance

SERVICES PROVIDED TO YOUTH
THROUGH THE RYAN WHITE CARE ACT
FOR FISCAL YEARS 1996 AND 1997
(MOST RECENT DATA AVAILABLE)

- In 1996 through Titles I, II and III of the CARE Act over 74,000 youth and adolescents received care and support services.
- In 1997 the Special Programs of National Significance alone served over 4,000 adolescents through nine adolescent programs and 3 demonstration grants.

NAPWA Activities supported by HRSA

- o To address the crisis of HIV/AIDS among Latinos and African Americans HRSA has funded a special initiative with NAPWA to reach out to these communities to participate in this year's National HIV Testing Day.

This campaign is an on-going activity to help end the HIV epidemic and to support our nation's health promotion and disease prevention goals, as identified by the Healthy People 2000 initiative. In particular, National HIV Testing Day is designed to encourage all people at risk for HIV infection in the United States to get tested and if infected, encourage them toward a comprehensive system of care. HRSA was proud to be a co-sponsor of this activity last year.

- o Close collaboration between HRSA's youth initiative and the Ryan White National Youth Conference;
- o Expanding HIV/AIDS treatment education through the NAPWA sponsored newsletter ***"Medical Alert"*** and treatment fact sheets;
- o Contributing to NAPWA's *"Positive Input"* publications which highlight the Ryan White Planning Processes; and
- o Assisting NAPWA to enhance it's speakers bureau.

PREFACE

Special Projects of National Significance Program

Ten Models of Adolescent HIV Care

This Special Supplement of the *Journal of Adolescent Health* is the result of a unique collaboration on the part of 10 Federally funded adolescent care providers to individually and collectively demonstrate innovative models of care for the human immunodeficiency virus (HIV) and the acquired immune deficiency syndrome (AIDS) for youth infected with or at high risk for HIV/AIDS. Through a partnership between the Federal government and leading evaluation and HIV research experts, project leaders have sought not only to better understand the needs of youth affected by HIV disease, but also to test models of care and treatment to improve their clinical, medical, and psychosocial health outcomes, and to increase the collective knowledge about HIV disease in adolescent populations in the United States.

Since 1991, the Special Projects of National Significance (SPNS) Program at the Health Resources and Services Administration (HRSA) in Rockville, Maryland, has been significantly involved in the development of new HIV care and service delivery systems. Created by Congress through the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act (P.L. 101-381), as amended by the Ryan White CARE Act Amendments of 1996 (P.L. 104-146), the SPNS Program seeks to meet the need for the development of comprehensive models of HIV-related health and support services for persons with HIV disease. The program is administered through the Office of Science and Epidemiology, HIV/AIDS Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services. Awards are made through direct grants to public and nonprofit entities for the care and treatment of persons with HIV disease.

As the research and development component of the Ryan White CARE Act, the SPNS Program seeks

to increase knowledge about the delivery of health and support services for people who are living with or are at high risk for HIV infection. This is accomplished by encouraging creative programming, experimentation, and organizational collaborations in HIV care and services which address the changing dynamics of the AIDS epidemic. Projects funded by the SPNS Program must be innovative in design, have a clear plan for evaluating proposed interventions, and have the potential for replication or adaptation by other providers.

The SPNS Program began funding projects in fiscal year (FY) 1991. In response to the first Notice of Funding Availability, however, very few adolescent-focused grant applications were received, and of 27 grants first awarded in FY 1991, only one adolescent project was funded: the Gay and Lesbian Adolescent Social Services (GLASS) of Los Angeles, California. Data from the Centers for Disease Control and Prevention (CDC), however, continued to show dramatic increases in diagnosed AIDS cases among young adults ages 20-24 years when compared to adolescents ages 13-19 years, indicating that most of these young people would have been infected during adolescence (1). Seroprevalence reports from the CDC and data from Pediatric AIDS Demonstration Project grantees and other HIV research studies also indicated a substantial increase in the number of youth ages 13-19 years seeking HIV counseling and testing and treatment for HIV infection (2). Further research indicated the virtual absence of specific continuums of care for adolescents with HIV disease in the United States (3).

Concurrent with these developments was the publication of a number of reports exploring and documenting the needs of young people and their risks associated with HIV disease: The National Commission on AIDS published "America Living With AIDS" in 1991 and "Preventing HIV/AIDS in Adolescents" in 1993; the *Journal of Adolescent Health*

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published a "Guide to Adolescent HIV/AIDS Program Development" in 1993, which provided a comprehensive resource for developing youth-sensitive HIV/AIDS programs; and the National Pediatric HIV Resource Center, in collaboration with HRSA's Maternal and Child Health Bureau's Pediatric AIDS Health Care Demonstration Project, issued a report entitled "Serving Young People at Risk for HIV Infection: Case Studies of Adolescent-focused HIV Prevention and Service Delivery Programs" in 1993 (4-7). Each of these reports underscored the need for increased funding at the national level of HIV care and for the development service delivery models for HIV-positive and at-risk youth.

Drawing upon the available research and key informant interviews with experts on adolescent health issues, in 1993 the SPNS Program, under the direction of then-Deputy Director George Sonstel, L.C.S.W., issued a competitive grant announcement focused exclusively on care for adolescents with HIV/AIDS: the Adolescent Care Demonstration and Evaluation Grant Initiative. This initiative established four competitive funding categories: (a) to expand access to health and support services for underserved adolescents with HIV/AIDS (or at high risk for HIV infection) through outreach services, risk-reduction counseling, HIV counseling and testing, health status screening, and appropriate follow-up services; (b) to provide for peer-based psychological, social, and practical support services in mentoring, group, or one-on-one formats for high-risk adolescents; (c) to expand the scope and intensity of treatment for HIV-positive adolescents by integrating mental health services and substance abuse treatment into primary care; and (d) to meet the full range of physical, psychological, social, and spiritual needs for adolescents already seriously ill with AIDS. Through this focused competition, the SPNS Program funded 10 adolescent-focused projects in FY 1993-1994 for project periods of 3 years. (Note: In 1997, nine of the projects competed successfully for 2 additional years of funding through a limited competition.)

Identifying HIV-infected youth and bringing them into care is central to each of these SPNS Program projects. Each of the projects provides a comprehensive range of direct services and referral services for youth. All of the projects provide services to youth populations who are HIV infected or have been identified as being at high risk for HIV infection. These include young gay men, young women at risk for pregnancy, and homeless, runaway, street-involved, and drug-involved youth, and youth of

color. In addition to the care and treatment offered by each site, the projects conduct their own local project evaluations and contribute data for national cross-site evaluations. These latter evaluations are designed to elicit client, project, and agency level information relevant to all sites.

The following is a synopsis of the 10 Adolescent Care Demonstration and Evaluation models funded by the SPNS Program, listed in the order in which they are presented in this Special Supplement. Each manuscript was written by representatives from the respective project; reviewed by an editorial staff composed of project directors, national evaluators, and the SPNS Program Director; and, finally, reviewed by an external editor.

Bay Area Young Positives (San Francisco, California) uses a staff of full-time, paid young people and volunteers to provide peer-based support services for youth with HIV who are under 26 years of age. While a majority of "members" are gay and bisexual men, a number of young women also participate actively in the program. Services include recreational and social activities, peer counseling, advocacy education, practical support services, and information on youth-sensitive care providers.

Boston HAPPENS Program (Boston, Massachusetts) provides outreach to HIV-positive and high-risk youth ages 12-24 years. Outreach is offered through a diverse and comprehensive network of primary care service providers to clients who are gay or bisexual, homeless, or street-involved. Services include HIV counseling and testing, case management, mental health, primary and referral care including multidisciplinary HIV care, substance abuse treatment, and housing assistance. Its network model facilitates an integrated service referral program among the principal adolescent service providers in the Boston area for HIV-infected, homeless, and at-risk youth.

Bridgeport's Teen Outreach and Primary Services (TOPS) Project (Bridgeport, Connecticut) provides outreach, HIV prevention and early intervention, HIV counseling and testing, mental health services, and referral services for African-American and Hispanic disadvantaged, inner-city minority youth, ages 15-24 years, who are HIV positive or at high risk for HIV infection and not enrolled in mainstream systems of care. Program staff provide intensive supervision and support for four peer-youth who serve as outreach gatekeepers and peer recruiters through training sessions, community presentations, and agency outreach to juvenile justice, day incarceration, and alternative school programs.

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Childrens Hospital Los Angeles (Los Angeles, California) provides comprehensive health care, case management, mental health services, and testing and counseling to youth ages 12–24 years living with HIV and those at very high risk. A majority of clients are Latino and African-American. A moderate number of transgender clients has also been identified. Enhanced outreach services are designed and implemented by youth educators employed by the project.

Health Initiatives for Youth (HIFY) (San Francisco, California) provides a comprehensive array of youth-centered services, self-help resources and skills-training for young people with HIV, age 25 years and under. HIFY clients include homeless or runaway youth, teenage mothers, gay/lesbian/bisexual/transgender youth, economically disadvantaged youth, youth of color, and youth who have a history of sexual abuse. The program emphasizes leadership development for young people including those who are on staff and who serve as volunteers. The Health Action Research Team (HART) Team produces a quarterly "zine" called, *Reality*.

Indiana Youth Access Project (Indianapolis, Indiana) is a peer-based model that addresses access to health and support services for undeserved gay, lesbian, and bisexual adolescents who are HIV positive or at risk for HIV infection. The project focuses on peer counseling, risk-reduction and assessment, health evaluations, street outreach, and an HIV prevention case management model in central Indiana. The Indiana Youth Access Project is a joint collaboration with the Indiana Youth Group, Inc., a peer-based gay and lesbian youth services provider.

Seattle YouthCare's Prevention, Intervention, and Education Project (Seattle, Washington) combines HIV counseling and testing with early intervention and prevention case management services to develop a continuum of care for homeless, runaway, and at-risk youth. The majority of clients are street-involved, homeless, and gay/bisexual youth ages 14–22 years. The project provides outreach and referral to youth in drop-in centers, needle exchange sites, and on the streets. A significant emphasis of the project is the provision of intensive case management for HIV-positive young people.

University of Alabama Teenage Access Project (Birmingham, Alabama) provided HIV outreach, education, testing and counseling and case management for disadvantaged, high-risk females between the ages of 10 and 24 years. It sought to improve access to medical and psychosocial services through family-centered case management and to identify HIV-positive young women through early interven-

tion, outreach, and testing. Funding for this project was limited to 3 years.

University of Minnesota Youth and AIDS Projects' Adolescent Early Intervention Program (Minneapolis, Minnesota) is developing and evaluating a model of outreach, early intervention, and service delivery for 13–22-year-old adolescents living with HIV who have been identified through the state's mandatory HIV reporting system. Through a partnership with 116 youth-serving agencies and the State Department of Health, the project is obtaining information on the use of public health disease intervention strategies to link HIV-infected youth with care, demographic and psychosocial characteristics of HIV-positive youth, the timing of early intervention services, and the clinical course of HIV disease.

Walden House Young Adult Planetree Project (San Francisco, California) provides a multidisciplinary approach to the substance abuse rehabilitation, mental health, and HIV care needs of HIV-positive youth and young adults ages 13–25 years living with HIV or at high risk for acquiring HIV who also have mental health and/or substance use issues. The project combines long-term residential substance abuse treatment with mental health and HIV care services specifically designed for young people whose multiple needs require an intensive model of care. An award-winning video journal, "Straight up Life," which Walden House clients helped to produce, focuses on experiences of HIV-positive young people undergoing substance abuse rehabilitation.

Recognizing the limited evaluation and research data available to address adolescent HIV issues nationally, the 10 adolescent projects were invited to participate in a cross-cutting national evaluation of their efforts. Through the SPNS Program's adolescent-focused national evaluation, cross-site data are collected using rigorous protocols from each grantee site and analyzed by a national evaluator selected for this purpose: the Measurement Group of Culver City, California. Also, as described below, a number of working groups were formed by the grantees to be able to address specific interest areas and create materials for the use of adolescent providers: a case management work group, a peer development work group, a program development work group, a service needs and utilization work group, and a target population work group.

Based on the data collected, studies have been published that address critical issues in delivering youth-centered services. The Measurement Group, in collaboration with HRSA and the 10 adolescent

projects, has produced adolescent-oriented evaluation tools which were used to collect this information and a series of reports based on the analyses of contributed data. (See the succeeding overview article.) The Health Resources and Services Administration has published two studies based upon the work of these grantees: "Getting HIV-Positive Youth Into Care: Issues and Opportunities, a Study of the Special Projects of National Significance Program Adolescent Care Projects" (1997) and "Adolescent in Youth Empowerment Positions: Special Projects of National Significance" (1996) (8,9). Each of these draws upon the individual and collective experiences of the 10 adolescent projects during their first 3 years of SPNS Program funding.

In addition, during the period from 1993 to the present, the projects have presented individual and collaborative research findings at hundreds of local, state, and national professional meetings including the Society for Adolescent Medicine, the American Public Health Association, the American Psychological Association, the National AIDS Update Conference, the National Skills-Building Conference, the AIDS and Social Work Conference, and the XIth International AIDS Conference. Many of these presentations, along with other research findings and general information from the 10 adolescent projects, are accessible on Internet Web sites at the Measurement Group—<http://www.tmg-web.com/adolspns/adolspns>—and SPNS Program—<http://www.hrsa.dhhs.gov/bhrd/spns>.

Through various working groups, the grantees are collaborating on the development and publication on a number of research topics. The Case Management Work Group is looking at issues relating to the systems through which clients are served and how case management affects quality of life and treatment adherence for youth. A manual for other adolescent programs providing case management services will capture the salient experiences and lessons learned from the SPNS Projects. The Peer Development Work Group is addressing the need for youth involvement in adolescent care models by looking at youth empowerment, peer training and development, peer education strategies, and youth development. The Program Development Work Group will synthesize the programmatic similarities and differences of the adolescent grantees that future program developers would find helpful. The Service Needs and Utilization Work Group is working on several papers that will illustrate what is necessary for providing effective services for adolescents and the strategies required for effective cost utilization. Finally, the Tar-

get Population Work Group is looking at youth who are at risk for HIV infection within the context of their environment.

Throughout this initiative, a guiding principle for the SPNS Program and the Adolescent Care Demonstration and Evaluation grantees has been to provide research findings and practical information derived from the collective experiences of these 10 adolescent-focused projects. It is hoped that this Special Supplement of the *Journal of Adolescent Health* will serve as a useful resource guide to all adolescent service providers who are dedicated to providing and improving the care and treatment of adolescents affected by HIV disease.

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ORIGINAL ARTICLE

Overview of the Special Projects of National Significance Program's 10 Models of Adolescent HIV Care

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Ten models of adolescent human immunodeficiency virus (HIV) care were funded in 1993 by the Special Projects of National Significance (SPNS) Program, HIV/Acquired Immunodeficiency Virus (AIDS) Bureau, Health Resources and Services Administration, through the Ryan White CARE Act. These models were supported to advance knowledge about the engagement of HIV-positive and at-risk adolescents and young adults in care. This article provides an overview of the SPNS Program's adolescent initiative, which developed and evaluated innovative models of HIV care, and provides background information on and summarizes the 10 models of care. The models are organized into four groups emphasizing different concepts: (a) youth involvement; (b) outreach to bring youth into services; (c) case management and linkage to services; and (d) a comprehensive continuum of care for youth. © Society for Adolescent Medicine, 1998

KEY WORDS:

HIV care
Models of care
Adolescent
HIV/AIDS
Special Projects of National Significance Program

In 1993, 10 models of adolescent human immunodeficiency virus (HIV) care were funded by the Special Projects of National Significance (SPNS) Program of

the Health Resources and Services Administration (see Preface to this issue). Because many HIV-positive adults were infected during adolescence and because young people are particularly hard to engage in care, these 10 innovative models were funded to advance the understanding of the issues around connecting adolescents and young adults (ages 12–24 years) to HIV care. This article summarizes the background information leading to the development of the adolescent models, and introduces the articles contained in this issue which describe in detail the 10 models of care.

National HIV/Acquired Immunodeficiency Virus (AIDS) Statistics

National HIV/AIDS statistics indicate that adolescents and young adults represent important risk groups. The Centers for Disease Control and Prevention (CDC) report that as of June 30, 1997, there were 612,078 reported cases of AIDS in the United States, with 2953 in the 13–19-year-old age group, and 22,070 cases in the 20–24-year-old age group (1). Owing to the long delay in developing symptoms associated with HIV infection, many of the young adults were probably infected during adolescence. The male/female ratio for AIDS cases is 1.6:1 for adolescents and 2.8:1 for young adults (20–24 years old), reflecting the increased number of young women with HIV in these age groups compared to adults (1). Estimates indicate that there are as many as two to three HIV-positive youth for every known case of AIDS (2). A 1996 report released by the White House Office of National AIDS Policy stated that

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25% of all new cases of HIV infection occur in young people between 13 and 20 years of age (3). Sexual exposures continue to account for the majority of adolescent AIDS cases (1). The majority of sexual risk for young men is through same-sex contact, and for young women, is heterosexual contact (1). HIV disease occurs disproportionately in black and Hispanic adolescents and young adults (1).

Special Issues for Adolescents

Adolescent subpopulations are particularly difficult to engage in the care needed for the diagnosis and treatment of HIV (4). Adolescents also are one of the most medically underserved populations in the United States (5). Even when physician-adolescent encounters occur, communication about HIV risk behaviors is frequently limited (6,7). In one study, fewer than half of the adolescents with histories of "survival sex," injection drug use (IDU), same-gender sexual behavior, or a sexually transmitted disease (STD) associated with genital ulcers or sores had sought or received help for these HIV-related issues (8). STDs are synergistic with HIV in terms of transmission and offer a marker of increased health risk behaviors (9,10). Taking risks and testing limits are necessary for normal adolescent psychosocial development. For most adolescents, however, these developmental tasks are accomplished without risk to health. When risk taking and limit testing include sexual risk behaviors, the chances of STDs and HIV increase. Developmentally appropriate and culturally competent HIV counseling and testing is particularly important for youth, since a significant number of young people state that they would commit suicide if they test HIV positive (11). Gay and bisexual adolescents have high rates of depression and a threefold increased risk in suicide intent and sevenfold increase in suicide attempts (12). Use of alcohol and other recreational drugs contributes substantially to potential HIV exposure (13,14), since both increase the likelihood of teens' participating in sexual risk behaviors and reduce the likelihood of condom use (15,16).

Homeless and Street Youth

Currently, there are between half a million and two million homeless and runaway teenagers in the United States (4). Many homeless youth have run away from family violence and sexual abuse or are "throw-away" youth because of issues such as sexual

orientation and pregnancy (4,17). Many of these adolescents exchange sex for food, shelter, or drugs to survive ("survival sex") (17-19). Homeless youth have particularly high seroprevalence rates (20) and require sensitive youth-oriented programs to connect them to care (21-23). Specialized training is required for health care providers to reach these populations (6,7,21,24-28).

Previous Efforts

The knowledge and experience of earlier programs for HIV-positive and homeless youth were helpful in the development of the SPNS Program's adolescent models of care. The Larkin Street Youth Center in San Francisco established a central drop-in center and medical clinic that demonstrated the importance of basic needs (such as food, clothing, and shelter) as a stepping stone to health care (28). The Adolescent AIDS Program at Montefiore Medical Center in the Bronx showed the importance of outreach to referring agencies to connect youth to care (29,30). The Los Angeles system of care for homeless youth discovered the importance of collaborating with agencies in a defined geographic area solidified by frequent network functions to care for homeless and street youth (31-34). CDC-funded programs found that HIV interventions in specific communities needed to be "based on local needs" using an empirically tested theoretical framework to develop prevention activities (35). Guidelines from the Title I programs for evaluation of local HIV service delivery programs emphasize the need for both qualitative and quantitative methods to evaluate service provision, consumer opinion, and HIV-related outcome measures (36). These prior efforts demonstrated important components and evaluation mechanisms for the SPNS Program's Adolescent Initiative.

Theoretical Background

Adolescents engage in clusters of HIV risk behaviors, often in association with other health-risk and problem behaviors, such as drug and alcohol use (13,14,31,32,37,38). Many of the effective health education programs aimed at preventing or changing adolescents' health-impairing behaviors have been based on social cognitive theory (39). According to social cognitive theory, interventions aimed at motivating self-directed behavior changes, thereby reducing the risk that adolescents will engage in HIV risk behaviors, should include four components: (a) in-

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formation designed to increase awareness and knowledge of the consequences of behavior; (b) social and self-regulative skills development aimed at translating knowledge into preventive action; (c) opportunities for guided practice and corrective feedback in applying the skills in high-risk situations, resulting in skills enhancement and resilient self-efficacy; and (d) changes in social norms and social supports for desired behavior change (39). Many programs emphasize all four of these components through youth involvement in program design, management, outreach, and skills building risk-reduction efforts (40-42). Peer educators can help shift normative behaviors and integrate skills into the individual's values (33,43-45). Interactive skills-based education has greater impact on behavior than knowledge-based education (46,47).

The Need for Outreach

Homeless adolescents are particularly difficult to treat because of their behaviors and vulnerabilities (4), the inability of providers to work with adolescents, and the legal status of adolescents in some states (48). Outreach has been shown to be effective for connecting homeless youth to services (20,22,31,49). Outreach programs are more effective when they are linked to integrated services including food, clothing, shelter, risk-reduction education, and health services (50). The CDC and others have reported that peers within the community should be recruited to deliver intervention messages and to reach less accessible populations (35,51-53), and help link hard-to-reach youth to services (54).

Issues of HIV Care

Once adolescents and young adults are connected to services, a balanced approach to HIV management is essential to maintain youth in care (29,55-57). The emphasis should be on continuing to engage youth in care rather than on obtaining particular laboratory results. Working with the adolescents to evaluate how tight a control of their infection they desire and enlisting their involvement in maintaining this control are essential (55,56). As in other chronic diseases, youth adherence to complex care plans is difficult and often not a high priority to the young person (55,56). Since resistance to antiretroviral medications develops so rapidly unless regimens are carefully followed, one should be careful not to eliminate medications which might later be useful (55,58,59). Providers should work with the young person to

balance personal issues and develop a care plan. These SPNS Program models of care provide a variety of culturally sensitive projects for at-risk populations which provide youth-oriented services, linked services networks, case management, and/or comprehensive HIV health care. Integration of culturally sensitive mental health and substance use care into all health care visits is important to serve vulnerable populations (60).

Models of Adolescent Care

Ten models of adolescent HIV care have been supported by the SPNS Program to demonstrate innovative concepts in youth-oriented HIV care. Those 10 models are described in the articles that follow. Several programs have developed linked services networks which cross institutional barriers. Many have demonstrated the importance of intensive case management to coordinate and maintain youth in care. Two programs are managed by young people and offer support to historically disenfranchised youth. Most of the programs contain youth advisors, providers, and educators. Outreach, HIV counseling and testing, and interagency referrals are important gateways to case identification and early intervention. Many programs link adolescents and young adults to comprehensive services, which include HIV care. Comprehensive care is more appealing to young people than specialized clinics or locations (54). Integrating ideas from youth themselves into program development improves the accessibility and appeal to young people who frequently would not obtain care.

Based on the literature reviewed above and the findings of the 10 grantees described below, it is very important to emphasize the word "adolescent" in "adolescent models of care." These perspectives converge on the idea that programs for youth must have significant youth input in their design and continuing operations to be attractive to the clients they wish to serve. Because of their ages, young people may not have had technical training in many areas which are needed to build and sustain a program. Hence, it is essential that trusting partnerships be formed between youth and traditional professional service providers.

Description of 10 Models: The Consensus Model

In the next article (pages 11-27), Huba and Melchior described a consensus model for the SPNS Program's

adolescent projects that summarize some major themes explored later in this issue. Tables are included which show the ways in which the five major consensus elements were expressed in the different projects and ways that future projects might implement these concepts. While there are several consistent themes among the programs, each model addresses the issues somewhat differently and offers unique solutions to the question of how to develop youth-friendly services that will attract large numbers of clients, keep them engaged in care, and produce useful medical and other outcomes. This synopsis is provided so that the reader can choose to read about models that are of particular interest or can compare the models as they are reviewed. In terms of their overall functional similarities, the projects can be clustered into four major groups. Those groupings are as follows:

I. Models stressing youth involvement

- Bay Area Young Positives (pp. 28–36)
- Health Initiatives for Youth (pp. 71–82)

II. Models stressing outreach to bring youth into services

- Bridgeport's Team Outreach and Primary Services (TOPS) Project (pp. 49–58)
- The University of Alabama Teenage Access Project (pp. 107–114)

III. Models stressing case management and linkage to services

- The Indiana Youth Access Project (pp. 83–95)
- Seattle YouthCare's Prevention, Intervention, and Education Program (pp. 96–106)
- The University of Minnesota Youth and AIDS Projects' Adolescent Early Intervention Program (pp. 115–121)

IV. Models stressing a comprehensive continuum of care for youth

- Boston HAPPENS Program (pp. 37–48)
- Childrens Hospital Los Angeles (pp. 59–70)
- Walden House (pp. 122–131)

National Evaluation

A special feature of the grant initiative was HRSA's decision to fund a national cross-cutting evaluation center. The Measurement Group has staffed this center throughout the history of the grants and helped develop, collect, and analyze standardized

information across sites. Some of these data are presented in the articles throughout this issue for the individual sites; the cross-cutting national results are available elsewhere (61–63). Fax-in forms and questionnaires can be obtained directly from the Measurement Group (5811A Uplander Way, Culver City, CA 90230) or on its Web site (<http://www.tmg-web.com>) (64–69). The evaluation modules are also published in the SPNS Program's reports (61–63). In addition, the three SPNS reports summarize the national data from their study of the infrastructure for adolescent services in their communities and cross-cutting analyses (61–63) and can be obtained from the Measurement Group.

Special thanks to the Special Projects of National Significance Program of the Health Resources and Services Administration for the support of these projects and the national evaluation center, the editorial board members for their careful reviews and assistance to the projects, and Maria Louni and Rebecca Lamm of Boston's Children's Hospital for coordination of the supplement. Also, special thanks to Robert H. DuRant, Ph.D., Barney Singer, JD, and George Huba, Ph.D., for their comments, and to Robin Guilfooy and Michelle McCarte of Children's Hospital, Boston, for preparation of the manuscript. This publication was supported in part by the Special Projects of National Significance Program's Project BRH 970155-04-0 and Project MCJ-MA259195 from the Maternal and Child Health Bureau, Health Resources and Services Administration, Department of Health and Human Services. This publication's contents are solely the responsibility of the author and do not necessarily represent the official view of the funding agencies.

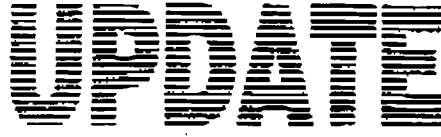
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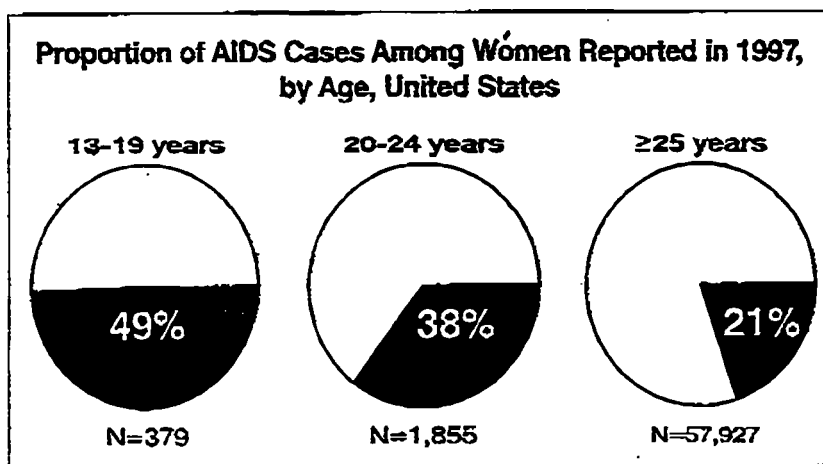
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Young People at Risk – Epidemic Shifts Further Toward Young Women and Minorities

In the United States, HIV-related death has the greatest impact on young and middle-aged adults, particularly racial and ethnic minorities. HIV is the second leading cause of death for Americans between the ages of 25 and 44. It is the leading cause of death for African-American men and women in this age group. Many of these young adults likely were infected as teenagers. It is estimated that half of all new HIV infections in the United States are among people under 25, and the majority of young people are infected sexually.



Among 13- to 24-year-olds, 52% of all AIDS cases reported among males in 1997 were among young men who have sex with men (MSM); 10% were among injection drug users (IDUs); and 7% were among young men infected hetero- sexually. In 1997, among young women the same age, 49% were infected heterosexually and 13% were IDUs.

Because of the long and variable time between HIV infection and AIDS, surveillance of HIV infection provides a much clearer picture of the impact of the epidemic in young people than surveillance of AIDS cases. CDC recently announced results from a study that analyzed data from 25 states* that had integrated HIV and AIDS reporting systems for the period between January 1994 and June 1997. In these states, young people

* Alabama, Arizona, Arkansas, Colorado, Idaho, Indiana, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, Virginia, West Virginia, Wisconsin, Wyoming

(aged 13 to 24) accounted for a much greater proportion of HIV than AIDS cases (14% versus 3%). Nearly half (44%) of the HIV infections in that age group were reported among young females, and well over half (63%) were among African Americans. The study also showed that even though AIDS incidence (the number of new cases diagnosed during a given time period, usually a year) is declining, *there has not been a comparable decline in the number of newly diagnosed HIV cases among young people.*

How Can We Improve Prevention Programs for Young People?

CDC's role is to provide communities with the best available science to guide comprehensive HIV prevention programs. As part of this process, CDC conducts an ongoing research synthesis process that seeks to identify the most recent and relevant scientific findings from around the world, both published and unpublished, and make them available to prevention program planners. CDC constantly combs the scientific literature, reviews domestic and international scientific databases, and speaks with colleagues around the world to identify effective interventions for all populations at risk, including youth.

Young people's prevention needs are as diverse as young people themselves. To reduce the toll AIDS takes on young Americans, a wide range of activities must be implemented.

Comprehensive, ongoing prevention efforts are needed for each group entering adolescence and young adulthood. All groups that exert influence over young people – families, schools, peer groups and social systems, youth-serving agencies, religious organizations – must be involved.

- **School-based programs.** Because risk behaviors do not exist independently – for example, a young person's ability to resist peer pressure and social influences to smoke are integrally related to the ability to say no to risky sexual activity – topics such as HIV, STDs, unintended pregnancy, tobacco, nutrition, and physical activity should be integrated and ongoing for all students in kindergarten through high school. The specific scope and content of school health programs, especially those related to HIV and STD prevention, should be locally determined and consistent with parental and community values. For communities and schools that seek assistance, CDC and other organizations have identified elements of successful HIV education programs, and this information is widely available from CDC and other youth-serving agencies. **Research has clearly shown that the most effective programs are comprehensive ones that include a focus on delaying sexual behavior and provide information on how sexually active young people can protect themselves.**
- **Community-based programs.** Addressing the needs of adolescents who are most vulnerable to HIV infection, such as homeless or runaway youth, juvenile offenders,

or school drop-outs, is critically important. For example, a 1993 serosurveillance survey of females in four juvenile detention centers found that between 1% and 5% were HIV infected (median 2.8%). Increased HIV seroprevalence rates may be associated with higher rates of drug injection or high-risk sexual practices in these populations of adolescents. Community outreach programs play an important role in reaching these young people.

- **Sustaining prevention efforts for young gay and bisexual men.** Targeted, sustained prevention efforts are urgently needed for young MSM as they come of age and initiate high-risk sexual behavior. Ongoing studies show that both HIV prevalence and risk behaviors remain high among young MSM. In a sample of young MSM ages 15-22 in 6 urban counties, researchers found that, overall, between 5% and 8% were infected with HIV. HIV prevalence was higher among young African Americans (13%) and Hispanics (5%) compared with young white MSM (4%).
- **Need to address sexual and drug-related risk.** Many students report using alcohol or drugs when they have sex, and 1 in 50 high school students reports having injected an illegal drug. Surveillance data from the 25 states with integrated HIV and AIDS reporting systems between January 1994 and June 1997 showed that drug injection led to 6% of HIV diagnoses reported among those aged 13-24 during that time period, with an additional 57% attributed to sexual transmission (26% heterosexual, 31% from male-to-male sex).
- **Role of STD treatment in comprehensive HIV prevention programs for young people.** An estimated 12 million cases of STDs other than HIV are diagnosed annually in the United States, and about two-thirds (roughly 8 million) of those are among people under the age of 25. A large body of research has shown that biological factors make people who are infected with an STD more likely to become infected with HIV if exposed sexually; and HIV-infected people with STDs also are more likely to transmit HIV to their sex partners. Expanding STD treatment services is critical to reducing the consequences of these diseases and also helping reduce risks of transmitting HIV among youth.
- **Ongoing evaluation of factors influencing risk behavior.** To better understand adolescent behaviors and the impact of selected family, social, and cultural factors on risk behaviors, CDC conducts broad-based surveys of the extent of risk behaviors among young people, as well as focused studies of the factors contributing to risk and behavioral intent among specific groups of adolescents.

Six-year trends from the Youth Risk Behavior Survey (YRBS) show both a decline in sexual risk behaviors and an increase in condom use among sexually active young people. The percentage of sexually experienced high school students decreased from 54.1 percent in 1991 to 48.4 percent in 1997. During the same time period,

condom use among students who are sexually active increased from 46.2 percent to 53.8 percent. These findings represent a reversal in the trend toward increased sexual risk among teens that began in the 1970s and point to the success of comprehensive prevention efforts to both delay first intercourse among teens and increase condom use among young people who are sexually active. Despite this success, too many youth remain at risk. Expanded efforts are needed that build on knowledge to date and address the wide range of prevention needs among young people.

For young people, it is critical to prevent patterns of risky behaviors before they start. HIV prevention efforts must be sustained and designed to reach each new generation of Americans.



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Trends in Sexual Risk Behaviors Among High School Students — United States, 1991–1997

Each year, approximately three million cases of sexually transmitted diseases (STDs) occur among teenagers (1), and approximately one million become pregnant (2). Human immunodeficiency virus (HIV) infection is the sixth leading cause of death among persons aged 15–24 years in the United States (3). Unprotected sexual intercourse and multiple sex partners place young persons at risk for HIV infection, other STDs, and pregnancy. To determine trends in sexual risk behaviors among high school students, CDC analyzed data from the Youth Risk Behavior Survey (YRBS) for the years 1991, 1993, 1995, and 1997. This report summarizes the results of this analysis, which indicate that, from 1991 to 1997, the percentage of U.S. high school students who had ever had sexual intercourse decreased, and the prevalence of condom use among currently sexually active students increased.

The YRBS, a component of CDC's Youth Risk Behavior Surveillance System, measures the prevalence of health-risk behaviors among adolescents through representative national, state, and local surveys conducted biennially. The 1991, 1993, 1995, and 1997 national surveys used independent, three-stage cluster sampling to obtain representative cross-sectional samples of students in grades 9–12 in the 50 states and the District of Columbia. In 1991, 1993, 1995, and 1997, the sample sizes were 12,272, 16,296, 10,904, and 16,262, respectively; school response rates were 75%, 78%, 70%, and 79%, respectively; student response rates were 90%, 90%, 86%, and 87%, respectively; and overall response rates were 68%, 70%, 60%, and 69%, respectively.

For each of the four cross-sectional surveys, students completed a self-administered questionnaire that included questions about sexual intercourse, number of sex partners, and condom use. The wording of these questions was identical in each biennial survey. Sexual experience was defined as ever having had sexual intercourse, multiple sex partners as having had four or more sex partners during one's lifetime, current sexual activity as having had sexual intercourse during the 3 months preceding the survey, and condom use as having used a condom at last sexual intercourse among currently sexually active students. Data are presented only for non-Hispanic black, non-Hispanic white, and Hispanic students because the numbers of students from other racial/ethnic groups were too small for meaningful analysis.

Data were weighted to provide national estimates, and SUDAAN was used to calculate 95% confidence intervals and to conduct trend analyses. The relative percent

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change in behavior from 1991 to 1997 was calculated as the 1997 prevalence minus the 1991 prevalence divided by the 1991 prevalence and multiplied by 100. Secular trends were analyzed by using logistic regression analyses that controlled for sex, grade, and race/ethnicity and simultaneously assessed linear, higher order (i.e., quadratic and cubic), and overall time effects. Additional logistic regression models included significant time effects and their interactions with sex, grade, and race/ethnicity. For interactions that were significant ($p < 0.05$), posthoc analyses were used to examine subgroup differences.

Compared with 1991, the prevalence of sexual experience in 1997 decreased 11%. Logistic regression analysis indicated a significant linear decrease overall and among male students and white and black students ($p \leq 0.01$; Table 1). Among male students, sexual experience decreased 15% (from 57.4% to 48.8%); sexual experience among female students did not show a significant linear decrease. Sexual experience decreased 13% (from 50.0% to 43.6%) among white students and 11% (from 81.4% to 72.6%) among black students; sexual experience among Hispanic students did not show a significant linear decrease.

The prevalence of multiple sex partners decreased significantly overall (14%) (from 18.7% to 16.0%) and among male students ($p < 0.01$; Table 1). The prevalence of multiple sex partners among male students decreased 25% (from 23.4% to 17.6%); multiple sex partners among female students did not show a significant linear decrease. The overall trend did not differ among grade or racial/ethnic subgroups.

The proportion of students who reported current sexual activity did not change significantly over time. Among currently sexually active students, condom use increased 23%, a significant linear increase ($p \leq 0.001$; Table 1). The overall trend in condom use did not differ among sex, grade, or racial/ethnic subgroups.

Reported by: Div of Adolescent and School Health and Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion; Div of HIV/AIDS Prevention-Intervention, Research, and Support, Div of HIV/AIDS Prevention-Surveillance and Epidemiology, and Div of Sexually Transmitted Diseases Prevention, National Center for HIV, STD, and TB Prevention, CDC.

Editorial Note: The findings in this report indicate that fewer high school students are engaging in behaviors that place them at risk for HIV infection, other STDs, and pregnancy. The decrease in sexual experience represents a reversal of the increasing trend in sexual intercourse rates among adolescents that occurred during the 1970s and 1980s (4).

These survey findings are consistent with other national data that have shown stable rates of sexual experience and increasing use of condoms among adolescents during the 1990s (4,5). These behavioral changes also are consistent with recent reports describing national decreases in related health outcomes among adolescents. During 1993–1996, gonorrhea rates decreased 35% among males and 11% among females aged 15–19 years (6). During 1992–1995, pregnancy rates among females aged 15–19 years declined in all 43 states with available data (7). The decrease in sexual risk behaviors among high school students during 1991–1997 also corresponds to an increase in the percentage of high school students who received HIV/AIDS education in school (from 83.3% in 1991 to 91.5% in 1997) (CDC, unpublished data, 1998).

The findings in this report are subject to at least three limitations. First, these data apply only to adolescents who attend high school. In 1996, 5% of persons aged 14–17 years were not enrolled in school (8). These adolescents are more likely to be

*Sexual Risk Behaviors — Continued***TABLE 1. Percentage of high school students who reported sexual risk behaviors, by sex, grade, race/ethnicity, and survey year — United States, Youth Risk Behavior Survey, 1991, 1993, 1995, 1997** *

	Survey year	Ever had sexual intercourse		Four or more sex partners during lifetime		Currently sexually active*		Condom use during last sexual intercourse†	
		%	(95% CI)‡	%	(95% CI)	%	(95% CI)	%	(95% CI)
Sex									
Male	1991	57.4	(±4.1)	23.4	(±3.0)	36.8	(±3.4)	54.5	(± 3.8)
	1993	55.6	(±3.5)	22.3	(±2.7)	37.5	(±3.0)	59.2	(± 3.8)
	1995	54.0	(±4.7)	20.9	(±2.6)	35.5	(±3.5)	60.5	(± 4.3)
	1997	48.8	(±3.4)	17.6	(±1.5)	33.4	(±2.6)	62.5	(± 2.8)
Female	1991	50.8	(±4.0)	13.8	(±1.8)	38.2	(±3.4)	38.0	(± 4.3)
	1993	50.2	(±2.5)	15.0	(±1.9)	37.5	(±1.8)	46.0	(± 2.8)
	1995	52.1	(±5.0)	14.4	(±3.5)	40.4	(±4.2)	48.6	(± 5.2)
	1997	47.7	(±3.7)	14.1	(±2.0)	36.5	(±2.7)	50.8	(± 3.0)
Grade									
9	1991	39.0	(±5.0)	12.5	(±2.9)	22.4	(±3.9)	53.3	(± 6.2)
	1993	37.7	(±4.2)	10.9	(±2.0)	24.8	(±3.2)	61.6	(± 5.7)
	1995	36.9	(±5.9)	12.9	(±3.0)	23.6	(±4.0)	62.9	(± 5.5)
	1997	38.0	(±3.8)	12.2	(±2.5)	24.2	(±3.3)	58.8	(± 5.6)
10	1991	48.2	(±5.7)	15.1	(±2.8)	33.2	(±4.6)	46.3	(± 4.7)
	1993	46.1	(±3.6)	15.9	(±2.0)	30.1	(±3.0)	54.7	(± 4.5)
	1995	48.0	(±5.1)	15.6	(±2.0)	33.7	(±3.1)	59.7	(± 4.6)
	1997	42.5	(±4.3)	13.8	(±2.7)	29.2	(±2.9)	58.9	(± 3.6)
11	1991	62.4	(±3.2)	22.1	(±3.6)	43.3	(±3.6)	48.7	(± 5.8)
	1993	57.5	(±3.5)	19.9	(±3.1)	40.0	(±3.6)	55.3	(± 3.0)
	1995	58.6	(±5.0)	19.0	(±3.7)	42.4	(±4.4)	52.3	(± 6.2)
	1997	49.7	(±5.2)	16.7	(±2.9)	37.8	(±4.8)	60.1	(± 5.2)
12	1991	66.7	(±4.4)	25.0	(±4.0)	50.6	(±4.5)	41.4	(± 3.8)
	1993	68.3	(±4.6)	27.0	(±3.6)	53.0	(±3.9)	46.5	(± 4.0)
	1995	66.4	(±4.0)	22.9	(±3.5)	49.7	(±3.9)	49.5	(± 4.4)
	1997	60.9	(±6.5)	20.6	(±3.5)	46.0	(±5.0)	52.4	(± 3.5)
Race/Ethnicity[§]									
Non-Hispanic white	1991	50.0	(±3.2)	14.7	(±1.8)	33.9	(±2.8)	46.5	(± 4.6)
	1993	48.4	(±2.8)	14.3	(±2.1)	34.0	(±2.1)	52.3	(± 3.9)
	1995	48.9	(±5.0)	14.2	(±2.4)	34.8	(±3.9)	52.5	(± 4.0)
	1997	43.6	(±4.2)	11.6	(±1.5)	32.0	(±3.1)	55.8	(± 2.0)
Non-Hispanic black	1991	81.4	(±3.2)	43.1	(±3.5)	59.3	(±3.8)	48.0	(± 3.8)
	1993	79.7	(±3.2)	42.7	(±3.8)	59.1	(±4.4)	56.5	(± 3.8)
	1995	73.4	(±4.5)	35.6	(±4.4)	54.2	(±4.7)	66.1	(± 4.8)
	1997	72.6	(±2.8)	38.5	(±3.6)	53.6	(±3.2)	64.0	(± 2.8)
Hispanic	1991	53.1	(±3.5)	16.8	(±2.6)	37.0	(±3.6)	37.4	(± 6.2)
	1993	56.0	(±4.1)	18.6	(±3.1)	39.4	(±3.7)	46.1	(± 4.4)
	1995	57.6	(±8.6)	17.6	(±3.7)	39.3	(±7.1)	44.4	(±11.1)
	1997	52.2	(±3.6)	15.5	(±2.4)	35.4	(±3.9)	48.3	(± 5.6)
Total									
	1991	54.1	(±3.5)	18.7	(±2.1)	37.4	(±3.1)	46.2	(± 3.3)
	1993	53.0	(±2.7)	18.7	(±2.0)	37.5	(±2.1)	52.8	(± 2.7)
	1995	53.1	(±4.5)	17.8	(±2.6)	37.9	(±3.4)	54.4	(± 3.5)
	1997	48.4	(±3.1)	16.0	(±1.4)	34.8	(±2.2)	56.8	(± 1.6)

* Sexual intercourse during the 3 months preceding the survey.

† Among currently sexually active students.

‡ Confidence interval.

§ Numbers of students in other racial/ethnic groups were too small for meaningful analysis.

Sexual Risk Behaviors — Continued

sexually experienced and to have had multiple sex partners than those adolescents who are enrolled in school (9). Second, the extent of underreporting or overreporting cannot be determined, although the survey questions demonstrate good test-retest reliability (10). Finally, the survey provides no information on socioeconomic status and other variables that might explain subgroup differences.

The decreases in sexual risk behaviors and the corresponding improvements in reproductive health outcomes among adolescents are the result of broad efforts by parents and families; schools; community-based organizations; the religious community; the media; federal, state, and local government agencies; and adolescents. The dual approach of delaying first intercourse among all adolescents and increasing condom use among those who are sexually active has succeeded in reducing overall risk through improvements in both behaviors. Despite these findings, decreases in sexual experience and multiple sex partners were not found among all subgroups of students, and the percentage of currently sexually active students remained stable. Many adolescents remain at risk for HIV, other STDs, and unintended pregnancy. Expanded efforts are required of families, schools, and other social institutions that affect adolescents to achieve continued reductions in risk.

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