Racial/Ethnic Disparities in the HIV and Substance Abuse Epidemics: Communities Responding to the Need

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SYNOPSIS

In 1998, community leaders prompted members of the Black and Hispanic Congressional Caucuses to urge President Clinton to declare HIV/AIDS a crisis in the African American and Latino communities; their advocacy resulted in the formation of the Minority AIDS Initiative. As part of this initiative, the Center for Substance Abuse Prevention (CSAP) of the Substance Abuse and Mental Health Services Agency funded the Substance Abuse and HIV Prevention Youth and Women of Color Initiative (CSAP Initiative). The CSAP Initiative is the first major federal effort to develop community-based integrated HIV and substance abuse prevention approaches targeting racial/ethnic populations that have been disproportionately impacted by HIV/AIDS. This article describes the current state of HIV prevention research involving racial/ethnic minority populations and the current status of the CSAP Initiative. The data collected through the CSAP Initiative, implemented by 47 community organizations, will help to fill the existing knowledge gap about how to best prevent HIV in these communities. This data collection effort is an unparalleled opportunity to learn about risk and protective factors, including contextual factors, that are critical to the prevention of HIV/AIDS in African American, Latino, and other racial/ethnic minority communities but that are often not investigated.

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Despite recent trends demonstrating a reduction in HIV seroconversion rates among certain groups in the United States, the Centers for Disease Control and Prevention (CDC) reports that HIV/AIDS rates among racial/ethnic minority groups remain disproportionately high.[1] Although racial/ethnic minority populations represent only 30.9% of the US population,[2] 61.4% of people in the US living with AIDS in 1999 were members of racial/ethnic minority groups. Blacks and Latinos in particular have been devastated by this epidemic; while blacks and Latinos each represent approximately 12.5% of the US population,[2] 40.6% of AIDS patients in the US were black in 1999 and 19.7% were Latino.[1]

The bleak HIV/AIDS epidemiological profile of minority communities spurred a contingent of 33 community leaders, under the leadership of Benny Primm, MD, to write to the Honorable Louis Stokes (D-OH), the ranking minority member of the House Appropriations Committee and Chair of the Congressional Black Caucus Health Braintrust. The expert testimonies given by Dr. Primm and his colleagues at the spring 1998 meeting of the Health Braintrust prompted members of both the Black and Hispanic Congressional Caucuses to urge President Clinton to declare HIV/AIDS "a particularly severe and ongoing crisis in the African American and Latino communities and in other communities of color," which resulted in a $156 million FY 1999 appropriation for the Minority AIDS Initiative.

This article describes the current status of one of the programs funded under the Minority AIDS Initiative, the Substance Abuse and HIV Prevention Youth and Women of Color Initiative (CSAP Initiative). Funded by the Center for Substance Abuse Prevention (CSAP) of the Substance Abuse and Mental Health Services Administration (SAMHSA), this program represents the largest effort to date to develop and test the effectiveness and efficiency of community-based integrated HIV and substance abuse prevention interventions in racial/ethnic minority communities. Two unique aspects of the CSAP Initiative are its focus on (*a*) addressing drug use–related HIV risk and (*b*) substance use and HIV prevention among racial/ethnic minority women and young people, populations neglected in many previous efforts.

To describe the needs addressed by the CSAP Initiative, this article will: first, present the epidemiology of HIV and substance abuse in racial/ethnic minority populations; second, summarize what is known from HIV prevention research about HIV risk and resiliency factors among and prevention efforts directed toward racial/ethnic minority women and young people; third, describe the Initiative's history and focus and the research information that it is expected to generate; finally, discuss the implications of the CSAP Initiative and its potential utility as a model for other public health programs.

EPIDEMIOLOGY: AIDS AND SUBSTANCE ABUSE IN RACIAL/ETHNIC MINORITY COMMUNITIES

National surveillance data demonstrate the disproportionate impact HIV/AIDS has had on racial/ethnic minority women and young people. Black and Latina women have been particularly hard hit by the epidemic. Although Blacks and Hispanics each account for 12.5% of the US population,[2] 81.1% of adult/adolescent females newly diagnosed with AIDS in 1999 were black or Latina (63.4% were black, and 17.7% Latina).[1] Of adult/adolescent females newly diagnosed with AIDS in 1999, 17.4% were white.[1] AIDS incidence data from 1999 also indicate that while adult/adolescent women represented fewer than one-fourth (24.1%) of newly diagnosed AIDS cases, more than one-third of women newly diagnosed with AIDS (37.4%) were younger than age 25.[1] Among both males and females, many become infected with the virus at an early age; 12.8% of men and 15.1% of women diagnosed with AIDS in the US by June 2000 were age 29 or younger,[1] indicating that for many seroconversion was likely to have occurred in adolescence. Further, analysis of AIDS deaths by race/ethnicity and age at death reveals that blacks and Latinos were twice as likely as whites to have died by age 29 through June 2000.[1]

Data from SAMHSA also reveal the racial/ethnic disparity in the US substance abuse epidemic. Findings from the 1999 Household Survey of Drug Abuse demonstrate that current illicit drug use rates are higher among blacks (7.7%), Native Americans/Alaskan Natives (10.6%), and bi/multiracial Americans (11.5%) than among white Americans (6.6%), with these same minority populations reporting greater needs for drug treatment.[3] Similarly, alcohol abuse is higher among racial/ethnic minority groups, with Mexican Americans reporting the highest rates of heavy alcohol use (6.9%) and Native Americans (5.6%) and Mexican Americans (5.6%) reporting the highest rates of alcohol dependence.[3] Drug-related morbidity and mortality also disproportionately affect racial/ethnic minorities; in 1999, 44.1% of drug episode cases in emergency departments were among non-whites, among whom 24.0% were black.[4] Medical examiner data on drug-related deaths in 1999 reveal similar findings: 39.6% of decedents were non-white, and 25.9% of non-white decedents were black.[5]

While substance abuse problems continue in mi-

nority communities, access to drugs appears to be facilitated while access to early intervention is less likely. Recent Household Survey of Drug Abuse data reveal that, while blacks, Native Americans, and Latino adolescents were each twice as likely as whites to report having been approached by someone selling drugs in the past year, white adolescents were more likely to have received alcohol or drug education at school.[3]

As with the HIV epidemic, while the numbers of substance abuse cases may be greatest among men, the substance abuse epidemic heavily affects minority adolescents and women. Household Survey of Drug Abuse data show that although substance use among adolescents declined from 1998 to 1999, more than 10 million adolescents ages 12–20 had used alcohol in the past year; of these, 6.8 million reported being binge drinkers and 2.1 million met the criteria for heavy drinkers.[3] More than one-fourth (27.6%) of adolescents ages 12–17 reported "ever use" of illicit drugs, with 10.9% reporting illicit drug use in the past month. While males were more likely to report alcohol and illicit drug use, among 12- to 17-year-olds, males and females had comparable rates of current alcohol use (19.2% of males and 18.1% of females). And while substance use was generally low among pregnant women ages 15–44 years (3.4% reported illicit drug use in the past month, and 3.4% reported binge drinking in the past month), younger pregnant women (ages 15–17) were most likely to report substance use during pregnancy.[3]

The similarity in HIV and substance use/abuse epidemiologic trends for racial/ethnic minority women and adolescents is not surprising, as numerous studies reveal that substance use greatly affects HIV risk.[6–15] Yet, to date, few programs have been evaluated that address both substance use and HIV for women or adolescents. The majority of HIV prevention studies with substance users/abusers have focused primarily on adult males and injection drug users. However, women and adolescents are more likely to become infected with HIV via sexual contact than via injection drug use,[1] and injection drug use is considerably less common than other drug use among both groups. Substances such as alcohol and crack or cocaine, which are more commonly used by women and adolescents than other drugs,[3] continue to be ignored by the majority of HIV prevention programs for adolescents and women.

HIV RISK FACTORS

HIV risk factors for minority women

According to the published literature, sexual risk-taking behaviors such as non-use of condoms, recent and past sexually transmitted disease (STD), multiple partnering, and sex with high-risk partners (i.e., those who have extra-relationship female or male sex partners and/or engage in injection drug use and/or are HIV-positive and/or have had a known history of STDs) are more common among black and Latina women who are heterosexual, young, unmarried, and/or low-income.[16–21] Research also shows that individual-level cognitive-behavioral factors are related to sexual risk-taking for both female adults and adolescents.[16,22–28] These factors include safer sex behavioral intention, sexual self-efficacy, positive attitudes toward condoms, and higher HIV risk perceptions.

Dyadic relationship factors also impact women's sexual risk. Numerous studies reveal that women in monogamous relationships have lower HIV risk perceptions and are less likely to use condoms.[29–33] Further, ethnic minority women report that it is difficult to start condom use once the sexual relationship without condoms has already started.[34] African American adult and adolescent females reported in a study by Fullilove et al. that they view a true relationship as characterized by deep trust, which means trust your partner and do not use condoms.[10] For teens in this same study, this involved even greater risk, as "respectable" sexual behavior for that age group meant staying faithful even when the partner was not.

Even in situations in which the woman would like to use condoms, it may not be possible if the male partner is unwilling.[35,36] Studies show that male willingness to use condoms is predictive of condom use.[18] This appears to be especially important in relationships characterized by abuse of women by male partners. Studies show that women in abusive relationships are significantly less likely to use condoms (see Amaro and Raj 2000[37] and Heise et al. 1999[38] for reviews) and significantly more likely to have had an STD.[39]

In addition to abuse in current relationships, women's histories of physical and sexual abuse impact their HIV risk. Women with such childhood or adult abuse histories are more likely to engage in the sex trade, have multiple partners, engage in casual sex, become pregnant during adolescence, choose a high-risk partner, and abuse substances, including injection drugs.[40–45] These findings clearly demonstrate how substance abuse, violence against women, and HIV risk interact to harm women and adolescent girls.

Substance use, and especially abuse of alcohol and crack cocaine, has only recently begun to be addressed as a primary risk factor for women's HIV acquisition via heterosexual contact, and researchers have yet to focus on assessing these links among adolescent girls.

Although one recent clinic study with adult women found that illicit drug and alcohol use in itself did not usually result in unsafe or undesired sexual behavior,[46] most research indicates that illicit substance abuse increases women's risk for HIV.[7–14] However, limited data are available on the relationship between ethnic minority women's alcohol use and their subsequent sexual risk behavior. The only published study assessing this issue for racial/ethnic minority women in the US found that African American women reporting excessive alcohol use (≥20 days/month of use) were significantly less likely to use condoms in their sexual relationships.[27]

In contrast, numerous studies on the relationship between crack use and sexual risk-taking have focused on women. A qualitative study with African American women and adolescents found that the impact of crack use on HIV risk is an important issue for young women.[10] Raj et al. found in their assessment of HIV-related risk factors and behaviors among African American substance users and non–substance users that multiple partnering and STD histories were highest among female crack users, compared with alcohol/marijuana users and non-drug users.[12] This same study also revealed that inconsistency between condom intentions and condom use was highest among female crack users, indicating that these women wanted to use condoms but were unable to effectively use them at every experience of intercourse. Schwarcz et al.[14] and DeHovitz et al.[7] showed similar relationships between substance use and current STDs among black and Latina women Other studies revealed similar findings when assessing the relationship between crack use and HIV seroprevalence.[8,11] These studies suggest that high STD and HIV rates among female crack users are directly related to trading sex for drugs, and all of these issues—crack use, sexual risk, and sex trade—are related to conditions of poverty and homelessness.[9,11] Little research to date has been done on other non-injecting drugs such as snorted heroin and methamphetamines; the injection drug use literature on women primarily focuses on women with drug-injecting partners.

Clearly, HIV prevention programs for racial/ethnic minority women and adolescent girls must address both the individual and the dyadic relationship to better meet the needs of these populations. Both the individual and relationship needs of these women and girls are clearly shaped by the issues of violence against women and substance abuse. Tailoring programs for these populations will mean addressing all of these issues simultaneously, and making interventions developmentally appropriate to meet the needs of women across the lifecycle.

HIV risk factors for minority adolescent males

There is a paucity of literature on HIV prevention among African American and Latino adolescent males. Therefore, much of our understanding of this population must rely heavily on inferences made from research with African American and Latino adult men and diverse racial/ethnic populations of adolescents. The lack of studies of these populations may be due to the fact that AIDS incidence rates are lower for adolescent males than for adolescent females.[1] However, adult males show much higher AIDS incidence rates than adult females,[1] indicating that early adolescence may be an important time to intervene with males. Further, substance use rates are considerably higher among male adolescents than among female adolescents,[3] and research shows that substance-using adolescents and young adults report higher-risk sexual behavior than those who do not use substances.[6,13,15,47] As among adolescent females, sexual risk-taking is high among adolescent males.[13,48] In addition, research reveals that individual and dyadic risk factors including safer sex self-efficacy, attitudes toward condoms, safer sex intentions, risk perceptions, engaging in casual relationships, and partner approval of condoms are also associated with sexual risk-taking among adolescent males.[13,48] For African American male as well as female adolescents, family protective factors also appear to reduce risk-taking,[49] while lack of protective factors appears to have the opposite effect. Kang et al. found in a study of incarcerated youth that young men whose parents and peers used drugs were more likely to engage in crack use, and crack use was related to higher sexual risk-taking.[50]

Incarcerated males appear to have high rates of both substance abuse and HIV risk behavior. Robles et al. found in a Latino male sample that incarceration was associated with chronic drug use and positive HIV serostatus.[51] Morris et al. found that incarcerated adolescents reporting recent alcohol use were more likely to report a greater number of sex partners, pregnancy, and sexually transmitted diseases than those who did not recently use alcohol.[52] Magura et al. found low rates of self-reported condom use among incarcerated adolescent males and very high rates of substance use, with approximately 50% reporting crack use.[48] Kang et al.'s study with incarcerated adolescent males also found that sexual risk-taking and substance abuse risk are not only related to each other but also positively related to other behavioral measures, including arrest records and school dropout rates.[50] Their study, as well as others with homeless/runaway and school populations[44,47] have found that substance abuse was associated with history of sexual abuse and/or physical abuse,

both of which were also related to greater sexual risk-taking. Among male crack users and prison inmates, sexual activity with male partners often occurs among those who may not otherwise identify as gay or bisexual. This is an important issue to consider, as there is a paucity of research on African American adolescent males who have sex with males, while a large proportion of young African American men who have AIDS contracted the virus through sexual contact with an infected male partner.[1] The research again demonstrates the need for multilevel approaches to address risk for individuals in context, accounting for current and past experiences.

While much of the above-cited research assumes male-female partnership, HIV exposure data for adolescent males indicate that the majority were exposed to the virus during sexual contact with an infected male partner.[1] HIV risk behaviors may be particularly high among adolescent males because general risk-taking is high.[52,53] Rotheram-Borus et al., in a study with African American and Latino gay and bisexual adolescent males, found that a major HIV risk factor for these young men was engaging in prostitution.[53] Results from the Massachusetts Youth Risk Behavior Survey reveal that gay and bisexual youth not only initiate sexual and substance use behaviors at an earlier age than other young people; they also maintain these risk behaviors at a higher level.[54]

Much of our understanding of the relationship between substance use and HIV risk among minority adolescent males is based solely on research with African American adolescents, as the field has ignored other racial/ethnic minority adolescent groups. Studies with young African American men reveal that those who use crack are more likely than those not using crack to report multiple partnering[55,56] and non-use of condoms,[57] which are known HIV risk factors.[58] African American males who smoke crack are also more likely to engage in injection drug use[59] as well as more likely to engage in sex with injection drug users.[56] They also report being more likely to engage in sex trade for drugs or money[9,55,56] and more likely to engage in unprotected sex during sex trade.[59] In addition, among incarcerated adolescent males, crack users are more likely to report having engaged in anal sex and frequent sex with female partners.[50] These findings indicate a strong relationship between crack use and HIV risk among African American males.

Gender issues also impact HIV risk for African American adolescents, for both females and males who have sex with females. A recent qualitative study revealed that African American male adolescents reported feeling at risk from women due to their general distrust of women.[60] These young men expressed distrust of women, who might want to become pregnant or intentionally infect them with HIV. At the same time, these African American male adolescents reported feeling that if a partner asks to use condoms, it is a sign that she is infected or does not trust him. Studies with African American adult males revealing similar findings indicate that safer sex attitudes and behavior of men may begin during adolescence.[61]

Whitehead suggests that African American men's investment in gender roles stems from their lack of sociopolitical and economic power in society.[61] According to Whitehead, these issues have heightened since the introduction of crack use in inner-city communities.[61] In the 1980s, as economic power diminished in lower-income African American communities, drug use and violence increased. While crack sales, as well as the sale of other drugs, provided economic power, African Americans were disproportionately imprisoned on drug-related charges. Overall the literature reveals that for adolescent males, individual and dyadic factors may place them at risk for HIV infection. However, situational factors, such as lack of family involvement and substance use/abuse, and structural issues, such as lack of economic opportunities and high incarceration rates, are contributing factors for the disproportional impact of AIDS on racial/ethnic minority males. Hence, to better address HIV risk for these populations, programs must be developmentally and culturally tailored, and must focus on the multiple facets of risk-taking among at-risk adolescents.

HIV INTERVENTIONS FOR ADOLESCENTS AND WOMEN: REVIEW OF THE LITERATURE

A review of the published literature on evaluations of HIV prevention programs demonstrates that effective programs for women and youth have utilized cognitive-behavioral theories and strategies.[62–70] Specifically, effective HIV prevention programs for women and youth offer safer sex education and behavioral skills training. Effective programs for ethnic minority women were primarily community-based multisession programs for all-female groups.[65] Identified effective programs for adolescents also tended to be multisession programs; however, the majority of these were school-based and mixed-gender,[65] although some were community-based as well. While these identified effective programs have been modestly effective in producing behavioral change for women and adolescents, the vast majority do not address contextual issues related to sexual risk-taking.[65] Data on risk factors suggest that addressing contextual factors such as violence against

women, the family environment, and related risk-taking behaviors including substance use, might enhance the effectiveness of prevention programs.

Recently, more HIV prevention programs have addressed related substance use/abuse issues, and vice versa. Needle exchange programs, in particular, have been well researched to determine if they are able to reduce HIV seroconversion rates. Studies have found that needle exchange programs can cost-effectively reduce seroconversion rates in communities without increasing injection drug use.[71–73] They also provide an entry into drug treatment.[73,74] A recent review of HIV risk-reduction outreach programs for injection drug users found that such programs reduced needle-related HIV risk (reduced use of unclean needles and injection equipment, increased needle cleaning, and reduced needle sharing) and reduced injection drug and crack use.[74] The review also found that these programs increased the use of safer sex practices including use of condoms, but that overall sexual risk remained high among the study samples.

A number of studies of HIV prevention programs for substance users have demonstrated little or no change in sexual risk behaviors but a decline in drug-related HIV risk behavior. A study with pregnant injection drug users on methadone maintenance found that a multisession cognitive skill-building program yielded a reduction in use of unclean needles but no effect on sexual behavior.[75] A 21-day inpatient detoxification program reduced relapse rates among program participants, but, again, no effect was seen on HIV-risk sexual behaviors.[76] Nyamathi et al.'s study of an integrated HIV and substance abuse intervention with homeless and drug-addicted women in treatment settings and homeless shelters also showed reductions in substance use but not in sexual risk-taking.[77] Studies with out-of-treatment injection and non-injection drug users have elicited similar negative findings.[78–80]

Nonetheless, some studies of HIV prevention programs for substance users have demonstrated success in reducing sexual risk; much of this research has been conducted with women. Eldridge et al.'s study of women entering inpatient drug treatment showed that although both education-only and behavioral skill-building groups resulted in reduction in drug use, only the members of the safer sex behavioral skill-building group reported an increase in condom use following program involvement.[81] Other studies with crack-injecting women also showed that programs that included behavioral skill-building and addressed both substance use/abuse and HIV risk resulted in reductions in both drug use and HIV-risk behaviors.[82,83] Studies with incarcerated women also demonstrated some risk reduction. Vigilante at al.'s intervention designed to reduce recidivism in incarcerated women via a discharge plan and support from a physician and social worker resulted in lower recidivism.[84] The authors suggest that lower recidivism may be indicative of lower risk, as sex trade and drug use are primary reasons women in the study had been imprisoned. El-Bassel et al.'s study assessing the effectiveness of HIV skill training and social support with imprisoned drug-abusing women also demonstrated an increase in safer sex practices among program participants; drug use was not measured.[85]

In contrast to large numbers of integrated substance use and HIV prevention programs for adults, little work has been conducted to address this need in adolescents. This may be attributable to the fact that substance abuse treatment programs and needle exchange programs are the primary sites in which integrated prevention efforts are housed, and substance abuse programs tailored to adolescents are less common than those for adults. Only one report on an integrated program for adolescents was identified in the literature. St. Lawrence et al. assessed the effectiveness of a behavioral skills program in reducing sexual risk-taking among adolescents in drug treatment.[86] Program participants reported reduced rates of engaging in unwanted sex, sex trade, sex while using substances, and sex with a risky partner by program completion. However, this study had no comparison group, and its findings may be attributable to the drug treatment program rather than to the skill-building program.

This review of the literature suggests that educational and behavioral skills programs that address both substance use and HIV prevention may result in behavioral change related to both substance abuse and HIV risk. However, as the studies cited report on six-month follow-ups at maximum, we do not yet know if maintained behavioral change is a consequence of these programs. Additionally, these programs have been limited primarily to institutional settings (e.g., prisons, shelters, treatment facilities), limiting the generalizability of their findings to community-based settings such as public housing, churches, or community-based organization Further, culturally tailored community-based approaches have been sadly lacking despite the fact that these approaches are viewed as a hallmark of effective HIV prevention.[87,88]

THE CSAP INITIATIVE

The CSAP Initiative is the first major federal effort to develop community-based, integrated HIV and substance abuse prevention approaches targeting racial/

ethnic populations that have been disproportionately impacted by HIV/AIDS. Recipients of Minority AIDS Initiative funding under the CSAP Initiative are organizations that provide HIV/AIDS services to racial and ethnic minorities: community-based service providers, research institutions, minority-serving college and universities, health care organizations, state and local health departments, and correctional institutions.

As outlined in the SAMHSA Guidance for Applications (GFA) 99-03, Cooperative Agreements with funded organizations have three purposes: (*a*) To increase the capacity of racial/ethnic minority communities to meet the needs related to the prevention of substance abuse and HIV/AIDS; (*b*) To assist community services to document and assess the effectiveness and efficiency of the interventions implemented; and (*c*) To facilitate the dissemination of results from these target population–appropriate interventions to improve provider practice.[89]

The GFA also described two core goals of the program: (*a*) To increase the prevention capacity of communities, "especially with respect to provision of substance abuse and HIV/AIDS prevention services that are age- and language-appropriate, culturally adapted, as well as appropriate according to gender and sexual orientation for African American, Hispanic/Latino, other racial/ethnic minority youth, and minority women and their children"; (*b*) To "promote the selection, adoption/adaptation, implementation, and evaluation of the effectiveness of integrated substance abuse and HIV/AIDS prevention interventions that are age and language appropriate, culturally adapted, and gender- and sexual orientation-specific."

Description of funded community interventions

The Table shows the 47 agencies funded under the CSAP Initiative. These agencies are all community organizations, or collaborations in which community organizations deliver the prevention services. Of these funded agencies, 54% serve predominately African-American communities, 6% Latino communities, 38% mixed minority communities, and 2% Native American communities. More than half of the agencies (57%) target minority adolescents. Approximately 25% serve women only, and another 16% serve families, while 9% serve diverse populations. Intervention strategies used by the agencies include family strengthening, street outreach, and peer education models, with two-thirds of the agencies using a combination of these strategies as their approach. The programs are delivered from a diverse set of venues including schools, churches, substance abuse treatment centers, health agencies, and community agencies.

Given the scarcity of science-based interventions that combine HIV/AIDS and substance abuse prevention strategies,[1,90,91] programs funded under the CSAP Initiative have typically pulled together core components of empirically validated substance abuse prevention and HIV/AIDS prevention interventions to develop their approaches. A few programs have adapted one of the few science-based programs that were specifically designed for minority communities to fit the cultural and community contexts of their participants.[92]

However, while the programs may vary in strategies, they target many of the same risk factors in their prevention curricula. For youth programs, the emphases are (*a*) respect for self and peers, (*b*) knowledge of HIV transmission routes, (*c*) improved communication with family or other trusted adults, (*d*) decision-making skills, (*e*) negotiation skills for refusing drugs, abstaining from sexual activity, or using condoms if sexually active. For adults, the program curricula address the following, depending on the needs of their target populations: (*a*) parenting skills, (*b*) improved communication with partners and children, including conflict management, (*c*) safer sex negotiation, (*d*) drug-related harm reduction strategies, (*e*) knowledge of HIV transmission routes, and (*f*) improved parenting skills around educating their own children about sex, HIV risk reduction, and resistance to substance use.

The science-based strategies that form the basis of the interventions delivered by the grantees are quite diverse. As such, they reflect the different audiences targeted by the CSAP Initiative as well as the multiple contexts in which HIV/AIDS and substance abuse risk factors are embedded. The science-based strategies from which the core components of these interventions were drawn included strategies specifically designed for youth of color such as Be Proud, Be Responsible[93] and Be a Responsible Teen,[94] school strategies such as Life Skills,[95] Families and Schools Together,[96] and Dare to Be You,[97] and family-centered approaches such as family strengthening.[98] Community outreach strategies similar to the Indigenous Leader[99] are also used by some of the programs funded by the CSAP Initiative. Programs that target lesbian, gay, bisexual, and transsexual populations are also using the Popular Opinion Leader approach.[100]

Evaluation of effectiveness

The CSAP Initiative included a federal mandate to conduct evaluations of individual programs as well as a cross-site evaluation. The program coordinating center, JSI Research & Training Institute in Boston, worked with the 47 organizations and CSAP to arrive at a

Table. Agencies funded under Substance Abuse Prevention/HIV Care Targeted Capacity Expansion Cooperative Agreements for African American, Hispanic/Latino and Other Racial/Ethnic Minority Youth, Women, and Minority Women and Their Children

Agency	*Age group (years)*	*Gender*	*Racial/ethnic group targeted*	*Language(s)*	*Setting*
Neighborhood Service Organization, Detroit, MI	12–19	Female, male	African American	English	Community
AMASSI/New Bridge Foundation/Sexual Minority Alliance of Alameda County, Oakland, CA	13–24	All	African American	English	Community
Operation Get Down, Detroit, MI	12–17	Female, male	African American	English	Community
Kansas City Free Health Clinic, Kansas City, MO	13–19	Female, male	African American	English	Church
Children's Aid Society, Homewood, AL	9–19	Female, male	African American	English	Community
Montgomery AIDS Outreach, Montgomery, AL	10–24	Female, male	African American	English	Community
Institute of Advanced Study of Black Family Life and Culture, Oakland, CA	17–35	Female	African American	English	Community
Pittsburg Pre-School Coordinating Council, Pittsburg, CA	9–12	Female, male	African American	English	Community
La Sima Foundation, Inc., Dallas, TX	School grades 4th–12th	Female, male	African American	English	Schools
National Association for the Advancement of Colored People, Houston, TX	9–19	Female, male	African American	English	Community
University of Texas Science Center at Houston, Houston TX	6–8	Female, male	African American	English	Community
Witchita State University, Wichita, KS	13–19	Female, male	African American	English	Community
Prototypes–Women's Link, Culver City, CA	Children 7–18; women ≥18	Female ≥7; male 7–18;	African American, Asian/Pacific Islander, Latina	English, Spanish	Community
Harlem United Community AIDS Center, New York, NY	Children 5–11; adolescents 12–20; adults 20–45	Female 5–45; male 5–11	African American, Latina	English	Community
Lesbian and Gay Community Services Center, New York, NY	Teens 13–20; parents ≥20	All	African American, Asian/Pacific Islander, Latino	English	Community
Family and Medical Counseling Service, Inc., Washington, DC	Children 3–14; women ≥18	Female ≥3; male 3–14	African American	English	Community
Whitman Walker Clinic, Washington, DC	≥18	Female	African American, Latina	English, Spanish	Community
Housing Works, New York, NY	Children 6–18; parents, grandparents ≥19	Female, male, transgender	People of color	ASL, English, Spanish	Community
Marion County Health Department/Indianapolis Health and Hospital Corporation, Indianapolis, IN	15–44	Female	African American, Latina	English, Spanish	Community
Brooklyn Pediatric AIDS Network/Kings County Hospital/ Research Foundation, SUNY Brooklyn, NY	Children 4–19; mothers ≥16	Female/male 4–19; mothers ≥16	African American, Caribbean origin, Latino	Creole, English, Spanish	Community
East Bay Perinatal Council, Richmond, CA	≥18	Female	African American	English	Community
Case Western Reserve University/University Hospitals–Cleveland Department of Family Medicine, Substance Abuse Initiative, Cleveland, OH	11–14	Female, male	African American	English	Community
Prevention Partnership, Chicago, IL	9–19	Female, male	African American	English	Community

(continued)

Table (continued)

Agency	Age group (years)	Gender	Racial/ethnic group targeted	Language(s)	Setting
Health Watch Information and Promotion Services, Brooklyn, NY	11–19	Female, male	African American, Latino	English	Community, mass media
Morehouse School of Medicine, Atlanta, GA	9–19	Female, male	African American	English	Schools
Council on Alcohol and Drugs, Norcross, GA	11–17	Female, male	African American	English	Churches, schools, prisons, YMCA
Families United/Research Foundation of SUNY Buffalo, Buffalo, NY	9–19	Female	African American/Latina	English, Spanish	Home
Greater Mount Calvary Holy Church, Washington, DC	All ages	Female	African American	English	Church
NYCHHC–Kings County Hospital Center, Brooklyn, NY	All ages	Female	African American, Caribbean origin, Latina	Creole, English, Spanish	Churches, community agencies
Connecticut Department of Mental Health and Addiction Services/Urban League, Hartford, CT	9–14	Female, male	African American	English	Churches
Unity Health System/St. Mary's Hospital Floor, Rochester, NY	8–10	Female, male	African American, Latino	English, Spanish	Schools
AIDS Consortia of Southeast Michigan, Detroit, MI	14–50	Female	African American	English	Community
Women's HIV/AIDS Prevention Program, AIDS Service Center, New York, NY	All ages	Female	African American, Latina	English, Spanish	Community
Amigos Volunteers in Education and Services Familias, Houston, TX	All ages	Female, male	Latino	English, Spanish	Community, cantinas
City of New Orleans, Mayor's Office of Health Policy, New Orleans, LA	≥14	Female, male	African American, Latino	English, Spanish	Community
Community Prevention Partnership, Neighborhood Unity Program, Reading, PA	≥18	Female	Latina	Spanish	Housing projects
Denver Area Youth Services, La Comunidad de Salud Avenue, Denver, CO	All ages	Female, male	Latino	Spanish	Community, housing projects, churches, homes
Latin American Youth Center, Washington, DC	11–18	Female, male	African American, Latino, Vietnamese	English, Spanish	Youth drop-in center, schools
Nez Perce Tribe, Students for Success, Lapwai, ID	9–18	Female, male	Nez Perce tribe	English	Rural tribal area
Southern Arizona AIDS Foundation, Tucson, AZ	13–15	Female, male	African American, Latino	English	Schools, community
WEATOC By and For Youth, Boston, MA	4–21	Female, male	African American, Latino	English	Community groups
Women in Need, Homeless Women of Color and their Children, New York, NY	18–54	Female, male	African American, Latino	English	Community
Women of Color AIDS Council, Dorchester, MA	≥18	Female	African American, Latina	English	Community
Department of Health, Administration for HIV/AIDS, Washington, DC	9–19	Male	African American	English	Schools
River Region Human Services, Jacksonville, FL	9–19	Female, male	African American	English	Schools
Concerned Medical & Health Care Professionals, Inc., Silver Springs, MD	9–19	Female, male	African American	English	Community
Health Outreach Project, Atlanta, GA	9–19	Female, male	African American	English	Community

consensus cross-site evaluation design and provide each program grantee with programmatic as well as evaluation-related technical assistance. All agencies are required to gather standardized information from participants in the intervention and from a comparison sample at the beginning of the intervention, at three months following pretest, and at nine months following pretest. Three versions of the cross-site evaluation surveys were created—one appropriate for adults, one for adolescents, and one for children. Each of these versions was translated into Spanish.

The purpose of the survey is to document the impact of the interventions in changing behaviors and attitudes related to substance abuse and HIV-risk behaviors. The survey also collects contextual information related to peers, school, family functioning, power within the primary partner relationship (adults only), migration, and acculturation. Specific behavioral outcomes measured by the survey include: substance use, number of sexual partners, types of sexual activity, and use of condoms. Specific cognitive outcomes measured include: perceptions of harm related to substance use or sexual behaviors, intention to use drugs or engage in sexual activity, attitudes about condoms, and condom self-efficacy. Improvement in knowledge about HIV transmission routes is also measured.

The survey also includes these specific contextual measures: quality of family/partner communication, history of sexual abuse and domestic violence (adults only), peer norms about drugs and sexual behavior (children and adolescents), school functioning (children and adolescents), attachment to neighborhood, and perceptions of neighborhood safety.

The cross-site evaluation survey was developed through a participatory process that included a request for topic suggestions and a review of drafts by all funded agencies, and identification and modification of survey questions by representatives of the children's programs and women's programs. The questionnaires were then pretested at several of the agencies using early program participants. In addition, expert consultants reviewed the questionnaires for issues related to cultural appropriateness, gay/lesbian perspectives, and age appropriateness. The questionnaires take on average 30 minutes to self-administer.

In addition to the standardized cross-site evaluation instrument, additional information about process outcomes and programmatic descriptions are collected through quarterly reports and site visits. Programs are also conducting their own local evaluations that are oriented to documenting the particular strengths and accomplishments of each of the agencies' efforts. The goals of the analysis of the cross-site data will be to identify which types of interventions, with which types of populations, under which types of circumstances/contexts, are most effective in producing particular outcomes.

CONCLUSION AND IMPLICATIONS

The Minority AIDS Initiative is bringing public attention to racial/ethnic disparities in the impact of HIV/AIDS. This mechanism, championed by the Black and Hispanic Congressional Caucuses, enables federal agencies to fund targeted prevention programs led by community agencies that can provide culturally and linguistically appropriate services in affected communities.[101] The CSAP Initiative, funded through the Minority AIDS Initiative, enables community organizations that are most familiar with affected populations to build capacity to provide HIV/AIDS prevention services. This targeted initiative is necessary because broader-based efforts have not resulted in adequate distribution of resources to these communities. The CSAP Initiative also includes an important evaluation component that will result in possibly the largest database to date on factors that affect HIV risk among African American, Latino, and other racial/ethnic minority groups.

Yet, while the current CSAP Initiative represents a critical step in building capacity for community HIV prevention, it alone will not be sufficient to stem the HIV/AIDS epidemic in racial/ethnic minority communities. Such an effort will need to be sustained and further developed over time based on established prevention principles. Further, prevention of HIV/AIDS in these communities will need to be accompanied by (*a*) increased access to drug abuse treatment and (*b*) improvement of the drug treatment system through support for evidence-based approaches to drug treatment.[102]

Similarly, the effort to enhance our scientific understanding of effective HIV prevention approaches with racial/ethnic minority populations must also be maintained and enhanced beyond the current CSAP Initiative. There is an urgent need for scientific data to inform the development and implementation of prevention approaches that are effective in reducing the HIV/AIDS epidemic in racial/ethnic minority communities. Insufficient attention has been given to understanding HIV prevention among African American, Latino and other racial/ethnic minority women and youth. While substance abuse is known to be closely related to the disproportionate impact of HIV in racial/ethnic minority communities, few programs have been evaluated that address both substance use and HIV risk for women or adolescents. Most intervention

studies that address the relationship of drug use and HIV have focused on injection drug use and have not demonstrated significant sexual risk reduction as a consequence of program participation. Yet the primary source of HIV infection for most women and adolescents is via sexual contact and drugs other than injection drugs (e.g., crack cocaine). We found few prevention efforts that could document success in reducing sexual and drug-use risk in these populations. The focus of the current CSAP Initiative on prevention approaches that integrate reducing risk for both HIV and substance abuse is greatly needed and likely to contribute important lessons on both effective and ineffective strategies for integration of services.

Data collected through the CSAP Initiative will help to fill this knowledge gap. The diverse community organizations and clients participating in the data collection effort make this an unparalleled opportunity to learn about risk and protective factors, including contextual factors, that are critical to the prevention of HIV/AIDS in African American, Latino, and other racial/ethnic minority communities but that are often not investigated. The study makes a paradigm shift from the person-centered approaches of most HIV prevention efforts to also searching for an understanding of the contextual explanations of risk. For example, the study collects information on country of birth and acculturation, which will help to account for the heterogeneity in risk behaviors and HIV rates among Latinos and blacks. Other contextual factors that are relevant to the life experiences of participants include religiosity, perceptions and experiences of discrimination, power balances in relationships, perceptions of community safety, and gender roles. Additionally, the quasi-experimental research design, which includes assessment of intervention and comparison program participants at three points in time, will allow comparisons to be made between those who received the interventions and those who did not, in terms of the risk behaviors known to be associated with HIV infection. Additionally, this evaluation will have the capacity to describe the types of interventions that prove most successful and define the characteristics of participants who benefit most from the tested programs.

The collaborative CSAP Initiative effort brings together policy, research, and practice such that findings from this project have the potential to have far-reaching effects on the HIV prevention field as a whole. A number of the interventions being implemented in the Initiative have been developed and studied previously in highly controlled research settings. In their current application, funded agencies are adapting them to be appropriate for the populations served. These programs are being implemented with all the real life limitations that community agencies face. The local evaluations of the funded programs will yield important stories and descriptive analyses of the processes of adaptation and implementation and the impact of these programs. These stories based on local experiences will not only provide useful guides for other agencies that want to engage in integrated substance abuse and HIV intervention; they will also provide important information for researchers and policy makers on the culture- and context-specific realities of engaging in HIV prevention in racial/ethnic minority communities. However, the complex scientific questions that need to be investigated will not be answered by any one single effort. Thus, to be truly useful, the CSAP Initiative will need to become a long-term commitment to building both community prevention capacity and a body of research that can inform the broader application of evidence-based and culturally appropriate HIV prevention public health practice.

REFERENCES

1. Centers for Disease Control and Prevention (US). HIV/AIDS surveillance report: U.S. HIV and AIDS cases reported through June 2000. Atlanta: CDC; 2000.
2. Bureau of the Census (US). Population by race and Hispanic or Latino origin for the United States: 1990 and 2000 [cited 2001 Sep 19]. Available from: URL: http://www.census.gov/population/cen2000/phc-t1/tab01.txt
3. Substance Abuse and Mental Health Services Administration (US). 1999 National Household Survey on Drug Abuse [cited 2001 Sep 19]. Available from: URL: http://www.samhsa.gov/oas/nhsda.htm
4. Substance Abuse and Mental Health Services Administration (US). Midyear 2000 preliminary emergency department data from the Drug Abuse Warning Network [cited 2001 Sep 19]. Available from: URL: http://www.samhsa.gov/oas/dawn/dawnmidyr/00mid_year.pdf
5. Substance Abuse and Mental Health Services Administration (US). Drug Abuse Warning Network annual medical examiner data 1999 [cited 2001 Sep 19]. Available from: URL: http://www.samhsa.gov/oas/dawn/99me_annual.pdf
6. Caetano R, Hines AM. Alcohol, sexual practices, and risk of AIDS among blacks, Hispanics, and whites. J Acquir Immune Defic Syndr Hum Retrovirol 1995;10:554-61.
7. DeHovitz JA, Kelly P, Feldman J, Sierra MF, Clarke L, Bromberg J, Wan JY, Vermund SH, Landesman S. Sexually transmitted diseases, sexual behavior, and cocaine use in inner city women. Am J Epidemiol 1994;140:1125-34.
8. Edlin BR, Irwin KL, Faruque S, McCoy CB, Word C, Serrano Y, et al. Intersecting epidemics: crack cocaine

use and HIV infection among inner city young adults. N Engl J Med 1994;331:1422-7.
9. Elwood WN, Williams ML, Bell DC, Richard AJ. Powerlessness and HIV prevention among people who trade sex for drugs ("strawberries"). AIDS Care 1997;9:273-84.
10. Fullilove MT, Fullilove RE, Haynes K, Gross S. Black women and AIDS prevention: a view towards understanding the gender rules. J Sex Res 1990;27:47-64.
11. Lindsay MK, Peterson HB, Boring J, Gramling J, Willis S, Klein L. Crack cocaine: a risk factor for human immunodeficiency virus infection type 1 among inner-city parturients. Obstet Gynecol 1992;80:981-5.
12. Raj A, Marsh S, DeLuca N, Wingood GM, DiClemente RJ. Gender differences in HIV risk related behavior among a community sample of African American drug users and non-drug users. Presented at the Annual Meeting of the American Public Health Association; 1997 Nov 9–14; Indianapolis, IN.
13. Orr DP, Langefield CD. Factors associated with condom use by sexually active male adolescents at risk for sexually transmitted disease. Pediatrics 1993;91:873-9.
14. Schwarcz SK, Bolan GA, Fullilove M, McKnight J, Fullilove R, Kohn R, Rolfs RT. Crack cocaine and the exchange for money or drugs: risk factors for gonorrhea among black adolescents in San Francisco. Sex Transm Dis 1992;19:7-13.
15. Weinstock HS, Linden C, Bolan G, Kegeles SM, Hearst NC. Factors associated with condom use by sexually active male adolescents at risk for sexually transmitted disease. Sex Transm Dis 1993;20:14-20.
16. Catania JA, Coates TJ, Kegeles S, Fullilove MT, Peterson J, Marin B, et al. Condom use in multi-ethnic neighborhoods of San Francisco: the population AMEN (AIDS in Multi-Ethnic Neighborhoods) study. Am J Public Health 1992;82:284-7.
17. Deren S, Shedlin M, Beardsley M. HIV-related concerns and behaviors among Hispanic women. AIDS Educ Prev 1996;8:335-42.
18. Fleisher JM, Senie RT, Minkoff H, Jaccard J. Condom use relative to knowledge of sexually transmitted disease prevention, method of birth control, and past or present infection. J Community Health 1994;19:395-407.
19. Ford K, Rubenstein S, Norris A. Sexual behavior and condom use among urban, low-income, African-American and Hispanic youth. AIDS Educ Prev 1994;6:219-29.
20. Grinstead OA, Faigeles B, Binson D, Eversley R. Sexual risk for human immunodeficiency virus infection among women in high risk cities. Fam Plann Perspect 1993;25:252-7.
21. Jemmott LS, Jemmott JB. Applying the theory of reasoned action to AIDS risk behavior: condom use among black women. Nurs Res 1991;40:228-33.
22. Gielen AC, Faden RR, O'Campo P, Kass N, Anderson J. Women's protective sexual behaviors: a test of the health belief model. AIDS Educ Prev 1994;6:1-11.
23. Heckman TG, Sikkema KJ, Kelly JA, Fuqua W, Mercer MB, Hoffman RG, et al. Predictors of condom use and human immunodeficiency virus test seeking among women living in inner-city public housing developments. Sex Transm Dis 1996;23:357-65.
24. Sikkema KJ, Koob JJ, Cargill VC, Kelly JA, Desiderato LL, Roffman RA, et al. Levels and predictors of HIV risk behavior among women in low-income public housing developments. Public Health Rep 1995;101:707-13.
25. Sikkema KJ, Heckman TG, Kelly JA. Community Housing AIDS Prevention Study Group. HIV risk behaviors among inner-city African American women. Womens Health. 1997;3:349-66.
26. Wagstaff DA, Kelly JA, Perry MJ, Sikkema KJ, Solomon LJ, Heckman TG, et al. Multiple partners, risky partners and HIV risk among low-income urban women. Fam Plann Perspect 1995;27:241-4.
27. Wingood GM, DiClemente RJ. The influence of psychosocial factors, alcohol, drug use on African-American women's high-risk sexual behavior. Am J Prev Med 1998;15:54-9.
28. Worth D. Sexual decision-making and AIDS: why condom promotion among vulnerable women is likely to fail. Studies Fam Plann 1989;20:297-307.
29. Misovich SJ, Fisher JD, Fisher WA. Close relationships and elevated HIV risk behavior: evidence and possible underlying psychological processes. Rev Gen Psychiatry 1997;1:72-107.
30. Bowleg L, Belgrave FZ, Reisen CA. Gender roles, power strategies, and precautionary sexual self-efficacy: implications for black and Latina women's HIV/AIDS protective behaviors. Sex Roles 2000;42:613-35.
31. Castañeda D. The close relationship context and HIV/AIDS risk reduction among Mexican Americans. Sex Roles 2000;42:551-80.
32. Simoni JM, Walters KL, Nero DK. Safer sex among HIV+ women: the role of relationships. Sex Roles 2000;42:691-708.
33. Wyatt GE, Vargas, CJ, Burns Loeb, T, Guthrie D, Chin D, Gordon G. Factors affecting HIV contraceptive decision making among women. Sex Roles 2000;42:495-521.
34. Deren S, Shedlin M, Beardsley M. HIV-related concerns and behaviors among Hispanic women. AIDS Educ Prev 1996;8:335-42.
35. Amaro H. Love, sex, and power: considering women's realities in HIV prevention. Am Psychol 1995;50:437-47.
36. DuGuerny J, Sjoberg E. Inter-relationship between gender relations and the HIV/AIDS epidemic: some possible considerations for policies and programs. AIDS 1993;7:1027-34.
37. Amaro H, Raj A. On the margin: power and women's HIV risk reduction strategies. Sex Roles 2000;42:723-49.
38. Heise L, Ellsberg M, Gottmoeller M. Ending violence against women. Popul Rep L 11 1999;27(4):1-44.
39. Martin SL, Matza L, Kupper LL, Daly M. Is domestic violence a risk factor for sexually transmitted diseases among pregnant women. Presented at the Annual Meet-

ing of the American Public Health Association; 1997 Nov 9–14; Indianapolis, IN.
40. Cunningham RM, Stiffman AR, Dore P. The association of physical and sexual abuse with HIV risk behaviors in adolescence and young adulthood: implications for public health. Child Abuse Neglect 1994;18:233-45.
41. Golding J. Sexual assault history and women's reproductive and sexual health. Psychology Women Q 1996; 20:101-21.
42. Irwin KL, Edlin BR, Wong L, Faruque S, McCoy HV, Word C, et al. Urban rape survivors: characteristics and prevalence of human immunodeficiency virus and other sexually transmitted infections. Obstet Gynecol 1995; 85:330-6.
43. Plichta SB, Abraham C. Violence and gynecological health in women <50 years old. Am J Obstet Gynecol 1996;174:903-7.
44. Raj A, Silverman J, Amaro H. The relationship between sexual abuse and sexual risk among high school students: findings from the 1997 Massachusetts Youth Risk Behavior Survey. Matern Child Health J 2000;4: 125-34.
45. Zierler S, Feingold L, Laufer D, Velentgas P, Kantrowitz-Gordonm I, Mayer K. Adult survivors of childhood sexual abuse and subsequent risk of HIV infection. Am J Public Health 1991;81:572-5.
46. Taylor J, Fulop N, Green J. Drink, illicit drugs and unsafe sex in women. Addiction 1999;94:1209-18.
47. MacKellar DA, Valleroy LA, Hoffman JP, Glebatis D, Lalota M, McFarland W, et al. Gender differences in sexual behaviors and factors associated with nonuse of condoms among homeless and runaway youths. AIDS Educ Prev 2000;12:477-91.
48. Magura S, Shapiro JL, Kang SV. Condom use among criminally-involved adolescents. AIDS Care 1994;6:595-603.
49. Calvert WJ. Protective factors within the family, and their role in fostering resiliency in African American adolescents. J Cultural Diversity 1997;4:110-17.
50. Kang SV, Magura S, Shapiro JL. Correlates of cocaine/crack use among inner-city incarcerated adolescents. Am J Drug Alcohol Abuse 1994;20:413-29.
51. Robles RR, Marrero CA, Freeman DH, Colon HM, Matos TD, Sahai H. Incarceration history as a risk factor for HIV infection among Puerto Rican injection drug users. Puerto Rican Health Science J 1993;12: 13-17.
52. Morris RE, Baker CJ, Valentine M, Pennisi AJ. Variations in HIV risk behaviors of incarcerated juveniles during a four-year period: 1989–1992. J Adolesc Health 1998;23:39-48.
53. Rotheram-Borus MJ, Reid H, Rosario M. Factors mediating changes in sexual HIV risk behaviors among gay and bisexual male adolescents. Am J Public Health 1994;84:1938-46.
54. Garofalo R, Wolf RC, Kessel S, Palfrey SJ, DuRant RH. The association between health risk behaviors and sexual orientation among a school sample of adolescents. Pediatrics 1998;101:895-902.
55. Hudgins R, McCusker J, Stoddard A. Cocaine use and risky injection and sexual behavior. Drug Alcohol Depend 1995;37:7-14.
56. Word CO, Bowser B. Background to crack cocaine addiction and HIV high-risk behavior: the next epidemic. Am J Drug Alcohol Abuse 1997;23:67-77.
57. Bailey SL, Camlin CS, Ennett ST. Substance use and risky sexual behavior among homeless and runaway youth. J Adolesc Health 1998;23:378-88.
58. Brunswick AF, Flory MJ. Changing HIV infection rates among an African American community cohort. AIDS Care 1998;10:267-81.
59. Tortu S, Goldstein M, Deren S, Beardsley M, Hamid R, Zeik K. Urban crack users: gender differences in drug use, HIV risk, and health status. Womens Health 1998; 27,177-89.
60. Gilmore S, DeLamater J, Wagstaff D. Sexual decision-making by inner city black adolescent males: a focus groups study. J Sex Res 1996;33:363-71.
61. Whitehead T. Urban low-income African American men, HIV/AIDS, and gender identity. Med Anthropol Q 1997;11:411-47.
62. Fisher JD, Fisher WA. Changing AIDS-risk behavior. Psychol Bull 1992;111:455-74.
63. Mallory C, Fife BL. Women and the prevention of HIV infection: an integrative review of the literature. J Assoc Nurses AIDS Care 1999;10:51-63.
64. Oakley A, Fullerton D, Holland J. Behavioural interventions for HIV/AIDS prevention. AIDS 1995;9:479-86.
65. Raj A, Amaro H, Reed E. Culturally tailoring HIV/AIDS prevention programs: why, when, and how. In: Kazarian SS, Evans DR, editors. Handbook of cultural health psychology. San Diego (CA): Academic Press; 2001. p. 195-239.
66. Remafedi G. Cognitive and behavioral adaptations to HIV/AIDS among gay and bisexual adolescents. J Adolesc Health 1994;15:142-8.
67. Siegel D, DiClemente R, Durbin M, Kransnovsky F, Saliba P. Change in junior high school students' AIDS-related knowledge, misconceptions, attitudes, and HIV-preventive behaviors: effects of a school intervention. AIDS Educ Prev 1995;7:534-43.
68. Stanton BF, Li X, Galbraith J, Feigelman S, Kaljee L. Sexually transmitted diseases, human immunodeficiency virus, and pregnancy prevention combined contraceptive practices among urban African-American early adolescents. Arch Pediatr Adolesc Med 1996; 150:17-24.
69. Wight D. School sex education. Vancouver Conference Review. AIDS Care 1997;9:66-9.
70. Wingood GM, DiClemente RJ. HIV sexual risk reduction interventions for women: a review. Am J Prev Med 1996;12:209-17.
71. Des Jarlais DC, Marmor M, Paone D, Titus S, Shi Q,

Parlis T, et al. HIV incidence among injection drug users in New York City syringe-exchange programmes. Lancet 1996;348:987-91.
72. Gold M, Gafni A, Nelligan P, Millson P. Needle exchange programs: an economic evaluation of a local experience. CMAJ 1997;157:255-62.
73. Heimer R, Kaplan EH, Khoshnood K, Jariwala B, Cadman EC. Needle exchange decreases the prevalence of HIV-1 proviral DNA in returned syringes in New Haven, Connecticut. Am J Med 1993;95:214-20.
74. Coyle SL, Needle RH, Normend J. Outreach HIV prevention for injection drug users: a review of published outcome data. Public Health Rep 1998;113 Suppl 1: 19-30.
75. O'Neill K, Baker A, Cooke M, Collins E, Heather N, Wodak A. Evaluation of a cognitive-behavioral intervention for pregnant injecting drug users at risk for HIV infection. Addiction 1996;91:1115-25.
76. McCusker J, Bigelow C, Luippold R, Zorn M, Lewis BF. Outcomes of a 21-day drug detoxification program: retention, transfer to further treatment, and HIV risk reduction. Am J Drug Alcohol Abuse 1995;21:1-16.
77. Nyamathi A, Flaskerud J, Keenan C, Leake B. Effectiveness of a specialized versus traditional AIDS education program attended by homeless and drug-addicted women alone or with supportive persons. AIDS Educ Prev 1998;10:433-46.
78. Cottler LB, Compton WM, Ben-Abdallah A, Cunningham-Williams R, Abram F, Fichtenbaum C, Dotson W. Peer-delivered interventions reduce HIV risk behaviors among out-of-treatment drug users. Public Health Rep 1998;113 Suppl 1:31-41.
79. Cottler LB, Leukefeld C, Hoffman J, Desmond D, Wechsberg W, Inciardi JA, Compton WM, Ben Abdallah A, Cunningham-Williams R, Woodson S. Effectiveness of HIV risk reduction initiatives among out of treatment non-injection drug users. J Psychoactive Drugs 1998;30:279-90.
80. Kotranski L, Semaan S, Collier K, Lauby J, Halbert J, Feighan K. Effectiveness of an HIV risk reduction counseling intervention for out-of-treatment drug users. AIDS Educ Prev 1998;10:19-33.
81. Eldridge GD, St. Lawrence JS, Little CE, Shelby MC, Brasfield TL, Service JW, Sly K. Evaluation of the HIV risk reduction intervention for women entering inpatient substance abuse treatment. AIDS Educ Prev 1997;9 Suppl 1:62-76.
82. McCoy HV, McCoy CB, Lai S, Weatherby NL, Messiah S. Behavior changes among crack-using rural and urban women. Subst Use Misuse 1999;34:667-84.
83. Stevens SJ, Estrada AL, Estrada BD. HIV sex and drug risk behavior and behavior change in a national sample of injection drug and crack cocaine using women. Women Healt 1998;27:25-48.
84. Vigilante KC, Flynn MM, Affleck PC, Stunkle JC, Merriman NA, Flanigan TP, et al. Reduction in recidivism of incarcerated women through primary care, peer counseling, and discharge planning. J Womens Health 1999;8:409-15.
85. El-Bassel N, Ivanoff A, Schilling RF, Gilbert L, Borne D, Chen DR. Preventing HIV/AIDS in drug-abusing incarcerated women through skills building and social support enhancement: preliminary outcomes. Social Work Res 1995;19(3):131-41.
86. St. Lawrence JS, Jefferson KW, Banks PG, Cline TR, Alleyne E, Brasfield TL. Cognitive-behavioral group intervention to assist substance-dependent adolescents in lowering HIV infection risk. AIDS Educ Prev 1994; 6:425-35.
87. Centers for Disease Control and Prevention (US). HIV/AIDS Research Synthesis Project: compendium of HIV prevention interventions with evidence of effectiveness. Atlanta: CDC; 1999.
88. Holtgrave DR, Qualls NL, Curran JW, Valdiserri RO, Guinan ME, Parra WC. An overview of the effectiveness and efficiency of HIV prevention programs. Public Health Rep 1995;110:134-46.
89. Substance Abuse and Mental Health Services Administration (US), Center for Substance Abuse Prevention. Substance Abuse Prevention/HIV Care Targeted Capacity Expansion cooperative agreements for African American, Hispanic/Latino and other racial/ethnic minority youth, women, and minority women and their children. 1999. SAMHSA Pub. No. 99-03 [cited 2001 Sep 9]. Available from: URL: http://www.samhsa.gov/grants/grants/html
90. Haour-Knipe M, Flery F, Dubois-Arber F. HIV/AIDS prevention for migrants and ethnic minorities: three phases of evaluation. Soc Sci Med 1999;49:1357-72.
91. Chwee CL, Collins JR. Providing culturally competent HIV prevention programs. Am J Health Stud 2000;16: 24-33.
92. Amaro H, Vega R, Valencia D. Gender, context, and HIV prevention among Latinos. In: Aguirre-Molina M, Molina CW, Zambrana RE, editors. Health issues in the Latino community. San Francisco: Jossey-Bass; 2001. p. 301-24.
93. Jemmott JB 3rd, Jemmott LS, Fong GT. Reductions in HIV risk-associated sexual behaviors among black male adolescents: effects of an AIDS prevention intervention. Am J Public Health 1992;82:372-7.
94. St. Lawrence JS, Brasfield TL, Jefferson KW, Alleyne E, O'Bannon RE, Shirley, A. cognitive-behavioral intervention to reduce African-American adolescents' risk for HIV infection. J Consult Clin Psychol 1995;63: 221-37.
95. Botvin GJ, Baker E, Dusenbury L, Botvin EM, Diaz T. Long-term follow-up results of a randomized drug abuse prevention trial in a white middle-class population. JAMA 1995;273:1106-12.
96. McDonald L, Billingham S, Dibble N, Rice C, Coe-Braddish D. Families and Schools Together: an innovative substance abuse prevention program. Am J Soc Workers School 1991;13:118-28.

97. Fritz J, Miller-Heyl J, Kreutzer J, MacPhee D. Fostering personal teaching efficacy through staff development and classroom activities. J Educ Res 1995;88:200-208.
98. Kumpfer KL. Selective prevention interventions: the Strengthening Families program. In: Ashery R, Robertson E, Kumpfer KL, editors. Drug abuse prevention through family intervention. NIDA Research Monograph Series #177. Bethesda (MD): Department of Health and Human Services (US); 1998. DHHS Pub. No. 99-4135.
99. National Institutes of Health (US), National Institute on Drug Abuse. Outreach/risk reduction strategies for changing HIV-related risk among injection drug users. Rockville (MD): NIDA; 1994. NIH Pub. No. 94-3726.
100. Kelly JA, St. Lawrence JS, Stevenson Y, Hauth AC, Kalichman SC, Diaz YE, et al. Community AIDS/HIV risk reduction: the effects of endorsements by popular people in three cities. Am J Public Health 1992;82: 1483-9.
101. Amaro H, McGuire J, Weissman G. Participation of Latino community organizations in the RWCA process: a study of two metropolitan areas. Free Inquiry Creative Sociol 1999;27(2):29-44.
102. Amaro H. An expensive policy: the impact of inadequate funding for substance abuse treatment. Am J Public Health 1999;89:657-9.