Appendix D

Effective Interventions (From Minnesota Comprehensive HIV Prevention Plan 2006-2008)

Chapter Four

Effective Interventions……

Research on Effective Interventions

There is now a body of evidence demonstrating that behavioral interventions can be effective in reducing sexual and drug related risk behaviors among populations that are at increased risk for contracting and transmitting HIV infection. However, the next major challenge lies in the translation of what has been learned through behavioral research into the realities of implementation in the community (Sweat et al., 2001).

How To Use This Chapter

This chapter summarizes research results related to HIV prevention interventions that have been shown to be effective in reaching the target populations prioritized by the CCCHAP. Any organization with an interest in implementing prevention interventions, including organizations that receive funding from MDH and those that do not, can use the information in this chapter to help in designing effective interventions for each of the priority target populations. If you wish to read the complete reference related to a specific intervention, citations are provided in the References section of this plan. Please note that the amount of research available varies significantly by target population.

Intervention Categories

In general, within each target population, the interventions and strategies are discussed under seven intervention categories: Counseling, Testing and Referral; Outreach; Individual Level Intervention; Group Level Intervention; Comprehensive Risk Counseling and Services; Community Level Intervention; and Health Communication/Public Information.

Counseling, Testing and Referral (CTR): HIV testing includes counseling before and after the test is given. High risk individuals who test negative are referred to prevention programs and other support services, and individuals who test positive are referred to medical care and other support services, as well as to prevention programs.

Outreach: Interventions that are designed to identify individuals who are at high risk for being infected with HIV in their neighborhoods or places they normally congregate; give them condoms, bleach, sexual responsibility kits, and educational materials; and refer them to services that can help them reduce or change their risk behaviors. Outreach activities can also include field based testing.

Individual Level Interventions (ILI): Health education and risk reduction counseling provided to one individual at a time. ILI assists clients in assessing their HIV risk and making plans for individual behavior change and ongoing assessment of their behavior. ILI includes skills building components. These services can also facilitate linkages to other services that support the reduction of risk, such as substance use treatment.

Group Level Interventions (GLI): Health education and risk reduction counseling with groups of different sizes. GLI models can either be led by peers or by professionals. As with ILI, group interventions contain a skills building component, and assist clients in assessing their risk, making plans for behavior change and assessing their progress.

Comprehensive Risk Counseling and Services (CRCS): Previously known as prevention case management (PCM), CRCS is a client-centered prevention activity focused on assisting clients with multiple, complex issues to adopt and maintain HIV risk reduction behaviors. CRCS provides intensive, ongoing, and individualized prevention counseling, including the development and monitoring of an individual prevention plan with goals and measurable objectives. CRCS also provides coordination with other case management services (e.g., Ryan White or Medicaid), when available, or provides case management services to clients who do not have access to other case management services.

Community Level Interventions (CLI): Community level interventions combine community organization and social marketing, and are directed at specific populations, rather than at individuals. The primary goal of these interventions is to improve health status by promoting healthy behaviors and changing those factors that negatively affect the health of a community's residents by changing group norms to improve or enhance the quality of health. Community level intervention strategies offer opportunities for peers to acquire skills in HIV risk reduction and, in turn, to reinforce these abilities when they become the teachers of these same skills to others.

Health Communication/Public Information (HCPI): The delivery of planned HIV prevention messages through one or more mediums to target audiences. The focus of the messages are to build general support for safe behavior, support for personal risk reduction efforts, and/or inform persons at risk how to obtain specific services. HCPI interventions may be delivered through: electronic media, print media, telephone hotline, information clearinghouse, presentations or lectures, community events, and web sites and chat rooms.

DEBI Project

The CDC is currently coordinating the Diffusion of Effective Behavioral Interventions (DEBI) Project, which is a national level strategy to provide high quality training and ongoing technical assistance on selected evidence based HIV/STD prevention interventions to state and community HIV/STD program staff.

The evidence based interventions included as a part of this project have been proven effective through research studies that showed positive behavioral (i.e., use of condoms; reduction in number of partners) and/or health outcomes (i.e., reduction in the number of new STD infections). Studies employed rigorous research designs, with both intervention and control groups, so that the positive outcomes could be attributed to the interventions. Interventions included in this chapter that are part of the DEBI Project are denoted by a "DEBI" in parentheses. (*Note:* MDH-funded organizations providing prevention services in Minnesota are not required to use interventions included in the DEBI Project.)

The DEBI Project emphasizes community and group level interventions over individual level interventions because CDC feels they have the potential to reach large numbers of the population and to reach individuals at high risk who might not voluntarily seek prevention information or services. They are also more cost effective. More information on all DEBI interventions can be found at http://www.effectiveinterventions.org

COMPENDIUM OF HIV PREVENTION INTERVENTIONS WITH EVIDENCE OF EFFECTIVENESS

The CDC also encourages the use of interventions included in the *Compendium of HIV Prevention Interventions with Evidence of Effectiveness* (CDC, 2001). Many of the DEBI interventions are based on those highlighted in the Compendium, although the Compendium also includes additional interventions. Interventions from the Compendium that are included in this chapter are so noted. MDH does not require funded organizations to use interventions included in the Compendium. A copy of the Compendium can be found at http://www.cdc.gov/hiv/pubs/hivcompendium/hivcompendium.htm

Index of Effective Interventions

This chapter provides descriptions of effective interventions for each of the priority target populations. Following is an index to assist you in finding interventions for specific target populations:

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Overview of Interventions Targeting HIV Positive Persons

We all have the collective responsibility to create the conditions in which both seropositive and seronegative people can make healthy choices (Marks et al., 1999). This means that it is essential to engage HIV positive persons, as well as those who are HIV negative, in prevention interventions. However, until recently, prevention efforts in this country have been mostly focused on people who are at risk for becoming infected. The prevention needs of HIV positive individuals have often been overlooked, as have the significant efforts on the part of many to avoid infecting others. Although one HIV positive person is involved in each case of transmission, the world of prevention has shied away from focusing on prevention with positives because of the justifiable fear of stigmatizing people who are living with HIV/AIDS and a concern about creating a divide between HIV positive and negative individuals. In addition, the federal funding streams created two separate systems; one to provide prevention to at risk individuals and the other to provide care and support to those who are positive (Collins et al., 2000).

As HIV positive persons are living longer, they are healthier and are enjoying sexual lives. Recent evidence indicates that risk behaviors among both HIV positive and negative persons are increasing. There is more discussion about issues of intimacy and sex. In addition, many people living with HIV and AIDS face problems that may contribute to risk behavior, such as poverty, racism, homophobia, threat of violence, substance use, and mental health issues (Collins et al., 2000).

Behavioral interventions can make a significant contribution to the lasting behavior change among people living with HIV and may be enhanced with the integration of messages of personal responsibility. While the great majority of HIV positive persons take steps to protect both their partners and themselves, a recent study found that approximately 13% of HIV positive individuals do not disclose their status to sexual partners before engaging in risky behavior that could transmit the virus (Ciccarone et al., 2003).

Advancing HIV Prevention

In 2003, CDC released its Advancing HIV Prevention (AHP) strategies (CDC, 2003a). One of the key strategies of AHP is to prevent new infections by working with persons diagnosed with HIV and their partners. According to AHP, CDC will work with professional associations to disseminate guidelines regarding the incorporation of HIV prevention into the medical care of persons with HIV to primary care providers and infectious disease specialists. CDC will work closely with the Health Resources and Services Administration (HRSA) to reach persons who are HIV positive but are not in ongoing medical care or prevention services. CDC has also funded some demonstration projects to provide prevention case management to HIV positive persons. Finally, CDC will support new models of partner counseling and referral services (PCRS), including offering rapid testing and using peers to conduct PCRS.

Recommendations Regarding Prevention with Positives Programs

The AIDS Policy and Research Center and Center for AIDS Prevention Studies at the AIDS Research Institute, University of California San Francisco, recommends that people living with HIV, and the groups that represent their interests, must provide the leadership in designing effective prevention with positive programs. They note that not enough attention

has been paid to the many efforts of HIV positive persons to change behavior and avoid infecting others. The challenge is to design prevention programs targeting HIV positive individuals that talk about accountability and responsibility without causing feelings of shame or encouraging stigma (CDC, 2003).

> *Prevention with Positives*
> Because there is so much diversity among people living with HIV, different kinds of interventions must be developed in order to effectively reach various populations. There are a number of factors that can affect risk behavior and should be taken into account in the development of programs:
>
> - *Personal* – current health status, length of time living with disease, success of HIV treatments
> - *Partner* – attractiveness, power dynamics within the couple, desire to please
> - *Race* – power dynamics, assumptions about roles and HIV status
> - *Community* – urban or rural setting, presence or absence of HIV positive peers, communal beliefs about the origins of HIV, the degree to which HIV infection stigmatized a person, ability to feel accepted in the community and discuss challenges with practicing safer sex
> - *Substances* – physical or emotional dependence on alcohol and/or drugs
> - *Economic situations* – homelessness, economic crisis, dependence on sex for money
> - *History* – memory of the Tuskegee syphilis study where treatment was withheld from African American men
> - *Availability of health care and prevention* – supportive education campaigns, condoms
>
> (CDC, 2003)

NAPWA's Principles of HIV Prevention with Positives

The National Association of People with AIDS (NAPWA) developed 14 principles of HIV prevention with positives to help shape these efforts. The principles were developed through a series of meeting with diverse groups of HIV positive persons across the country, and represent the perspective of those who will be most directly impacted by prevention with positives interventions.

1. **Prevention must be a shared responsibility.**

   Developing prevention programs for positive people must not become an excuse for shifting all responsibility for prevention (or blame for new infections) onto the shoulders of people living with HIV/AIDS. A culture of shared responsibility that encourages communication and equality in relationships should be a goal of our prevention programming.

2. **Don't assume serostatus.**

   HIV prevention programs should deliver messages that are inclusive, understanding that HIV positive people will also hear these messages. It needs to be assumed that any HIV prevention effort will reach some people living with HIV/AIDS. Messages that are meant to apply only to uninfected people ("Stay negative," "Don't have sex with a person with AIDS," etc.) will be heard and understood differently by different people. Think about how these messages shape the way people living with HIV/AIDS think about prevention, and the way others think about us.

3. **HIV positive people have unique needs and concerns that require targeted approaches to reach us.**

   It isn't the same for positive and people of unknown or negative status.

4. **People living with HIV/AIDS are extremely heterogeneous and programs need to address the different needs of such a diverse group.**

   It simply isn't the same for everyone, and we need culturally competent interventions for diverse populations: race, gender, sexual orientation, age, language, geography, addiction, etc. all impact the type of programming needed. One size does not fit all.

5. **Effective programs must fully accept the right of people living with HIV/AIDS to intimacy and sexual health.**

   Few issues are as emotionally charged as sexual activity by people living with HIV/AIDS. Providers must learn to be truly non-judgmental and support the human right to a fulfilling sexual life, while working with people to decrease potential risk to others and themselves.

6. **Behavior change is tough for everyone…including people living with HIV/AIDS.**

   Expecting 100% perfection from people who are HIV positive is as unrealistic as expecting it from the uninfected. Creating and sustaining behavior change is rarely instantaneous.

7. **Knowledge of serostatus is important, but isn't enough.**

   Knowing is the first step, but it still requires support and skills. Most people who know they are HIV positive will take steps to avoid infecting others – but it is unrealistic to expect people to make and maintain change solely based on knowledge of status.

8. **There is no magic bullet, no single type of intervention that will work for everyone.**

   Just like every other population, people living with HIV/AIDS need a variety of interventions delivered in a variety of settings and sustained over time. While medical settings offer one important venue for interventions, there are many drawbacks to relying on them for positive prevention. A diverse range of interventions, delivered in diverse settings, is required.

9. **Disclosure isn't always the answer.**

   Disclosure doesn't guarantee safe behavior. Disclosure may produce severe and negative consequences. Helping people assess their readiness to disclose and developing the skills to do so is different than telling people they must disclose.

10. **Stigma, discrimination, shame and fear drive people underground and make prevention harder for everyone, especially positive people.**

    Programs must function with an acute understanding of the centrality of these issues in the experience of people living with HIV/AIDS, must help people cope with their impact, and should challenge these harmful attitudes in communities.

11. **Coercion/criminalization is not the answer – and certainly shouldn't be the first answer.**

    It is impossible to retain the trust and honest engagement of people if our prevention strategies are predicated on the threat of criminal prosecution for engaging in consensual activities.

12. **Programs must be anchored in the real needs and concerns of people living with HIV/AIDS.**

    If it is driven solely by a prevention agenda without considering the priorities of people living with HIV/AIDS, it will fail. Listen to what is important to your population. Addressing relationships, housing, economic security, personal safety, etc. are all important in engaging people in prevention.

13. **People living with HIV/AIDS need to be involved in the planning, design, delivery and evaluation of these programs.**

    Things that are "done to us" won't work as well as things that are "done with us."

14. **Resources and capacity building efforts must support the development of HIV positive-run programs to respond to this need.**

    There is an important role for PWA coalitions and other organizations run by and for positive people in these programs. We must invest in the capacity of organizations to do this work, creating sustainable PLWHA-led prevention efforts.

Recommendations from Empowering Heroes Conference

In March 2003, MDH and DHS co-sponsored a conference for HIV positive persons, their caregivers, and providers. The purpose of the conference was to provide health education information to participants, and to gather feedback on how to design effective prevention with positives programs. Three focus group discussions were held. Twelve (12) persons participated in the group with service providers and caregivers, 7 persons in the group with HIV positive individuals, and 4 in the one with negative partners of HIV positive persons, for a total of 23 participants. Three questions were asked of participants:

1. What is a really helpful prevention message?
2. What is an unhelpful prevention message?
3. What prevention activities should be encouraged?

The comments were then analyzed and seven common themes emerged. They are presented below in the order of frequency with which they were mentioned.

Accurate information: Participants emphasized the need for accurate information to be repeatedly disseminated at different times, venues, and communities. The information should address transmission routes and levels of risk for different behaviors. Based on their experiences, the participants felt that this type of information does not appear in the community anymore.

Alternatives to penetrative sex: Prevention messages should include information about types of sexual behavior other than penetration. Examples given include masturbation, safe use of toys, physical touching, and other types of intimate contact.

Use condoms: Participants stressed the need for access to condoms (including non-latex and female condoms) and education about how to use condoms. They also mentioned outreach in public sex areas, bars, and other places where sex might occur or be negotiated.

Directed to a specific community: It is important that information and prevention messages are adapted for reaching specific communities. Some of the communities mentioned by participants were African Americans, deaf and hard of hearing, and youth.

Negative sexuality and disempowerment: Participants recommended not using fear, shame, shock or revulsion to educate about HIV/AIDS. Negative sexual self-image and disempowerment occurs when these types of messages are used, and could lead to increased unsafe behavior.

Positive sexuality and empowerment: As opposed to the previous theme, participants stressed the need to emphasize sex as a positive and empowering aspect of a person's life and something to be celebrated. Positive sexuality affirms the strength and desires of the individual and builds on those strengths to reduce transmission.

Miscellaneous: Other comments provided did not fit into the other categories and included specific examples of prevention activities and advertising campaigns, and the need for outreach.

Counseling, Testing and Referral

A meta-analysis of 27 published studies involving 19,957 participants was conducted to see whether HIV counseling and testing leads to a reduction in sexual risk behavior (Weinhardt et al., 1999). This analysis found that after counseling and testing, HIV positive individuals and persons in serodiscordant couples reduced unprotected intercourse and increased condom use more than people who received HIV negative results or those who did not test.

Weinhardt et al. (1999) also note that specific outcomes of HIV counseling and testing should include identifying those HIV positive individuals who are most at risk for transmitting the disease to others and referring them to specialized behavioral interventions and support. Asking a client at the time of testing about the number of persons he or she may have infected might identify those clients at greatest risk of transmitting HIV to others. The number of persons infected between time of infection and diagnosis significantly predicts the number of persons infected post-diagnosis.

Partner Counseling and Referral Services

Partner Counseling and Referral Services (PCRS) are targeted at both HIV positive persons and their sexual and needle sharing partners. Disease Intervention Specialists (DIS) contact persons who test positive and offer to provide them with risk reduction and referral information. For those who accept PCRS services, the DIS provide information on HIV disease, risk reduction counseling, and referrals to medical care and support services. The DIS also discuss the importance of contacting sexual and needle sharing partners to let them know that they have been exposed to HIV. HIV positive persons can choose to contact their partners themselves, in which case the DIS will provide coaching on how to tell their partners that they are at risk of infection and how to refer them to counseling and testing services. The DIS also offer to contact partners on their behalf. In this case, the DIS locate partners using names, descriptions, and addresses provided by the HIV positive person. The anonymity of the index patient is always maintained. Once partners are located, the DIS provide an initial 45–60 minute session about HIV and risk reduction to those who accept PCRS, and offer them an OraSure test. If partners do not want to be tested by the DIS, they are referred to a counseling and testing site. The DIS also provide post-test counseling for those to whom they provide an OraSure test. Several studies have shown that PCRS strategies are cost effective (Rahman et al., 1998; Varghese et al., 1998).

GROUP LEVEL INTERVENTION

Healthy Relationships (DEBI)

This DEBI Project group session intervention is based on a study involving HIV positive gay, heterosexual and bisexual men and women. Participants in the study reported greater self-efficacy for suggesting condom use with new partners, as well as reporting less unprotected sex, more protected sex, and fewer sexual contacts at the 6-month follow-up. Participants were also significantly more likely to refuse to engage in unsafe sex at the 6-month follow-up (Kalichman et al., 2001).

> *Core Elements of Healthy Relationships*
> Healthy Relationships is a five-session, small group intervention for HIV positive men and women. Core elements of the intervention include:
>
> - Defining stress and coping skills in relation to disclosing to family and friends, disclosing to sexual partners, and building healthier and safer relationships
> - Using modeling, role play, and feedback to teach and practice skills related to coping with stress
> - Teaching decision making skills about disclosure of HIV status
> - Providing personal feedback reports to motivate change of risk behaviors and maintenance of protective behaviors
> - Using movie clips to set up scenarios about disclosure and risk reduction to stimulate discussions and role plays
>
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COMPREHENSIVE RISK COUNSELING AND SERVICES

CDC promotes comprehensive risk counseling and services (CRCS), previously known as prevention case management, as a priority for HIV positive persons. CDC defines CRCS as being "intensive, individualized client-centered counseling for adopting and maintaining HIV risk reduction behaviors."

Upon looking at prevention case management (PCM) programs across the nation, CDC found that they were being implemented very differently. They also identified some barriers to successful PCM programs, which include a lack of interest by clients, lack of clear definition of PCM, lack of referral resources in the community, and difficulty evaluating the outcome of the program (Collins et al., 2000). In response to some the lack of clarity in the definition of PCM, CDC changed the name of the service to CRCS and released new guidance for implementing CRCS programs in 2006. The guidance clarifies that the focus of CRCS is to provide risk reduction counseling. Case management services may be provided only if these services are not otherwise available to the client.

The CDC guidance also defines the primary goal and essential components of CRCS. The primary goal is to help HIV positive (and HIV negative) persons who are at high risk for HIV transmission (or acquisition) to reduce risk behaviors and address the psychosocial and medical needs that contribute to risk behavior or poor health outcomes. The seven essential components of CRCS are: client recruitment, screening, development of personal prevention plan, risk reduction counseling, coordination of client support with other case management programs and provision of referrals as needed, ongoing monitoring and reassessment of client progress and needs, and discharge.

A study of prevention case management with HIV positive clients conducted in Wisconsin found that the percentage of clients reporting risk behaviors (unprotected insertive anal or vaginal sex, or needle sharing, with partners whose HIV status was negative or unknown) decreased from 41% at baseline to 29% at first follow-up (average of 4.6 months later). However, among clients who participated in a second follow-up (approximately 3 months

later), self-reported behavior indicated increases in unprotected sex with both HIV negative and HIV positive partners, as well as increases in the average number of total partners (Gasiorowicz et al., 2005).

HIV Prevention in Medical Care Settings

In July 2003, CDC, the Health Resources and Services Administration (HRSA), the National Institutes of Health (NIH), and the HIV Medicine Association of the Infectious Disease Society of America released recommendations regarding the incorporation of HIV prevention into the medical care of persons living with HIV and AIDS (CDC, 2003b). The recommendations are general and apply to all HIV positive adolescents and adults, regardless of age, sex or race/ethnicity. They are intended for all professionals that provide medical care, such as physicians, nurse practitioners, nurses, and physician assistants. They might also be useful to other providers such as case managers, social workers and health educators.

The recommendations state that clinicians can greatly affect their patients' risk for HIV transmission by doing the following:

- Performing a brief screening for HIV transmission risk behaviors
- Communicating prevention messages, both verbally and with literature/posters
- Providing condoms
- Discussing sexual and drug use behavior
- Positively reinforcing changes to safer behavior
- Referring patients to services such as substance abuse treatment
- Facilitating partner notification
- Counseling and testing
- Identifying and treating other STDs

Highly Active Antiretroviral Therapy (HAART)

The use of highly active antiretroviral therapy (HAART) can significantly reduce the levels of virus in the blood, often to the point of being undetectable by current tests. Lower viral load in the blood tends to correlate with lower levels of the virus in genital fluids, but it is not an exact correlation (Barroso et al., 2003).

One study in Uganda found that low blood viral load resulted in decreased transmission of HIV. No transmission was observed among the 51 serodiscordant couples whose infected partner's blood viral load was under 1500 copies per ml (Quinn et al., 2000). Another study in Taiwan found that after implementing a policy of providing free access to HAART in 1997, the estimated rate of HIV transmission was reduced by 53% by the end of 2002 (Fang et al., 2004).

It must be noted, however, that even for HIV positive persons on HAART, virus remains in many tissues of the body, inside cells, and in the blood despite being undetectable to tests. Viral loads can also fluctuate over time due to changes in adherence to treatment, the development of drug resistance, or the natural history of disease progression (Center for AIDS Prevention Studies, 2003). Also, as previously noted in the Needs Assessment chapter of this plan, optimism about treatment has been associated in some studies to an increase in risky behavior.

Comprehensive Programming

Safety Counts (DEBI)

Safety Counts is a client-centered, comprehensive intervention targeting HIV positive and HIV negative individuals who are currently using injection or non-injection drugs. The intervention is not specific to gender, race/ethnicity, or sexual orientation. The goal of the program is to reduce risk of becoming infected with or transmitting HIV and hepatitis viruses, and involves individual and group level activities over a period of 4 to 6 months. Staff discuss the importance of knowing HIV status upon program enrollment and offer CTR services at each session for HIV negative clients.

Compared to persons enrolled in the comparison condition, clients who participated in Safety Counts were about 1.5 times more likely to reduce their drug and sex-related risks, were more than 2.5 times more likely to report an increase in condom use, were significantly more likely to report a reduction in the number of times they inject, and more likely to test negative for opiates through urinalysis (Rhodes and Humfleet, 1993; Rhodes and Wood, 1999).

Core Elements of Safety Counts

The five core elements of Safety Counts are:

- **Group Sessions One and Two** involve hearing clients' HIV risks and current stage of change, hearing risk reduction success stories, setting personal goals, identifying first steps to reduce HIV risk, and making referrals to CTR and medical/social services
- **One (or more) Individual Counseling Session** involves discussing/refining risk reduction goals, assessing client's needs, and providing referrals
- **Two (or more) Social Events** are designed for socializing, participating in risk reduction activities, and receiving reinforcement for personal risk reduction
- **Two (or more) Follow-up Contacts** involve reviewing client's progress, discussing barriers encountered, identifying concrete next steps and possible barriers/solutions, and referrals
- **HIV/HCV Counseling and Testing** is offered through the service or referral to another agency

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HIV Positive Men Who Have Sex with Men

Individual Level Intervention

Richardson et al. (2004) evaluated brief provider-delivered messages in HIV primary care clinics among a sample primarily made up of MSM. The six clinics were randomly assigned to deliver risk reduction messages that emphasized the benefits of adopting safer behavior, messages that emphasized the consequences of not reducing sexual risk behaviors, or HIV treatment adherence messages (control condition). Among participants with two or more partners at baseline who received messages regarding consequences of not reducing risk, there was a 38% reduction in unprotected intercourse. The study did not find any effect among participants with one partner at baseline who received consequences messages or among participants who received messages about the benefits of adopting safer behaviors, regardless of the number of partners. The findings demonstrate that this is not a “one size fits all” intervention.

Group Level Intervention

In a study of brief (60–90 minute) risk reduction interventions, participants were randomly assigned to one of four conditions: 1) a single, targeted counseling session that focused on condom use, negotiation, or disclosure; 2) a single-session comprehensive intervention that covered all three topic areas; 3) the same comprehensive intervention with two monthly booster sessions; or, 4) an attention control exercise comparison condition. All four of the conditions, including the comparison condition, resulted in a significant decrease in total occasions of unprotected sex over 12 months. The findings suggest that a brief intervention can reduce HIV transmission risks among HIV positive MSM, but the effectiveness of one intervention over another remains unclear (Patterson et al., 2003).

HIV Positive Injection Drug Users

Group Level Intervention

Holistic Health Recovery Program (DEBI)

The Holistic Health Recovery Program (HHRP) is based on an intervention study conducted by Margolin et al. (2003). Participants were inner city HIV positive IDUs with mild to moderate cognitive impairment who were dually addicted to heroin and cocaine and had a history of unsuccessful drug treatment. HHRP has since been adapted so that it can be used with HIV positive and HIV negative IDUs. HHRP is a 12-session, manual-guided, group level intervention to promote health and improve quality of life. More specific goals include a reduction of or abstinence from illicit drug use and sexual risk behaviors; reduced risk for HIV transmission; and improved medical,

> *Core Elements of HHRP*
>
> HHRP teaches participants the following:
>
> - Harm reduction skills related to injection drug use and unprotected sexual activities
> - Negotiation skills to reduce unsafe sexual behaviors
> - Decision making and problem solving skills
> - Goal setting and action plan development skills
> - Stress management skills
> - Skills to improve health, health care participation, and adherence to medical treatments
> - Skills to increase clients’ access to their self-defined spiritual beliefs to increase motivation to engage in harm reduction
> - Skills to increase self awareness
>
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psychological and social functioning. Participants in the study demonstrated a decrease in addiction severity, a decrease in risk behavior, and significant improvement in behavioral skills, motivation and quality of life.

HIV Positive High Risk Heterosexuals

GROUP LEVEL INTERVENTION

The Women Involved in Life Learning from Other Women (WILLOW) Program was evaluated with HIV positive women who were predominantly African American. The intervention consisted of four 4-hour meetings that were facilitated by a health educator and an HIV positive female peer. The sessions emphasized gender pride, maintaining and expanding current social networks, HIV transmission knowledge, communication and condom use skills, and healthy relationships (social and sexual). Compared to participants in the control condition focused on HIV treatment and nutrition, at 12-month follow up women who participated in the intervention reported fewer episodes of unprotected vaginal intercourse; were less likely to report never using condoms; had a lower incidence of bacterial STD infections, reported greater HIV knowledge and condom use self-efficacy, more network members, fewer beliefs that condoms interfere with sex, and fewer partner-related barriers to condom use; and demonstrated greater skill in using condoms (Wingood et al., 2004).

HIV Positive Youth

GROUP LEVEL INTERVENTION

Teens Linked to Care (DEBI)

Teens Linked to Care (TLC) is an effective intervention for young people living with HIV and is delivered in small groups using cognitive-behavioral strategies to change behavior. TLC consists of three modules, each of which consists of 8-12 sessions that are delivered in a general sequence. Each module is focused on a different behavioral outcome. Module I: *Staying Healthy* targets health care utilization and health behaviors. Module II: *Acting Safe* addresses both sexual and drug-use-related transmission acts. Module III: *Being Together* focuses on improving quality of life. Young people meet regularly to provide social support, learn and practice new skills, and socialize. This program helps young people identify ways to improve their quality of life by setting new habits and daily social routines.

Core Elements of Teens Linked to Care

The core elements of TLC are:

- Delivery of three modules consisting of 8-12 sessions each
- Delivery of modules in interactive groups
- Exercises in each session that are designed to be meaningful personal experiences, leading to development of personal knowledge and attitudes and increased skills to support adoption of new behaviors
- Individualized homework tasks assigned following each session

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Teens Linked to Care is based on research with HIV positive youth by Rotheram-Borus et al. (2001) which found that participants reported fewer sexual partners, including fewer HIV-negative partners, and fewer unprotected behaviors. The youth also reported a decrease in alcohol and drug use, as well as decreases in feelings of distress and anxiety, and physical symptoms of the disease, and an increase of the social support coping skill.

Individual Level Intervention

Rotheram-Borus et al. (2004) conducted a study to evaluate whether Teens Linked to Care could be adapted for delivery on an individual level with fewer sessions and remain effective with substance using HIV positive youth. Participants (ages 16–29) were randomly assigned to in-person delivery or phone delivery of the intervention. The intervention used the same 3 modules as Teens Linked to Care, but each module consisted of only 6 sessions lasting 2 hours each. The control condition consisted of repeated risk assessments over a period of 15 months without receiving the intervention. Youth assigned to the in-person intervention demonstrated a significantly higher increase in protected sexual risk acts, especially with HIV negative partners, than participants in the telephone or control conditions. There were no differences in number of sexual partners, disclosure of serostatus, drug use, adherence to HAART, improved healthy behaviors, or emotional health across the three intervention groups.

Although more expensive than conducting Teens Linked to Care in a small group setting, the in-person individual level intervention was shown to be effective in reducing sexual risk and the authors note that it could be more easily used in rural settings. Interestingly, the study found that most participants in the control condition consisting only of repeated risk assessments reduced their sexual and drug use behaviors over time. The authors are currently evaluating the effectiveness of this type of intervention with HIV positive persons.

HIV Positive Greater Minnesotans

There have been no studies conducted of effective prevention interventions targeting HIV positive persons living in rural areas.

M*en Who Have Sex with Men……*

Overview of Interventions for Men Who Have Sex with Men

In general, the evaluation of programs for gay men has been of high quality, based on sound theory and has been successful in targeting specific behaviors. However, further data are needed regarding long-term behavioral change. In addition, there is a lack of evaluated interventions that focus on men of color who have sex with men, gay and bisexual youth, men who have sex with men who do not identify themselves as gay, and non-urban men who have sex with men.

Also, some more basic research needs to be done among gay men to describe attitudes and motivations, including development of good scales to measure these constructs. The wider spectrum of sexuality needs to be considered in order to affect maintenance of safer sex over time. For example, according to the CDC, research has shown that some men make false assumptions about the HIV status of their partners, assuming that partners who do not insist on a condom must not be infected, or believing that they have communicated their status by leaving their HIV medications in visible locations. Programs must be designed to address these and other factors influencing behavior, and must ensure that messages are reinforced and adapted as needed over time.

Recommendations From MSM in Minnesota

A total of 61 men participated in a series of five community forums that were held with MSM in 2001 for the purpose of gathering input on appropriate prevention interventions for the MSM target population (MDH, 2001). Overall, 93% of the participants in these forums were White. Three of the forums occurred in Minneapolis. Two were held in Greater Minnesota, and were attended by a total of 27 men. Some common themes emerged from the forums.

Access to Condoms
The men stated that there is a need for greater access to free condoms and lubricant, along with information about how to use the condoms and HIV/STD risk reduction information. In addition to having bowls of condoms available in places like bars, restrooms, parks, and beaches, several groups talked about the importance of having outreach workers available to distribute the condoms and build up trust with the people they are reaching. It was noted that condoms are particularly difficult to access in rural areas, and that married, older, or younger men may be inhibited from buying condoms in a store because of the fear of being judged or fear that their partner, spouse, or parent may see the receipt.

Information on the Internet
Men from both the metro area and Greater Minnesota emphasized the use of the Internet as a prevention tool. Suggestions for the type of information to post included: HIV and risk reduction information, resources for testing and safer sex supplies, banner ads in MSM chat rooms, and a list of GLBT friendly health care providers.

Free and Anonymous HIV Testing
All groups except one talked about the importance of having free and anonymous testing accessible, and the need for being able to easily access test results. One group from Greater Minnesota suggested the option of having test results available over the Internet,

and a metro group discussed the possibility of providing test results and counseling over the phone.

Images of MSM

The group of married men who have sex with men (10 participants) talked about the need for images in public of men showing affection and loving each other, including married men. They talked about the lack of validation they feel as MSM, particularly being married, and that this leads to a sense of isolation. The isolation can lead to denial and mental stress, which may also lead to risky behavior such as anonymous, unprotected sex.

Peer Group Educational Opportunities

Both rural and metro groups talked about the need for small peer group events that provide the opportunity to share factual information about HIV, and to discuss issues such as coming out and drug use, which impact risk behavior. One group talked about the importance of providing the opportunity for MSM to meet people and dialogue about sexuality in a setting that does not involve drinking or drugs. Several groups also mentioned the need for a safe space for MSM to come together.

Discussing HIV and Sexuality with Doctors

Two groups talked about the need to educate health care providers about the need to be sensitive to MSM and to talk about safer sex and HIV/STDs with all patients. They also suggested educating MSM about how to talk to their doctors about HIV and risk behavior.

Comprehensive Programming

Safety Counts (DEBI)

As previously described on page 304, Safety Counts is a client-centered, comprehensive intervention targeting HIV positive and HIV negative individuals who are currently using non-injection or injection drugs. The intervention is not specific to gender, race/ethnicity, or sexual orientation. The goal of the program is to reduce risk of becoming infected with or transmitting HIV and hepatitis viruses, and involves individual and group level activities, as well as social events over a period of 4 to 6 months. The intervention focuses on setting personal risk reduction goals, assessing progress, discussing barriers, and identifying next steps. Staff discuss the importance of knowing HIV status upon program enrollment and offer CTR services at each session for HIV negative clients (www.effectiveinterventions.org).

Men of All Races Who Have Sex with Men

COUNSELING AND TESTING

A meta-analysis of 27 published studies involving 19,957 participants, including MSM, was conducted to see whether HIV counseling and testing leads to a reduction in sexual risk behavior. The results indicate that people who receive negative test results and those who do not test are less likely to reduce risky sexual behavior than persons who test positive or are in a serodiscordant couple. HIV negative participants did not reduce risk behavior any more than participants who did not test. This study suggests that counseling and testing is not effective as a primary prevention strategy (Weinhardt et al., 1999).

INTERNET OUTREACH

Due to the popularity among MSM of using the Internet to meet sexual partners, several studies have been conducted of Internet outreach efforts, although with limited information about their impact on behavior change. One effort was undertaken by the San Francisco Department of Health in response to increases in syphilis cases among gay men. The intervention included one-on-one discussions via instant message and e-mail with persons in chat rooms, banner ads, one-hour auditorium-style chats with questions answered by an expert, an educational site allowing for questions to be posted and then answered by a physician, message boards, and promotion of syphilis testing. This intervention measured the number of persons reached and tested for syphilis, but did not assess behavior change. The banner ads and the educational site reached the greatest number of people. Of the thousands of persons who visited the syphilis testing site, only 140 completed the test. Among these, 6 (4%) new syphilis infections were identified. The researchers note the difficulty in targeting the campaign to a specific geographic area and suggest that communities across the country may want to pool resources to develop Internet-based activities (Klausner et al., 2004).

An exploratory study was conducted of a chat room intervention in which a health educator actively participated in general chat room dialogue and announced his availability to answer questions and provide referrals related to HIV/AIDS. Six major themes evolved during chat room discussions: sexual risk reduction strategies, particularly related to barebacking; questions about HIV testing; alternatives for non-sexual social support; referrals for youth; resources related to coming out; and access to risk reduction materials and supplies. Although this study did not assess behavioral change, the author notes that this type of intervention reaches MSM in the space and time that they are looking for sexual partners and that prevention messages and negotiation skills are less likely to be forgotten in the short time between hearing them and hooking up with a partner (Rhodes, 2004).

The study that did attempt to assess behavioral change experienced difficulties with follow-up. MSM were recruited through chat rooms, list serves, banner ads, flyers to health departments and social service agencies, and links from HIV prevention organizations' websites. People who agreed to participate were randomly assigned to the intervention or to the control group, where they received messages about HIV and STD prevention similar to those available on numerous Internet sites. The intervention was based on the AIDS Community Demonstration Project and consisted of three tailored messages, generated according to information they provided in their risk assessment. The messages were delivered using a role model story format, and were accompanied by a photo of a man

similar to the participant in terms of age and race/ethnicity. The stories encouraged the participants to consider small incremental changes towards three behavioral outcomes: condom use with non-main partners, STD testing, and HIV testing. Participants were asked to return to the website in 3 months to complete a follow-up survey. Only 15% of participants completed the follow-up. However, of these, data indicate that men in the intervention group were significantly more likely to indicate they were willing to go to an STD prevention website to get information about disease prevention, and showed a trend toward testing for HIV more frequently than men in the control group (Bull et al., 2004).

Individual Level Interventions

EXPLORE

The EXPLORE behavioral intervention assumes that different MSM will have different risk factors and that interventions need to be tailored to each individual (Chesney et al., 2003). The first three sessions of the EXPLORE model are designed to build rapport between the counselor and the individual. They focus on identifying the factors most important for the individual in relation to unsafe sex and self-protection. Based on the information gathered in the first three sessions, the counselor designs the following sessions to focus on issues that are most pertinent to the individual.

The EXPLORE model is based on 10 counseling modules. The counselor individualizes the intervention by choosing the modules that best fit the needs of each person.

Module 1 – Being HIV negative and participating in EXPLORE.

Session Focus:

- Participant states why he wants to stay HIV negative.
- Mixed feelings about sex and risk are examined and normalized.

Modules 2 and 3 – Risk: What's acceptable to me? Crossing acceptable limits.

Session Focus:

- Knowledge of risk factors assessed.
- Personal meaning of risk reduction is explored through talking about recent sexual experiences and personal attitudes regarding acceptable risk.
- Discussion about pleasure of unprotected sex.

Modules 4 and 5 – Sexual Communication: HIV status, spoken and unspoken messages.

Session Focus:

- Attitudes and skills that help or impair clear communication of risk limits.
- Communication of serostatus.
- Being part of a couple that negotiates safety arrangements or risk limits.

Modules 6, 7, 8 and 9 – Sex, Drinking, and Drugs: Places and events as triggers, feelings and thoughts as triggers, partners as triggers.

Session Focus:

- Impact of substance use on risk behavior.
- How personal, social, and environmental factors may trigger either risky sex or safer behavior.
- Examination and skills training to manage risk when faced with: settings where risky sex may occur, life and social events that may encourage risk, emotions and self-talk that cue risk taking, partner characteristics that trigger risky sex.

Module 10 and Maintenance – Planning for maintenance and staying HIV negative.

Session Focus:

- Planning for how to maintain personal risk reduction efforts, including training on how to prevent relapses, applying lessons to changing life situations.

The study found that the most common factor reported by 75% of participants was enjoyment of unprotected anal sex, which presents a challenge to motivating behavior change. This model employs motivational interviewing, which is used to identify feelings of ambivalence towards reducing risk. The focus of counseling is on identifying and vocalizing pros and cons of change and reasons to engage in safer behaviors.

Compared to the control condition, consisting of two individual counseling sessions and two follow-up visits with HIV testing, the rate of acquisition of HIV infection was 16% lower among participants in the EXPLORE intervention. The effect was more favorable in the first 12–18 months of follow-up. The occurrence of unprotected receptive anal intercourse with partners of positive or unknown serostatus was 21% lower among the EXPLORE participants compared to those in the control condition (Koblin et al., 2004).

Group Level Interventions

Most group level interventions have been shown to be effective, particularly if sexually explicit materials were used and behavioral skills were an important part of the intervention. However, the studies did not measure long-term behavioral change. These interventions involved highly motivated men who self-identified as gay or bisexual, and may not be as effective for other men having sex with men.

Small Group Lecture Plus Skills Training (Compendium)

A lecture-only intervention tested with mostly White gay men covered HIV transmission, HIV infection, relative risk for specific sexual practices, condom use, interpretation of HIV test results, and importance of reducing risk. A second intervention added a skills building component that incorporated role play, psychodrama, and group process. Both groups showed trends toward behavior change, and the skills building intervention was effective at increasing the use of condoms during insertive anal sex at 6- and 12-month follow-ups (Valdiserri et al., 1989). Additional studies have shown that not only is the incorporation of a skills building component into HIV prevention education effective in changing behavior, it is also cost effective (Pinkerton et al., 1997).

Man-to-Man Seminar

The Man-to-Man Seminar, developed in Minnesota, is a 2-day sexual health seminar designed to provide comprehensive sexual health education to MSM. The seminar focuses on participants' knowledge, attitudes, and behaviors as they relate to HIV prevention, risk behavior, and sexual health. The seminar provides basic information on sexual health issues including sexual identity, HIV and STD prevention techniques, relationships, intimacy, and sexual behavior. The curriculum includes multi-media, multi sensory experiences with large group discussions, small group discussions, behavioral modeling, storytelling, video, music, and PowerPoint slide presentations.

Participants in the seminar participate in the following: completion of voluntary pre-and post-test surveys, small group and large group exercises, breakout groups, and discussions with other participants of the seminar. The surveys include questions about sexual and drug experience, attitudes, beliefs, mood, and any abuse experienced and related issues. An evaluation study indicated the effectiveness of the seminar in increasing condom use among participants (Rosser et al., 2002).

COMMUNITY LEVEL INTERVENTIONS

Community PROMISE (DEBI)

Community PROMISE is based on the AIDS Community Demonstration Projects, which took place over three years in Dallas, Denver, Long Beach, New York City, and Seattle. Target communities included non-gay-identified men who have sex with men, among others. Each intervention site used peer volunteers to distribute kits featuring role model stories, brochures, condoms, and bleach kits. Significantly greater achievement in consistent condom use, and maintenance of consistent condom use with non-main partners was found in the intervention communities (CDC AIDS Community Demonstration Projects Research Group, 1999).

> *Core Elements of Community PROMISE*
>
> The core elements of Community PROMISE:
>
> - Community identification process to collect information about the community, including HIV/STD risk behaviors and influencing factors
> - Creating role model stories based on personal accounts from individuals in the target population who have made positive behavior change
> - Recruiting and training peer advocates from the target population to distribute role model stories and prevention materials
> - Continuous formative evaluation to capture behavior change
>
> www.effectiveinterventions.org

Community PROMISE begins with a community identification process, which involves interviewing and holding focus groups with stakeholders in the community to identify why people engage in risk behaviors, what barriers exist to changing behavior, what will encourage them to change behaviors, and locations where they engage in risk behaviors. This helps with identifying target populations and appropriate tailoring of the intervention. Members of the target population who have made positive behavior change are interviewed and role model stories are written based upon their interviews. Peer advocates from the target populations are recruited and trained to distribute the role model stories and other materials.

Popular Opinion Leader (DEBI)

The Popular Opinion Leader (POL) model is based on a study conducted by Kelly et al. (1991) and targets men who frequent gay bars, male sex workers, adolescents, and business owners who cater to gay men. POL involves the recruitment of a group of trusted, well-liked men who frequent gay bars. The "popular opinion leaders" are trained in a series of 4 sessions to endorse safer sexual behaviors in casual, one-on-one conversations with peers at the bars and other settings. During these conversations, the popular opinion leader corrects misperceptions, discusses the importance of HIV prevention, describes strategies he uses to reduce his own risk (e.g., keeping condoms nearby, avoiding sex when intoxicated, resisting coercion for unsafe sex), and recommends that the peer adopt safer sex behaviors. Popular opinion leaders wear buttons displaying the project logo, which also is on posters around the bars, as a conversation-starting technique.

> *Core Elements of Popular Opinion Leader*
>
> The core elements of the POL model are:
>
> - Identifying and enlisting the support of popular and well-liked opinion leaders to take on risk reduction advocacy roles
> - Training cadres of peer opinion leaders to disseminate risk reduction endorsement messages within their own social networks
> - Supporting and reinforcing successive waves of opinion leaders to help reshape social norms to encourage safer sex

Each leader agrees to have at least 14 such conversations and to recruit another popular opinion leader.

According to the CDC (2000), the use of peer opinion leaders has been found to be an effective strategy in the MSM community. Surveys of nearly 1,300 gay men in cities with and without a popular opinion leader program found that men in the intervention communities were 34% less likely to have unprotected sex compared to men from other control communities 3 to 6 months after intervention. When the intervention was first tested, results indicated that unprotected anal intercourse decreased from between 15–29%, condom use increased, and the number of sex partners decreased (Kelly et al., 1991).

Men of Color Who Have Sex with Men

GROUP LEVEL INTERVENTIONS

Many Men, Many Voices (DEBI)

This group level intervention is focused on behavioral self-management and assertion skills, and is based on a study conducted with primarily White gay men. Twelve group sessions addressed HIV and prevention, improving behavioral self-management, self-identification of risk behaviors and personal risk reduction strategies, assertiveness training, relationship building and social support. The intervention was effective in improving safer sex behaviors and at maintaining this improvement over an 8-month period, and in improving assertiveness skills and HIV/AIDS knowledge (Kelly et al., 1989).

The intervention has been adapted to target gay men of color as well as those on the "down low." Many Men, Many Voices (3MV) consists of 6 or 7 group sessions designed to influence behavior change for HIV/STD prevention. A peer facilitator leads a series of 2- to 3-hour sessions. Sessions address behavioral influencing factors specific to gay men of color and encourage sharing of experiences. The participants build an understanding of how their life experiences relate to how they feel about themselves, their attitudes and beliefs, and their risky behaviors. It is a step-by-step process that relies on real dialogue and participant interactions. The program uses behavioral skills practice, group discussions, role plays, and group exercises. The 7 sessions address specific influencing factors in a purposeful sequence including:

- Dual identify of gay men of color
- STD/HIV prevention for gay men of color – sexual roles and risks
- STD/HIV risk assessment and prevention options
- Intentions to act and capacity to change
- Sexual relationship dynamics – partner selection, communication, and negotiation
- Social support and problem solving to maintain change
- Building a healthy community (optional)

Core Elements of Many Men, Many Voices

The core elements of 3MV are:

- Educate clients about HIV risk and sensitize to personal risk
- Develop risk reduction strategies
- Train in behavioral skills
- Train in partner communication and negotiation
- Provide social support and relapse prevention

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Group Sessions Targeting African American Gay and Bisexual Men

African American gay and bisexual men in the San Francisco Bay Area were recruited from bars, bathhouses, erotic bookstores, and through African American organizations, street networks, newspaper advertisements, and personal referrals. Some participants were randomly assigned to an intervention consisting of three 3-hour group sessions, and included the following components: promotion of self-identity and self-pride; HIV/AIDS risk reduction education, assertiveness training (discussion and role play), and verbal commitments to reduce high risk behavior. Other participants were randomly assigned to attend one 3-hour group session or to a wait-list control group. Compared to the control

group, both intervention groups reported decreased unprotected anal intercourse at 12-month and 18-month follow-up. Participants in the 3-session intervention demonstrated a 50% decrease in unprotected anal intercourse at both follow-ups. Participants in the 3-session intervention reported significantly less risk behavior than those in the single session intervention at the time of both follow-ups (Peterson et al., 1996).

Hot, Healthy and Keeping It Up!

Hot, Healthy and Keeping it Up! is a 3-hour single group session targeting Asian and/or Pacific Islander gay and bisexual men. The intervention is designed to increase positive ethnic and sexual identity in order to help participants acknowledge HIV risk behaviors by discussing negative experiences of being both Asian or Pacific Islander and gay. Facilitators use interactive and group process techniques to address four intervention components: development of positive self-identity and social support, safer sex education, eroticizing safer sex, and negotiating safer sex. At the 3-month follow-up, participants in the intervention were significantly more concerned about HIV infection, had significantly fewer partners, and were significantly less likely to report unprotected anal sex than participants in the control condition (Choi et al., 1996).

Hermanos de Luna y Sol

Hermanos de Luna y Sol is a prevention intervention targeting immigrant, Spanish-speaking Latino MSM. Participants are recruited through bar outreach to participate in 6 weekly discussion workshops that address four factors that impact safer sex: low self-esteem, perceptions of low sexual control, lack of social support, and fatalism regarding the inevitability of HIV infection. Participants have access to follow-up resources and activities to support them in maintaining safer sexual behavior over time. These activities include an ongoing support group, specialized workshops and retreats, and access to individual level risk reduction counseling services. Evaluation of the program indicates that it has been successful in reducing by 52% the percentage of men who never use condoms for anal intercourse. The percentage of men who were firmly committed to condom use for anal sex increased from 22% to 34% (Center for AIDS Prevention Studies, 2001).

COMMUNITY LEVEL INTERVENTIONS

Intervention Targeting Puerto Rican Men

An intervention developed to target gay men in Puerto Rico involves several components. Peer volunteers are first trained to conduct outreach in gay venues in order to recruit participants to come to a 3-hour small group meeting. The small group meetings are facilitated by peer educators and allow participants to discuss issues related to HIV prevention. Small group participants are invited to participate in a 4-session workshop also facilitated by peers. The sessions focus on intimacy (relationships, self-concept and self-hatred), perception of risk (HIV/STDs and risk behaviors, sexuality and culture, eroticizing safer sex), benefits and barriers to behavior change (alcohol and drug use, self-efficacy, communication and negotiation), and homophobia (community support and development, living with HIV, commitment for change on a personal and community level). Workshop participants were encouraged to contact two friends and refer them to a small group meeting. This proved to be one of the best ways to access members of the community for the intervention. Although the evaluation of the intervention did not include follow-up, results from pre- and post-test data analysis indicate that participants reduced high risk sexual behaviors and increased safer sexual behaviors over the course of the intervention (Toro Alfonso et al., 2002).

B-Boy Blues Festival
The B-Boy Blues Festival is a successful program designed to recognize that a significant portion of African American men who have sex with men may not self-identify as gay or bisexual. HIV prevention information is provided in a more acceptable setting. The festival, held in St. Louis, Missouri, does not advertise or identify as an HIV/AIDS event and includes entertainment and cultural programs that accompany HIV workshops, HIV counseling and testing, and distribution of condoms and HIV prevention literature. As reported by CDC (2000), surveys disseminated at the festival in 1996, 1997, and 1998 showed significant improvements in attitudes about and knowledge of HIV and AIDS by attendants, illustrating that outreach activities not promoted as HIV/AIDS programs are useful in serving these usually hard to reach men.

Recommendations Regarding Interventions for Older MSM of Color

In a study of risk behaviors among older MSM of color, Jimenez (2003) recommends that in order to be effective, interventions targeting this population must be sensitive and specific to the multidimensional character of older minority MSM sexuality and role identification. Although a large proportion of the participants in this study self-identify as gay, intervention messages and strategies should be developed that address a substantial portion of the population who do not identify as gay or homosexual and includes individuals who may, in fact, engage in regular bisexual activity.

Secondly, prevention efforts must consider the perceptions of gay-related and AIDS-related stigmatization held by many of the respondents in this study. Results from numerous studies indicate that stigmatization plays an important role in increasing HIV-associated risks behaviors while decreasing the use of HIV prevention services, particularly among men of color (Ramírez Valles, 2002; Stokes and Peterson, 1998). Finally, to facilitate access to prevention services for older MSM of color, interventions may need to redirect their activities to areas outside of traditional gay urban enclaves. Most participants in this study, particularly those who were non-gay-identified, resided in communities of color, most of which are highly disenfranchised and underserved.

Young Men Who Have Sex with Men

Counseling, Testing and Referral

A study comparing recent risk behaviors and HIV seroconversion among young MSM based on the frequency of their utilization of CTR services found that compared to young MSM who were first time testers, young MSM who repeatedly tested were more likely to acquire HIV and to report recent high risk behaviors. The researchers state that providers must strengthen practices to identify, counsel and test young MSM and provide enhanced behavioral interventions for those with persistent risks (MacKellar et al., 2002).

Individual Level Intervention

An intervention developed in Minnesota which includes individual risk assessment, risk reduction counseling, peer education, optional HIV antibody testing and counseling, referral to medical and psychosocial services as needed, and longitudinal follow-up has contributed to short-term risk reduction in HIV transmission among gay/bisexual youth, measured by reductions in the number of sex partners and their frequency of unprotected anal intercourse among the participants (Remafedi, 1994). This intervention has also been shown to be cost effective in societal terms of averting 13 HIV infections, and saving 180 Quality Adjusted Life Years over a 10-year period, at a cost of $1.1 million dollars (Tao and Remafedi, 1998).

School-based Intervention

Gay Sensitive HIV Education

A study of HIV education among high school students in Massachusetts points to the need for gay sensitive HIV health education in schools (Blake et al., 2001). The study compared risk factors for gay, lesbian and bisexual (GLB) youth in schools that did not offer gay sensitive HIV education with those in schools that did offer gay sensitive HIV education. A drawback of the study is that gay sensitive HIV education was not clearly defined. It was determined by teachers reporting the use of gay sensitive HIV education curricula and confidence that they could meet the needs of gay/bisexual students.

The study found that GLB students in schools with no or minimal levels of gay sensitive HIV education were more likely than their heterosexual classmates, and more likely than GLB or heterosexual students in schools with gay sensitive education to:

- Become or get someone pregnant
- Have a higher number of recent sex partners
- Make a plan to commit suicide
- Miss school for personal safety reasons
- Have property damaged or stolen

COMMUNITY LEVEL INTERVENTIONS

The Mpowerment Project (DEBI)

The Mpowerment Project is based on an intervention conducted over eight months to reach young gay men ages 18-29. Men who participated in the project reduced their frequency of unprotected anal intercourse significantly more than the men in the comparison community did (Kegeles et al., 1996). The intervention is run by a core group of 10–15 young gay men from the community and paid staff. The young gay men, along with other volunteers, design and carry out all project activities. Ideally, the project has its own physical space where most meetings and social events are held and then can be used as a drop-in space during specified hours.

Core Elements of the Mpowerment Project

Mpowerment consists of four integrated activities:

- *Formal outreach:* Teams of young gay men go to venues frequented by the target population to discuss and promote and discuss safer sex, deliver informational literature on HIV risk reduction, and distribute condoms. Additionally, the team creates their own social events (e.g., dances, video parties, discussion groups, etc.) to attract young gay men and promote safer sex
- *M-groups:* Peer-led, 2-3 hour small group meetings allow young gay men to discuss factors contributing to unsafe sex. Through skills building exercises, participants practice safer sex negotiation and condom use. Participants receive free condoms and lubricant and are trained to conduct informal outreach
- *Informal outreach:* Young men discuss safer sex with their friends
- *Ongoing Publicity Campaign:* The campaign attracts young gay men to the project by word of mouth and through articles and advertisements in gay newspapers

www.effectiveinterventions.org

Popular Opinion Leader (DEBI)

The Popular Opinion Leader (POL) model has also been shown to be effective with young gay men. As described in more depth on page 313, the POL model involves the training of popular opinion leaders who then have one-on-one conversations promoting safer sex with their peers. The popular opinion leaders also recruit another person to go through the training. (www.effectiveinterventions.org)

High Risk Heterosexuals……

Overview of Interventions for High Risk Heterosexuals

While some prevention interventions have been developed for use with specific subpopulations of high risk heterosexuals, a number of interventions have been evaluated and found to be effective for adult high risk heterosexuals, without being racially or ethnically specific. Others have been tested and found to be effective with more than one racial/ethnic group.

INDIVIDUAL LEVEL INTERVENTIONS

Project RESPECT (Compendium)
Project RESPECT examined the efficacy of HIV/STD prevention counseling. It enrolled 5,801 primarily heterosexual STD patients (59% African American, 19% Latino, 16% White, 6% other) from five inner-city clinics into an enhanced counseling arm (four 60-minute sessions), a brief interactive counseling arm (two 20-minute sessions), and an HIV information arm (two 5-minute sessions), all of which were followed up at 3, 6 and 12 months. All three interventions were face to face, and used a structured format to encourage consistent condom use with all sex partners. A $15 stipend was offered per intervention session.

At the 3-month and 6-month follow-up, consistent condom use was significantly higher in participants of both the enhanced and brief counseling interventions compared to those in the information intervention. After 6 months, 30% fewer participants in both counseling interventions had new STDs, and after 12 months, 20% fewer participants in both had new STDs. The STD reduction was similar for men and women. Subset analyses suggest that the counseling interventions were better for adolescents (45% fewer had new STDs) and for people who had an STD at the baseline visit (40% fewer had new STDs) (Kamb et el., 1998).

Project Connect
Project Connect was a study of an intervention targeting primarily African American and Latino women and their heterosexual male partners. Participants were randomly assigned to one of three interventions. The first intervention consisted of 6 weekly 2-hour intervention sessions conducted with the woman only. The second intervention consisted of 6 weekly 2-hour sessions with both the male and female partners. Both of these interventions strongly emphasized the relationship, including issues of intimacy and closeness in the relationship, the meaning of monogamy and trust, and how all of these factors act as barriers to HIV/STD prevention. The two interventions focused on the importance of communication, negotiation, and problem solving skills, and highlighted how relationship dynamics may be affected by gender roles and expectations. The control condition consisted of a 1-hour HIV/STD educational session. Participants in both intervention groups reported increased protected sexual acts and decreased unprotected sexual acts than those in the control group. There was no significant difference between the two intervention groups. The intervention demonstrated that it is feasible to conduct a couple-based intervention with African American and Latina women and their partners, and that these men were willing to participate (El-Bassel et al., 2003).

Group Level Interventions

Condom Skills Education (Compendium)

Men and women (67% African American, 15% Latino, 19% other) received a 10 to 15 minute presentation while waiting for appointments at an STD clinic. The presentation emphasized three important points for effective condom use: condoms should be made of latex, condoms should have a reservoir tip or space left at the end, and condoms should be lubricated with a spermicide. The session included group discussion and a demonstration of how to put on a condom. Another 10 to 15 minutes were allowed for questions and answers. Men and women who participated were significantly less likely to return to the STD clinic within the next 12 months with a new STD (Cohen et al., 1991).

Group Sessions for Pregnant Women (Compendium)

One intervention, led by female psychologists and health educators, consisted of 4 sessions, for groups of 2 to 8 single, pregnant women (57% African American, 40% White, 3% other). Women learned negotiation and assertiveness skills, created health plans, reviewed videos, and role played risk scenarios. Incentives included cash, partial reimbursement for transportation, childcare, and participation in a lottery for a color TV. Women who participated in the intervention increased their use of condoms with partners significantly more than women in the comparison condition (Hobfall et al., 1994).

Community Level Interventions

Real AIDS Prevention Project (DEBI)

The Real AIDS Prevention Project (RAPP) intervention is based on the Women and Infants Demonstration Trial, which targeted women in inner city communities. Women in the intervention communities were more likely to initiate condom use with steady partners, negotiate condoms with steady and casual partners, and consistently use condoms (sex workers) with both steady and casual partners (Lauby et al., 2000).

The intervention objectives are to increase consistent condom use by women and their partners, to change community norms so that safer sex is seen as the norm, and to involve as many people from the community as possible. The program has two phases: 1) community assessment, which involves learning about the community and how to talk to women and their partners about HIV risk, and 2) getting the community involved in a combination of risk reduction activities.

Core Elements of RAPP

RAPP consists of the following core elements:

- Conducting community outreach using peer networkers
- Having one-on-one safer sex discussions based on client's stage of readiness to change
- Using printed stories about community members and safer sex decisions (role model stories)
- Obtaining program support from community organizations and businesses (community networking)
- Sponsoring small group activities, such as safer sex gatherings and HIV prevention presentations

www.effectiveinterventions.org

Community PROMISE (DEBI)
As described in more detail on page 313, Community PROMISE is based on the AIDS Community Demonstration Projects. This intervention has been tested with African American, White and Latino communities, including female sex workers, high risk heterosexuals and high risk youth.

Community PROMISE begins with a community identification process, which involves interviewing and holding focus groups with stakeholders in the community to identify why people engage in risk behaviors, what barriers exist to changing behavior, what will encourage them to change behaviors, and locations where they engage in risk behaviors. This helps with identifying target populations and appropriate tailoring of the intervention. Members of the target population who have made positive behavior change are interviewed and role model stories are written based upon their interviews. Peer advocates from the target populations are recruited and trained to distribute the role model stories and other materials. The final core element is formative evaluation to capture behavior change within the target population (www.effectiveinterventions.org).

COMPREHENSIVE PROGRAMMING

Safety Counts (DEBI)
As previously described on page 304, Safety Counts is a client-centered, comprehensive intervention targeting HIV positive and HIV negative individuals who are currently using non-injection or injection drugs. The intervention is not specific to gender, race/ethnicity, or sexual orientation. The goal of the program is to reduce risk of becoming infected with or transmitting HIV and hepatitis viruses, and involves individual and group level activities, as well as social events over a period of 4 to 6 months. The intervention focuses on setting personal risk reduction goals, assessing progress, discussing barriers, and identifying next steps. Staff discuss the importance of knowing HIV status upon program enrollment and offer CTR services at each session for HIV negative clients (www.effectiveinterventions.org).

African High Risk Heterosexuals

African immigrants are a relatively new population to Minnesota and to the United States in general. As a result, although they are greatly impacted by the HIV epidemic in Minnesota, very little research has been conducted with this population. The two studies available were conducted with African immigrants in Canada and Israel.

Recommendations from African Community Leaders in Minnesota

In 2003, MDH and DHS hosted a meeting with leaders from African communities in Minnesota to share findings from needs assessment activities that occurred during the year and to gather their recommendations for HIV prevention activities. Their recommendations were organized under several themes, as described in the side bar.

Recommendations from Minnesota
The following are recommendations regarding prevention efforts targeting African immigrant communities in Minnesota:

Training
- MDH should provide prevention training to community leaders. Training should be targeted by age, gender, country of origin, etc.
- Train HIV positive individuals to do prevention work in the community
- Adapt the Red Cross training for Africans

Information
- MDH should translate existing materials in a culturally appropriate manner
- Bus stop ads in appropriate languages
- Brochures and other appropriate material at community events
- Peer education programs
- Education for youth in school or other venues where youth congregate
- Sex education for individuals and community
- Information about available HIV prevention and care services

Outreach/Media
- Conduct outreach in schools and places of worship
- Use dramas and movies to provide education
- Large-scale campaigns addressing HIV testing, services, stigma
- Use community radio and newspapers to provide educational information

Community Level Intervention

Educational Program Targeting Ethiopian Immigrants
An educational program was conducted with Ethiopian immigrants in absorption centers and hotels in Israel upon their arrival, particularly those who were HIV positive, their families, and their sexual partners. The program sought to decrease the risk of further HIV transmission among Ethiopian immigrants, to provide correct information in a culturally acceptable form, to promote safer behavior, to encourage tolerance and support of people living with HIV and their families, and to reduce the negative effects of stigma on prevention efforts. Through this program, community members were trained in a 3-day workshop as health educators and cultural mediators. The health educators then provided presentations to groups of 15–30 adults and answered questions. The health educators focused on six basic messages: each person must be responsible to protect him/herself against infection; it is better to do things when you can prevent them than to cry when you are already suffering and there is nothing you can do (Amharic proverb); each and every member of the community can protect him/herself, the family, and the community; people with HIV should not despair and perceive death as their immediate fate; there is no need to know who is infected – protection lies in behaving as if

everyone may be infected; and there is no need to ostracize people with HIV. The program developed a number of culturally and linguistically appropriate educational materials, including posters, audio programs and pamphlets (Chemtov et al., 1993).

Health Communication/Public Information

Africans United to Control AIDS (UACA)

The Africans United to Control AIDS (UACA) Program was implemented in Toronto and was designed to increase awareness in African communities in order to prevent the spread of HIV, to utilize the expertise of community members to develop appropriate educational material, and to provide a support network for persons living with HIV/AIDS. Education materials were developed that were culturally appropriate for women, men, youth, and members of specific countries/tribes. UACA conducted outreach through organizations serving African immigrants, lawyers serving immigrants and social service organizations and engaged them in assisting with the distribution of educational materials, condoms, and information about the program. UACA developed relationships with media (community radio stations, newspapers, and theaters) and worked with them to provide information and promote the program. Educational sessions were provided to specific groups of people (e.g., men, women, youth, ESL classes, people from specific countries/tribes), and were sometimes integrated into community events. Sessions were usually held in the evening or over the weekend, and addressed the following topics: definition of HIV/AIDS, origin of the disease, transmission – both how it can and cannot be transmitted, misconceptions about the disease, preventive measures, testing options and the importance of getting tested, and treatment and community support systems (Nakyonyi, 1993).

African American High Risk Heterosexuals

Counseling, Testing and Referral

HIV Education, Testing and Counseling (Compendium)

In a study conducted by Wenger et al. (1991), men and women (85% African American) at an urban STD clinic were offered HIV counseling and testing. The counseling consisted of a pamphlet discussing safer and unsafe sexual acts and how to use condoms; a 15-minute video examining risk behavior and promoting condom use, as well as discussing risk with sex partners; and a 10-minute one-on-one counseling session with a physician. Participants reported significantly fewer occurrences of unprotected intercourse than did those in the comparison condition.

Individual Level Intervention

Intervention for African American Women Using Crack Cocaine

African American heterosexual women who use crack cocaine were recruited to participate in one of two enhanced gender- and culturally-specific interventions. The control condition was a standard National Institution on Drug Abuse (NIDA) intervention. The motivational intervention consisted of 4 individual sessions. The first session emphasized sex and drug-related risk behaviors, risk reduction strategies, and impact of race and gender on HIV risk and protective behaviors. Over the remaining sessions, the client identified what she would be motivated to change, developed short- and long-term goals, and talked about experiences in implementing short-term goals. The enhanced negotiation intervention also consisted of 4 sessions, with the first session being the same as in the other intervention. In the remaining sessions, focus was on intended behavioral changes; skills related to communication and assertiveness; setting short-term goals related to communication, gaining control, and developing assertiveness; discussing experiences with short-term goals and identifying barriers; and skills for negotiation and conflict resolution. The enhanced interventions were found to be more effective in reducing the number of paying partners for vaginal sex, frequency of sex with paying partners, the use of crack in risky settings, and in increasing condom use with steady partners. There were some differences in outcomes based on the two enhanced interventions. At the 6-month follow-up, the percentage of women across reporting crack use in the past 30 days decreased from 100% to 61% across the three intervention groups. The findings suggest that combined components of the two enhanced interventions may be most effective in reducing risky behavior among this population (Sterk et al., 2003).

Group Level Interventions

Group Discussion and Condom Promotion (Compendium)

This single session group intervention with men and women (92% African American) waiting for appointments in an STD clinic began with a video that depicted condom use as being socially acceptable, followed by group discussion about methods of preventing STDs, promotion of condom use, and reasons why people like or don't like using condoms. Role playing allowed the participants the opportunity to practice condom negotiation. Finally, participants were given 10 free condoms. Men who participated in this intervention had a significantly lower STD reinfection rate. There was no evidence of change for women (Cohen et al, 1992).

Cognitive-Behavioral Skills Training Group (Compendium)

This clinic-based intervention consisted of 4 weekly group sessions lasting 90 minutes with 8 to 10 women in each group (87% African American). The sessions provided detailed information about HIV risk and focused on behaviors that increase risk, common misconceptions, and how to reduce risk. Exercises emphasized cognitive-attitudinal areas, behavioral skills and social factors. Role plays were used to practice initiating conversations about HIV and condom use, and how to resist sexual pressure. Condom demonstration and practice was also included. The women also learned how to recognize, understand, and manage personal triggers for risk behavior. Women participating in this intervention significantly increased condom use and decreased frequency of unprotected sex (Kelly et al., 1994).

SISTA Project (DEBI)

The SISTA Project is a social skills training intervention for African American women based on an intervention that was demonstrated to be effective in increasing consistent condom use, and in improving skills and perceived norms from partners among African American women in a low income community in San Francisco (DiClemente and Wingood, 1995). The intervention consists of a series of five 2-hour sessions facilitated by two peer health educators in a community based setting. The sessions are gender specific and include behavioral skills practice, group discussions, lectures, role playing, a prevention video, and take home exercises.

The curriculum emphasizes gender and ethnic pride and enhancement of self-worth, sexual assertion skills, proper condom use, and cultural and gender triggers that may make it challenging for women to negotiate safer sex. The importance of partner involvement in safer sex is also emphasized, and the take home exercises involve the male partner.

Core Elements of SISTA

The SISTA Project consists of the following core elements:

- Conduct small group sessions to discuss the session objectives, model skills development, role play women's skills acquisition, and address the challenges and joy of being an African American woman
- Utilize skilled facilitators to implement the SISTA group sessions
- Utilize cultural and gender appropriate materials to acknowledge pride and enhance self worth in being an African American woman (e.g., use of poetry, artwork by African American women)
- Train women in sexual assertion skills so that they can both demonstrate care for partners and negotiate safer behaviors
- Teach women proper condom use – SISTA is designed to foster positive attitudes and norms towards consistent condom use and provide women the appropriate instruction for placing condoms on their partner
- Discuss cultural and gender triggers that may make it challenging for women to negotiate safer sex
- Emphasize the importance of partner involvement in safer sex – the homework activities are designed to involve the male partner

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VOICES (DEBI)

VOICES is a single-session, video-based HIV/STD prevention program designed to encourage condom use and improve condom negotiation skills among African American men and women. An evaluation of the intervention showed that VOICES is effective when delivered at a "teachable moment;" for instance, a visit to an STD clinic may motivate a person to change behavior. Health educators convene groups of 4-8 clinic patients in a room that allows privacy for discussion. Groups are gender-specific. Information on HIV risk behaviors and condom use is delivered by a video that is culturally specific for African Americans, facilitated group discussion, and a poster board presenting features of various condom brands. Skills in condom use and negotiation are modeled in the video, and then role played and practiced by participants during the discussion that follows. At the end of the single, 45-minute session, participants are given samples of the types of condoms they have identified as best meeting their needs. Participants of this intervention demonstrated an increased knowledge about the transmission of HIV and other STDS, a more realistic assessment of their personal risk, a greater likelihood of getting condoms and intending to use them regularly, and presented with fewer repeat STDs (O'Donnell et al, 1998).

Core Elements of VOICES

The core elements of VOICES include:

- Viewing culturally specific video portraying condom negotiation
- Conducting small group skills building session to work on overcoming barriers to condom use
- Educating program participants about different types of condoms and their features
- Distributing samples of condoms

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Other Group Interventions for African American Heterosexual Women

One intervention consists of six 90-minute sessions, followed by three booster sessions at 3, 6 and 9 months, combined HIV risk reduction information, skills training, role playing and modeling in an attempt to increase self-efficacy and improve positive social norms. The women in the study had significantly increased their use of condoms at the 6-month follow-up, but by the 9-month follow-up, they had returned to the level of risky behavior that they demonstrated at the 3-month follow-up. The same pattern was found with the women's level of self-efficacy. The results indicate good short-term results, but point to the need for ongoing prevention interventions (Dancy et al., 2000).

Kalichman et al. (1996) investigated the impact of interventions that were similar in time frame, but different in content, on HIV risk behavior among African American low income women. The study involved four intervention groups: 1) one HIV education session and three sessions on sexual communication skills; 2) one HIV education session and three sessions on behavioral self-management skills; 3) one HIV education session, 1.5 sessions on behavioral self-management, and 1.5 sessions on sexual communication skills; and, 4) four sessions of HIV risk education without skills training. All groups had 4 total sessions that met twice a week. At 3-month follow-up, intentions to change risk behavior and condom use had increased among participants of all 4 groups. Participants in groups involving communication skills showed increased rates of talking to partners about sex and refusing unprotected sex. The women who received both communication skills and behavioral self-management skills building demonstrated the lowest level of risk.

Group Intervention for African American Heterosexual Men

An intervention for African American men in an inpatient drug treatment program consisted of HIV information, skills training, and explanations of the benefits of safer sex in an attempt to increase perceived susceptibility to HIV and to help identify barriers to

changing high risk behavior. The intervention was conducted through 2-hour sessions provided on three consecutive days. The control group lasted the same length of time, but consisted of information only. At the 3-month follow-up, the intervention group reported an increase in their communication skills, an increase in their condom use skills, and a decrease in their risk behavior. Both groups reported a decrease in the number of sexual partners (Malow et al., 1994).

Latino/a High Risk Heterosexuals

There has been very little research done on effective interventions specifically targeting Latino/a heterosexuals. The studies that have been done have mostly focused on Latina women.

Group Level Interventions

VOCES (DEBI)

VOCES is a single-session, video-based HIV/STD prevention program designed to encourage condom use and improve condom negotiation skills among Latino men and women (the same intervention as VOICES for African Americans). Health educators convene groups of 4-8 clinic patients in a room that allows privacy for discussion. Groups are gender-specific. Information on HIV risk behaviors and condom use is delivered by a bilingual video that is culturally specific for Latinos, facilitated group discussion, and a poster board presenting features of various condom brands in English and Spanish. Skills in condom use and negotiation are modeled in the video, and then role played and practiced by participants during the discussion that follows. At the end of the single, 45-minute session, participants are given samples of the types of condoms they have identified as best meeting their needs. Participants of this intervention demonstrated an increased knowledge about the transmission of HIV and other STDS, a more realistic assessment of their personal risk, a greater likelihood of getting condoms and intending to use them regularly, and presented with fewer repeat STDs (O'Donnell et al, 1998).

> *Core Elements of VOCES*
>
> The core elements of VOCES include:
>
> - Viewing culturally specific video portraying condom negotiation
> - Conducting small group skills building session to work on overcoming barriers to condom use
> - Educating program participants about different types of condoms and their features
> - Distributing samples of condoms
>
> www.effectiveinterventions.org

Group Level Interventions Targeting Latina Heterosexual Women

A study was conducted with Latina women who were mostly immigrants from Puerto Rico, Dominican Republic, Central America, Mexico, and South America. The participants were divided into 3 intervention groups, all of which lasted 12 weeks and had sessions of 90 to 120 minutes in duration. The intervention group focused on HIV and related risk, and incorporated elements of empowerment theory and group dynamics, including participatory education strategies (e.g., critical reflection). It also included discussions of partner violence and societal risk factors such as poverty and oppression. The comparison group provided more traditional HIV education and skills training and women's health issues, without the emphasis on empowerment and participatory education strategies. These two groups were compared to women placed in a waiting list control group. At the 3-month follow-up, women in both the intervention and comparison groups were more likely to have increased condom use and their intent to use condoms than women in the control group. Only the women in the intervention group reported increased safer sex communication. Women in the comparison group were more likely than either the

intervention or control group to have been tested for HIV in the past 3 months (Raj et al., 2001).

An intervention targeting low income, primarily Spanish-speaking Mexican and Puerto Rican women in Chicago consisted of 6 group sessions that included viewing and discussing videos, role playing, skill demonstration, homework to build self-efficacy, and quizzes. Each session focused on one of the following topics: 1) importance of HIV/AIDS awareness in your community and knowing your body; 2) understanding and preventing HIV and STDs; 3) myths and misconceptions about condoms and how to use condoms correctly; 4) negotiating safer sex practices; 5) preventing domestic violence; and, 6) partner communication, review of previous sessions, and benefits of behavior change. Compared to the control group, the intervention was found to be effective in improving HIV knowledge, communication with partner, risk reduction behavioral intentions and condom use, as well as in decreasing perceived barriers in condom use (Peragallo et al., 2005).

Women at Risk is designed to help Latina women recognize their personal susceptibility to STDs, commit to changing their sexual behaviors, and acquire the skills necessary to change behaviors. The intervention consists of 3 small group sessions that address the myths about AIDS and increase awareness of the fact that minority populations are disproportionately affected by HIV and STDs. The sessions also provide information about STD prevention, help build decision making and communication skills, and encourage participants to set risk reduction goals. Of the mostly Mexican American, English speaking women who were included in the evaluation, results indicate that women who participated in the intervention had significantly lower STD infection rates at the 6-month and 12-month follow-up than women in the control group. Also, women in the intervention group were significantly less likely to have multiple partners or to have engaged in high risk sexual behaviors (Shain et al., 1999).

Native American High Risk Heterosexuals

Even less research has been conducted to evaluate effective prevention interventions targeting Native American heterosexuals. In fact, no randomized controlled trials appeared in response to literature searches. However, recommendations for effective prevention strategies have been developed by community leaders and studies have been conducted to assess risk behaviors and needs within Native American communities.

Recommendations from Native American Community

A report developed by the National Alliance of State and Territorial AIDS Directors (NASTAD) with guidance from Native American leaders from across the country identified overarching recommendations for effective prevention efforts targeting Native American communities:

- Establish trust and support from tribal leaders.
- Conduct an assessment of need and meet communities where they are.
- Form collaborations with agencies working on other health and social issues.
- Recognize the distinctive cultural needs of different tribes and adjust programs accordingly.
- Become familiar with the appropriate terminology used by a particular Native American nation/community. Be cognizant of how Native Americans refer to themselves and their people.
- Remain aware of issues in the external environment that affect Native communities and recognize that these, as well as historical events, form the larger framework within which HIV prevention can be pursued (NASTAD, 2004).

Focus groups conducted with Native American drug users in four cities identified the following recommendations for prevention strategies targeting Native American communities in general and active drug users specifically (Baldwin et al., 1999):

HIV Prevention Strategies for Native American Communities and Active Drug Users

Communities	Active Drug Users
Credible Sources	
Elders and Leaders	Ex-drug users
Youth	Youth
People living with HIV/AIDS	People living with HIV/AIDS
Messages	
Native language, as well as English	Visual/graphic
Visual/graphic	Fear-invoking
Paired with alcohol prevention	
Channels	
Chapter houses	Street outreach
Bingo halls	Support groups
Dances, powwows	Jails/prisons
Native corporations	Needle exchange
Schools	
Family gatherings	
Media (newsletters, posters, radio, TV)	

COMMUNITY LEVEL INTERVENTION

Community Readiness Model

While the Community Readiness Model was originally developed to address community alcohol and drug abuse prevention efforts, it has been used successfully to address a number of health issues, including HIV and STDs. The Community Readiness Model is a 9-stage model that assesses a community's level of readiness to develop and implement prevention programming. It is based on the idea that interventions must be consistent with the community's awareness of a problem and their readiness to address it. The interventions must be culturally and community specific and use local resources.

The process begins by identifying the issue to be addressed, followed by identifying the community (e.g., women, youth, a neighborhood). Questions are developed and then interviews are conducted with key informants in the identified community. The interviews are scored and readiness is evaluated using the 9-stage model. Implementation then begins by inviting members from various segments of the community to a workshop where they identify strategies specific to the readiness stage their community is in. The outcome is expected to be community change. As a community advances to a higher level of readiness, new activities can be implemented specific to the new stage of readiness (Vernon and Jumper-Thurman, 2002).

Community Readiness Model

Following are the 9 stages of community readiness and the community change goals associated with each:

1. **No awareness** - Raise awareness
2. **Denial** - Awareness that the problem is here
3. **Vague Awareness** - We can do something
4. **Pre-planning** - Assess and begin planning
5. **Preparation** - Gather information, plan and prioritize
6. **Initiation** - Focus and outreach
7. **Stabilization** - Stabilize efforts
8. **Confirmation Expansion** - Sustain and enhance
9. **Professionalization** - Maintain and expand

HEALTH COMMUNICATION/PUBLIC INFORMATION

In the Northwest Territories, a health promotion campaign was implemented focusing on healthy lifestyle choices with an emphasis on HIV. Community health workers and community members delivered information about HIV/AIDS door to door. Other approaches were also used, including broadcasts on local radio, presentations to community groups, and posters. Pamphlets were developed in 6 languages and audio cassettes were developed for the Dene, whose language is primarily oral. Also, an Inuit woman living with HIV/AIDS shared her story with many people. Band chiefs and councils were informed of the campaign and support from the elders was obtained. An evaluation of the program indicated that the program was well received, mostly because of the high level of involvement of community members. The evaluation did not assess behavioral change (Weaver, 1999).

Young High Risk Heterosexuals

Adolescence and young adulthood can be a difficult and confusing time as youth are struggling to establish their identities and values in the face of peer pressure, parents' expectations, and conflicting messages from the surrounding environment. This is a time when many begin to experiment with sex, drugs, and alcohol, without necessarily having the skills to make wise decisions about their behavior. It is important to reach youth with HIV information and risk reduction skills that they can continue to use throughout their lives.

Individual Level Intervention

Communication Between Parents and Adolescents

Studies demonstrate the positive impact of communication between parents and adolescents on teen sexual behavior. One study found that mother-adolescent discussions about condoms before first sexual intercourse greatly increased the percentage of young people who use condoms, both for their first intercourse and for subsequent acts (Miller et al., 1998). Key findings are:

- *Less Risky Sexual Behavior Among Teens:* Parental communication can influence two primary public health strategies for preventing HIV infection among adolescents. First, parent-adolescent communication can encourage delay of sexual initiation. Second, it can promote condom use among sexually active youth.
- *Less Conformity to Peer Norms By Teens:* Parental discussions about sex and condoms can impact behavior by moderating the extent to which peer norms guide sexual behavior and condom use. Conversely, teens who do not discuss sexual issues with a parent may be influenced by peer norms to guide their sexual behavior.
- *Greater Belief that Parents Provide the Most Useful Information About Sex:* Teens who discuss sexual issues with their parents see them as the most useful source of information and norms about sex (Whitaker et al., 2000).

Group Level Interventions

Street Smart (DEBI)

Street Smart is based on research conducted of small group sessions at a recreational/ social service agency for gay/bisexual youth. Protected sex acts rose from 60% at baseline to 78% at 12-month follow-up for anal sex, and from 28% to 45% for oral sex. The intervention had no effect on those gay/bisexual youth who engaged in commercial sex; instead, their level of high risk sex increased over time (Rotheram-Borus et al., 1994).

The resulting Street Smart program is designed for runaway or homeless youth ages 11-18, but can easily be adapted for youth in other settings. It is a skills building program designed to help runaway youth reduce unprotected sex,

Core Elements of Street Smart

The core elements of Street Smart include:

- Enhancing affective and cognitive awareness, expression and control
- Teaching HIV risk hierarchy and its personal application
- Identifying personal triggers, using peer support and small group skills building sessions
- Building participants' skills in problem solving, personal assertiveness, and HIV harm reduction

number of sex partners, and substance use. The intervention consists of eight 2-hour group sessions, one individual session after the group sessions are completed, and then a group trip to a community resource. It is preferred that teens attend all sessions, but the program is designed so that each session stands alone. Each group session has a specific topic:

Session 1: Getting the language of HIV/AIDS and STDs

Session 2: Personalized risk

Session 3: Condoms and dams

Session 4: Drugs and alcohol

Session 5: Recognizing and coping with feelings

Session 6: Negotiating safer sex

Session 7: Self talk

Session 8: Staying safe over time

The program utilizes role plays to act out typical situations. Quick role plays are short and usually scripted, and are mainly used to introduce a session or topic. Longer role plays may or may not be scripted, and are videotaped so that participants can see themselves as others see them. Other participants also fill out feedback forms on the role plays.

After Street Smart was implemented with runaway and homeless youth, participants reported lower rates of substance use and unprotected sex with young women self-reporting greater reductions than young men. African American youth self-reported less substance use than youth of other racial/ethnic groups (Rotheram-Borus et al., 1997).

Be Proud! Be Responsible! (Compendium)
The study of this intervention consisted of one 5-hour small group session targeting African American male adolescents. It was led by African American men and women and included culturally and developmentally appropriate materials, including a video, and an "AIDS Basketball" activity in which participants formed into teams to earn points for correctly answering questions about HIV. A condom exercise focused on the correct use of condoms, and role play activities confronted participants with potential problems in trying to implement safer sex practices. Adolescents who participated in the intervention reported more frequent use of condoms and fewer sex partners than adolescents in a comparison condition (Jemmott et al., 1992).

Focus On Kids (Compendium)
The Focus on Kids intervention is an 8-session group intervention delivered to low-income African American pre- and early adolescents in peer groups that consisted of 3 to 10 same-gender friends within three years of age of each other. The sessions were led by two African American men or women recruited from the community, at least one of whom was gender-matched to the group.

The sessions emphasized values clarification and goal setting; presented facts about AIDS, STDs, contraception, and human development; and, provided condoms. Multiple delivery formats were used including videos, games, acting, role playing, storytelling, and arts and crafts. In the seventh session, participants developed community projects with specific target audiences and intervention messages. Beginning in the first session and integrated throughout, a family genogram was used to illustrate the application of concepts to real life situations. Sexually active youth who participated in the intervention reported significantly greater condom use than sexually active youth in the comparison condition (Stanton et al., 1996).

Becoming a Responsible Teen (Compendium)
The Becoming a Responsible Teen (BART) intervention involved 8 small group sessions delivered to African American youth at a public health clinic serving low income families. Incentives included $5 an hour for participating, a project T-shirt, and a personalized certificate of completion. The sessions provided HIV/AIDS information, addressed sexual decisions and values, condom use, communication skills and assertiveness, behavioral self-management and problem solving, and social support and empowerment. Videos, games, discussion, role plays, and peer education were some of the media used to deliver the educational messages. Youth who participated in the intervention reported significantly greater condom use and significantly lower frequency of unprotected intercourse than youth in the comparison condition. Abstinent youth who participated in the intervention significantly delayed sexual onset to a greater extent than abstinent youth in the comparison condition (St. Lawrence et al., 1995).

Group Level Interventions for African American Adolescents
DiClemente et al. (2004) evaluated the effectiveness of an intervention targeting sexually active African American adolescent females ages 14 to 18. All participants received four 4-hour group sessions. The intervention emphasized ethnic and gender pride, HIV knowledge, communication, condom use skills and healthy relationships. The control condition emphasized exercise and nutrition. At the 12-month follow-up, adolescents in the intervention group were more likely to use a condom at last intercourse, less likely to have a new vaginal sex partner in the last 30 days, more likely to apply condoms to sex partner, and had better condom application skills. Intervention participants also reported a higher percentage of condom-protected sex acts and less unprotected vaginal sex.

Another study evaluated the effects of abstinence and safer sex HIV risk reduction interventions on young inner-city African American male and female adolescents' HIV sexual risk behaviors (Jemmott III et al., 1998). The participants were African American adolescents recruited from 6th and 7th grade classes. Each intervention consisted of eight 1-hour modules divided equally over two consecutive Saturdays. Each intervention was highly structured and was implemented by facilitators who used intervention manuals. Designed to be educational, but entertaining and culturally sensitive, each intervention involved group discussions, videos, games, brainstorming, experiential exercises, and skills building activities. Each intervention incorporated the "Be proud! Be responsible!" theme that encouraged the participants to be proud of themselves and their community, to behave responsibly for the sake of themselves and their community, and to consider their goals for the future and how unhealthy behavior might thwart the attainment of their goals. The abstinence intervention acknowledged that condoms can reduce risks but emphasized abstinence to eliminate the risk of pregnancy and STDs, including HIV. The safer sex intervention indicated that abstinence is the best choice but emphasized the importance of using condoms to reduce the risk of pregnancy and STDs, including HIV, if participants were to have sex. The study found that both abstinence and safer sex interventions can reduce sexual risk behaviors, but safer sex interventions may be especially effective with sexually experienced adolescents and may have longer lasting effects.

Clinic-based Intervention for African American and Latina Adolescent Girls
In this study, sexually active African American and Latina adolescent girls in an adolescent clinic were randomly assigned into three 250-minute group interventions. One was an information-based intervention that provided information about how to practice safer sex, another was skills-based and both provided information and taught skills necessary to practice safer sex, and the third was a health promotion control intervention concerned

with health issues unrelated to sexual behavior. At the 12-month follow-up, participants in the skills intervention reported significantly less unprotected sexual intercourse than both the information and control groups. They also reported fewer sexual partners and were less likely to test positive for STDs than the control group (Jemmott III et al., 2005).

School-based Programs

> *Successful School-based Programs*
> Successful school-based programs have the following characteristics:
> - Narrow focus only addressing sexuality
> - Based on social learning theories
> - Personalized information acquired via active learning methods
> - Address social and media influences on sexual behavior
> - Give clear statements of facts, norms, and expectations about behavior

A number of sex education curricula have been designed, some of which address HIV prevention. No evidence exists that educational programs increase sexual activity, and some programs are effective in postponing onset of intercourse or increasing contraceptive usage if students are sexually active. Decision making strategies and behavioral skills are generally not effective without the context of clear statements of norms. These norms should be age-appropriate (i.e., younger kids get more abstinence messages, while older kids get more clear messages about safer sex). Abstinence only curricula have not been effective in postponing age of intercourse onset.

Reducing the Risk (Compendium)
Reducing the Risk was implemented in 13 high schools in California through 15 sessions in health education classes. The curriculum included instruction on developing social skills to reduce sexual risk behavior and used role plays to model and practice the skills. It also emphasized decision making and assertive communication skills, encouraged students to go to stores and clinics to get relevant health information, and required students to ask their parents about their views on abstinence and birth control. Students receiving the intervention were significantly less likely to initiate sexual intercourse than those in the comparison condition. Intervention students who were already sexually active were significantly less likely to engage in unprotected sex than sexually active students in the comparison condition (Kirby et al., 1991).

Get Real About AIDS (Compendium)
Get Real About AIDS was implemented in 10 high schools in Colorado. The intervention consisted of 15 sessions covering HIV knowledge that can be used to reduce risk, teen vulnerability to HIV, normative determinants of risky behavior, condom use, and skills to help students recognize, manage, avoid, or leave risky situations. Students who participated in the intervention reported fewer sex partners and greater frequency of condom use than students in the comparison condition (Main et al., 1994).

Safer Choices

Safer Choices is a 2-year, school-based HIV/STD and pregnancy prevention program for high school students. It was tested with 20 high schools, with 10 being randomly assigned to the intervention and 10 to the comparison condition. The schools in the comparison condition implemented a standard 5-session knowledge-based curriculum. Schools in the intervention condition implemented the five primary components as described in the side bar. The actual curriculum consisted of 10 lessons provided in 9th grade and 10 lessons in 10th grade. Using many interactive activities, the curriculum provided knowledge about HIV, STDs and pregnancy; taught skills related to communication, condom use, other contraceptives, and refusing sex; and reinforced social norms supportive of safer behaviors.

Components of Safer Choices

Safer Choices includes five primary components:

- **School Organization:** Schools formed a School Health Promotion Council to support and coordinate activities. The councils included teachers, students, parents, administrators, and community members
- **Curriculum and Staff Development:** The curriculum included 10 lessons in 9th grade and 10 lessons in 10th grade. Teachers received training on the curriculum and ongoing technical support. In-class peer leaders facilitated some of the activities
- **Peer Resources and School Environment:** The school environment was saturated with activities, information, events, and services to reinforce key messages of the intervention. Peer resource groups implemented activities such as articles in school newspaper; school opinion polls; organizing public speakers; distributing posters, buttons, etc.; conducting small group discussions
- **Parent Education:** Schools sent newsletters to parents 3 times a year and 9th and 10th grade students were asked to discuss sexuality topics with parents twice a year
- **School-Community Linkages:** Homework assignments required students to gather information about local resources, schools distributed a resource guide, and HIV positive speakers from community gave presentations at school

Overall, Safer Choices did not significantly delay the onset of sexual intercourse, but it did appear to improve condom use. There was no difference by gender in the initiation of sex, but the intervention had a greater impact on condom use for males than females. Safer Choices did significantly delay the initiation of sex among Latino students, but not among Blacks, Asians, or Whites. The intervention also increased condom use at last sex more among Latinos and Whites than among Blacks.

Safer Choices was found to have a positive impact on students whether they initiated sex before or after the beginning of the intervention. In terms of frequency of unprotected sex, the intervention had a significantly greater impact on students who initiated sex after baseline than on youth who were sexually experienced at baseline. In terms of condom use at last sex, Safer Choices had a greater impact on youth who were sexually experienced at baseline compared to youth who initiated sex afterwards (Kirby et al., 2004).

School-based Intervention Targeting Inner-city African American Youth
A study was conducted to evaluate the effectiveness of two culturally sensitive programs designed to reduce high risk behaviors among inner-city African American youth. The program targeted students in grades 5 through 8, as well as their parents and teachers. The social development curriculum (SDC) consisted of 15 to 21 lessons per year focusing on social competence skills necessary to manage situations in which high risk behavior occurs. The school/community intervention (SCI) consisted of SDC as well as school-wide climate and parent and community components. The control group received a health enhancement curriculum focusing on nutrition, physical activity, and general health care. For boys, the SDC and SCI both significantly reduced violent behavior, provoking behavior, school delinquency, drug use, recent sexual intercourse, and improved the rate of condom use. The SCI was significantly more effective than the SDC in improving a combined behavioral measure. There were no significant effects of either the SCD or SCI for girls (Flay et al., 2004).

University/College-based Interventions
A study by Sikkema et al. (1995) involved a series of four 90-minute sessions held over one month targeting mostly White heterosexual women recruited through classes, social groups, and the health service at a Midwestern university. Only 13% of women approached participated. Topics included risk behavior education; assertiveness, decision making, problem solving, and negotiation skills; condom use; maintenance of healthy behavior; and rehearsal and role playing. The intervention improved self-efficacy, sexual assertiveness and communication skills. There was modest reduction in sex without a condom and drug use.

A study with a racially/ethnically diverse sample of male and female university students evaluated the ability of a 20-minute self-administered intervention to increase risk reduction behaviors. Participants in the intervention group were given results from a survey of students from the university that showed that the majority of students reported using condoms most or all of the time. Data were presented in this way to emphasize that risk reduction was the prevailing social norm among their fellow students and that only a minority of students practiced high risk behavior. Participants were asked to compare their own behavior to the majority social norms and reflect on their willingness to change. Participants were given a list of specific behavior change goals (e.g., increased condom use, fewer sexual partners, increased discussion of safer sex, and decreased use of alcohol and drugs with intercourse) and were asked to select which ones they believed they could commit to over the next 30 days. In 30 days they were asked to return for a follow-up survey. Those in the control group were given a pamphlet with brief information about how to prevent HIV and STDs. Participants in both groups received $10 or a course credit both at the time of the intervention and at follow-up. Compared to participants in the control group, men in the intervention reported significantly higher condom use at follow-up, while women in the intervention group reported significantly fewer sexual partners (Chernoff and Davison, 2005).

CORRECTIONS-BASED PROGRAMS

Intensive AIDS Education in Jail (Compendium)
A group intervention was delivered to male adolescent drug users in a correctional facility. It consisted of four 1-hour sessions focusing on health education issues, including general health knowledge and HIV knowledge. Counselors were guided by a written curriculum. Counselors used techniques based on the problem-solving therapy model, where

participants identified the problem, generated solutions, decided on alternatives, and used role play and rehearsal to practice alternative solutions. Participants received $5 for each session they attended. After release from jail, youth who participated in the intervention were significantly more likely to use condoms during sex and had fewer high risk sex partners than youth in the comparison condition (Magura et al., 1994).

Project START

Project START was designed specifically to target young men ages 18–29 who are leaving prison. The control condition consisted of 1 pre-release individual session where the person's knowledge and risk was assessed and an individual risk reduction plan was developed. Men randomly assigned to the intervention received 2 pre-release sessions and 4 individual sessions post-release. The first pre-release session was the same as the control condition. The second pre-release session focused on the participant's needs after release and included developing a post-release plan, problem solving and referrals. The 4 post-release sessions continued addressing goals identified in the post-release plan and included a review and update of the HIV/STD/hepatitis risk reduction plan developed in the very first session. Initial findings from this study indicate that men in the intervention were significantly less likely than the control group to report unprotected vaginal or anal sex with all partners since the last interview (Center for AIDS Prevention Studies, 2004).

Framework of Project START

Project START is based on the following conceptual framework:

- **Harm Reduction:** Reducing harmful consequences to self and others
- **Problem Solving:** Generating possible solutions, determining consequences, choosing best solutions, creating realistic plan of action
- **Motivational Enhancement:** Enhancing motivation for behavior change through a client-centered but directive approach
- **Enhancing Access to Service:** Facilitating referral and reducing barriers to use of existing community services

COMMUNITY LEVEL INTERVENTIONS

Intervention Targeting Latino Youth

This intervention was focused in neighborhoods where at least 20% of the residents were Latino. The intervention was implemented over 18 months and involved several components designed to provide information about HIV and risk reduction: mass media, workshops, and distribution of risk reduction materials. The intervention also used peer educators who were trained to implement several portions of this intervention, such as the workshops. In follow-up interviews, male adolescents from the intervention city were less likely than males in the comparison city to have initiated sexual activity. There was no significant increase or decrease in the initiation of sexual activity among female adolescents, although sexually active females in the intervention city were significantly less likely to have multiple partners than those in the comparison city. The intervention also increased the likelihood that both boys and girls would have a condom with them at the time of follow-up interview compared to baseline (Sellers et al., 1994).

STAND - Peer Education for Rural Teens

STAND is a peer education training program designed for rural teens. It is consistent with the developmental characteristics of teens, including perceived unique invulnerability, limited abstract reasoning ability, and focus on present rewards over long-term consequences. STAND is an "abstinence-plus curriculum," promoting both sexual

abstinence and risk reduction strategies. It is delivered in 28 one-hour sessions, held twice per week, and can be school or community based. The training prepares teens to initiate one-on-one conversations with their peers about sexual risk reduction. Teens are taught to determine a person's stage of change, and recommend the use of appropriate change supporting processes. Peer leaders are selected by a peer- and self-nomination technique, and this process usually results in a very diverse group of teens.

After completion of the training, STAND peer educators plan and participate in whatever formal and informal educational activities are feasible in their community setting. They also participate in the STAND club, which meets once a month to provide peer educators with peer support. STAND peer educators self-reported positive changes in knowledge, condom use self-efficacy, consistent use of condoms, and incidence of unprotected intercourse, although most of these changes were more pronounced at the beginning of follow-up than at the 8-month follow-up. STAND teens also reported significantly more conversations with friends about birth control or condoms (Smith and DiClemente, 2000).

Asian/Pacific Islander High Risk Heterosexuals

Recommendations from Southeast Asian Community Members

There have been no studies conducted of effective prevention interventions targeting Asian and Pacific Islander heterosexual men and women. However, focus groups with Cambodian, Vietnamese and Laotian women, as well as providers serving these communities, provided some recommendations about effective strategies (Jemmott et al., 1999):

Skills building: Skills building training is needed for Asian/Pacific Islander women, men and youth. Particularly, the need for women to learn safer sex negotiation skills was noted.

Newspapers: Articles with information about HIV and risk reduction placed in community newspapers written in their own languages is a viable medium for reaching members of the communities who are literate in their languages.

Appropriate services: Prevention services need to be multilingual and culturally sensitive to HIV prevention and domestic violence issues.

Men's involvement: Men need to be involved in prevention programs. They usually consider reproductive issues as only concerning women. Men may be more receptive to messages from older male professionals than from women.

Health care providers: Health care providers that are linked to or are part of the community would be effective agents for change. They must be able to capitalize on the cultural value of respect for age and wisdom.

Mobile van: A mobile van for providing CTR and other health services to avoid stigma.

Video: Educational video in their own languages could be used to share information with partners and friends, and addresses the lack of literacy that some people experience. Having an older Asian/Pacific Islander physician present basic facts instead of using a narrative story format was suggested.

Programs in the home: Women felt that members of their communities would respond positively to HIV prevention strategies offered within the privacy of their homes.

A community forum held with 13 Vietnamese participants in St. Paul yielded additional recommendations (MDH, 2005). Participants felt that a visiting Vietnamese physician specializing in HIV/AIDS would be ideal. Having a physician who speaks Vietnamese would eliminate barriers related to using interpreters to talk about HIV-related issues. They also suggested counseling services via a phone line that offers Vietnamese interpretation services. The participants felt that the concerns related to using an interpreter would be addressed through the anonymity that a phone line offers. Participants felt that face to face counseling services would be appropriate for second generation Vietnamese, but the first generation immigrants would not be comfortable with this.

Participants also noted the nonexistence of information available in Vietnamese and suggested developing HIV informational and risk reduction brochures in both Vietnamese and English. They also suggested developing more effective and accessible Vietnamese media outlets in Minnesota and having them integrate HIV/AIDS messages into their programming or print media.

Finally, the group suggested having HIV professionals train Vietnamese community leaders about HIV and risk reduction, and then having the community leaders create awareness and provide education to the community and families.

Community Level Intervention

A program targeting Asian/Pacific Islanders in California was developed based on recommendations gathered through focus group participants who identified physicians as persons of authority and worthy of great respect and indicated a preference for receiving health care from an Asian or Pacific Islander provider. An intervention was developed to encourage testing and risk reduction behaviors, as well as to facilitate access to services for those who were positive. The intervention was initiated with a 1-day training for Asian/Pacific Islander health care providers that addressed recognition and treatment of HIV-related symptoms, how to conduct a risk assessment, approaches to counseling patients about risk reduction, barriers to HIV prevention, and resources available in the community. Providers also viewed a video in English that tells the real life story of an adult son who learned he was positive, how his family coped with the news, and the progression of his disease. The video dealt with issues such as death, sexuality, faith, and isolation. The majority of providers felt the video would be helpful to use with English-speaking patients and they were able to get copies. The health care providers then indicated any additional training that would be useful and program developers planned trainings to address the identified concerns. Providers were also asked to indicate whether they would be willing to serve as a liaison between their particular professional community and HIV service organizations. Reactions from providers who participated in the training were positive. An evaluation of the impact of the intervention on the Asian/Pacific Islander community has not been published (Loue et al., 1996).

White High Risk Heterosexuals

Because HIV/AIDS has disproportionately impacted heterosexuals of color in the United States, studies of prevention interventions have either been conducted with racially/ethnically mixed samples or have primarily focused on African American and/or Latina women. Thus, there is a lack of information regarding effective interventions specifically targeting adult White high risk heterosexuals. In fact, only one study was found, which was conducted with mostly White heterosexual cocaine users.

Cocaine Abuse Counseling as a Prevention Intervention

The efficacy of cocaine abuse counseling alone as a strategy to reduce HIV-related sexual risk behaviors was evaluated through a study where 232 cocaine abusing or dependent individuals, mostly White heterosexuals, received up to 26 weeks of Matrix counseling, but no formal HIV prevention interventions. Matrix counseling uses a manual-driven format for teaching cognitive and behavioral skills to initiate substance use abstinence and prevent relapse. Participants who completed counseling were more likely to change to safer sex or maintain safer sex over the 6 months than those who terminated counseling prematurely. Safer sex changes included decreases in numbers of partners (Shoptaw et al., 1997).

Injection Drug Users……

Overview of Interventions for Injection Drug Users

Specific behaviors associated with drug use that are risk factors for HIV transmission include shared use of drug injection equipment and unprotected vaginal or anal sex with sexual partners. Strategies to decrease these behaviors are therefore critical components of intervention strategies to reach IDUs and MSM/IDUs. Strategies for HIV risk reduction among drug users include substance use treatment, educational interventions, and HIV counseling and testing programs. Substance use treatment programs, to the degree that they are effective, are believed to reduce the risk of HIV transmission by increasing abstinence from drug use and/or injection. Although interventions with drug users aim primarily to protect drug users from getting infected with HIV, these interventions have an indirect benefit of also protecting their sexual and needle sharing partners.

ACCESS TO CLEAN SYRINGES

Syringe Access Initiative

In 1998, Minnesota passed legislation allowing for voluntary pharmacy sales of up to 10 syringes without a prescription. Impact of the legislation was assessed one year after its implementation. The study found that IDUs were more likely to purchase syringes at a pharmacy after enactment of the laws. A significant decrease in the percentage of IDUs who shared syringes was observed. This decrease did not hold true, however, for IDUs who were speedball users or had a history of incarceration. The practice of reusing syringes and the safe disposal of syringes did not differ significantly after implementation of the Syringe Access Initiative (Cotten-Oldenburg et al., 2001).

Needle Exchange Programs

There have been no randomized, controlled studies of needle exchange programs; however, other studies indicate that these programs are mostly positive in reducing needle sharing and other risk behaviors. How needle exchange programs impact sexual risk behavior among IDUs is not clear. Although studies contain a preponderance of evidence demonstrating the effectiveness of needle exchange as an HIV prevention intervention among injecting drug users, state and federal governments prohibit the use of public funds to support such interventions. Thus, a prior public policy intervention is necessary before needle exchange activities can be comprehensively implemented.

Several studies have demonstrated the relationship between needle exchange programs and a decrease in drug-related risk behavior. One study examined how drug injection and needle sharing practices respond when a needle exchange program is introduced into a city. The model found that needle exchange programs were associated with decreases of 13% in drug injection and 20% in needle sharing (DeSimone, 2005). A meta-analysis of data from 47 studies evaluating the effectiveness of needle exchange programs using data collected from 1986–1997 found that needle sharing consistently declined among IDUs attending needle exchange programs (Ksobiech, 2003).

Holtgrave et al. (1998) found that a policy of funding syringe exchange programs, pharmacy sales, and syringe disposal to cover all illicit drug injections would cost $34,278 per HIV infection averted, which is much less than the cost of lifetime treatment for someone with HIV, which is estimated at $154,402 (Holtgrave and Pinkerton, 2003). Cost effectiveness studies of specific needle exchange programs have consistently found them

to be cost effective, and an efficient use of financial resources (Gold et al., 1997; Jacobs et al., 1999).

Substance Abuse Treatment Programs as HIV Prevention Interventions

A review of studies conducted over the past 20 years indicate significantly lower rates of drug use, drug-related risk behaviors, and HIV infections among drug users who remain in treatment programs. However, the studies did not address reduction in sex-related risk behaviors. The authors point out that the public health impact of drug treatment programs is limited due to the fact that access to treatment services in many areas of the United States is not sufficient to meet the need (Metzger and Navaline, 2003).

Another review of studies was conducted to assess the impact of adherence to heroin dependence treatment on HIV prevention. The review found that the best adherence rates were achieved with methadone and diacetylmorphine treatment. Studies of methadone maintenance programs found that higher treatment adherence is correlated with a reduction in HIV transmission, suggesting that patients who continuously adhere to methadone treatment are less likely to continue injecting drugs and sharing dirty needles than those who interrupt treatment (De Castro and Sabaté, 2003).

Use of Peers in Prevention Efforts

Based on lessons learned so far during the ongoing Urban Health Study, researchers state that IDUs can and will take responsibility for their own health and the health of their community. IDUs who provide new sterile needles to other IDUs (secondary exchange) are motivated to help prevent the spread of HIV among their peers. The researchers recommend recruiting secondary exchange providers and training them as peer educators. Based on their experience, these peer educators will help develop and pass along risk reduction messages to their friends (AIDS Research Institute, 2003).

Men Who Have Sex with Men and Inject Drugs

No studies have been conducted to evaluate the effectiveness of prevention interventions targeting MSM/IDU. However, information gathered through focus groups and individual interviews with 98 drug using (injecting and non-injecting) MSM from 6 cities provides some recommendations regarding strategies to reach MSM/IDU (Rhodes et al., 1999):

Preferred institutional sources of HIV information: Community health clinics and medical offices, STD clinics, drug treatment programs, HIV counseling and testing sites, gay and lesbian community centers, shelters, youth centers, street outreach programs, and needle exchange programs. Providers perceived as bureaucratic, impersonal, or lacking in respect or empathy for drug users were avoided whenever possible.

People most capable of influencing behavior change: Drug-using peers were most frequently mentioned as the people most capable of influencing behavior in relation to HIV prevention. Younger participants especially went to peers for advice, while a few of the older participants had no regard for the opinions of drug-using people they knew. In general, family members were not considered influential.

Materials: Some participants thought that brochures and written materials were not effective because many street-based drug users have limited reading skills. Pictorial materials were suggested as more effective in reaching people with low literacy skills.

Prevention interventions and program staff: There was general agreement from all sites that street outreach is the most important strategy for reaching MSM drug users, particularly outreach conducted at night and with a vehicle. They also suggested drop-in centers, rap groups, plays and skits, food (especially meals), and radio and TV advertising. Participants felt it was very important for outreach workers and intervention staff be former drug users, or at least members of the local community, and comfortable with people who use drugs.

Sexual orientation of staff and programs: The sexual orientation (or gender) of outreach and intervention staff did not matter; being treated with respect was most important. Participants did not see any benefit in implementing separate programs for MSM drug users. Men who did not self-identify as gay viewed separate programming as negative while men who identified as gay did not have a preference either way.

The recommendations from this study may indicate that MSM/IDU in Minnesota would be more comfortable accessing existing programs serving IDU instead of having separate interventions targeted specifically at them. However, the following program seems to have been successful in providing programming that targets MSM/IDU, although it appears to target men who self-identify as gay or bisexual.

Community Level Intervention

Project NEON

Although the program has not been evaluated in a randomized controlled trial, Project NEON has been providing services to MSM/IDU for over 10 years in Seattle. Project NEON's services are targeted at gay and bisexual men who use crystal meth, primarily those who inject it. Project NEON offers brochures located in bars, sex clubs, and GLBT agencies in the city. A peer education team of current and former users conduct outreach and distribute safer sex and clean injection supplies, conduct needle exchange, talk about safer partying, and provide referrals. One-on-one counseling is available and focuses on drug use, sex,

relationship issues, and assistance in getting needed social and medical services. The program also offers several group level intervention options. One is a weekly drop-in chat/support group. There are also two drug abstinence based support groups, one for men who want to stop using meth and another for men who have already stopped and do not want to start again (Seattle Counseling Service, 2003).

Injecting Drug Users of All Races and Genders

Counseling and Testing

A meta-analysis of 27 published studies, which found that people who receive negative test results and those who do not test are less likely to reduce risky sexual behavior than persons who test positive or are in a serodiscordant relationship, also found that IDU participants who receive counseling and testing services in treatment centers did not demonstrate behavioral changes related to sexual risk. The study recommends focusing on sexual risk behaviors in addition to needle sharing behaviors during HIV counseling and testing delivered in treatment centers (Weinhardt et al., 1999).

Outreach Interventions

A study was conducted to determine the cost effectiveness of street outreach compared to methadone maintenance in averting HIV infections. This was done by simulating the spread of the HIV epidemic in San Francisco and New York from the mid-1980s to the mid-1990s and incorporating the behavioral effects of the two interventions. The study found that it was almost always more cost effective to spend as many resources as possible on street outreach vs. methadone maintenance (Wilson and Kahn, 2003).

In an outreach program implemented in Denver, peer volunteers were trained to share role model stories and distribute intervention kits (including brochures, pamphlets, flyers, etc.), bleach kits, and condoms to high risk individuals over the course of 2.5 years. The intervention was effective at increasing both needle cleaning and consistent condom use over the time of the study. Consistent bleach use increased from 20% to 29%, and condom use during vaginal sex increased from 2% to 24% (Reitmeijer et al., 1996).

The NADR Project (National Institutes of Health, 1999) assessed longitudinal data from 28 sites delivering street outreach services to a total of 13,475 IDUs and 1,637 sex partners of IDUs. Participants were randomly assigned to standard and enhanced interventions. The standard outreach interventions, delivered by indigenous outreach workers, consisted of risk reduction information, referral, condom and bleach distribution, HIV testing and counseling, and demonstration and rehearsal of risk reduction skills. Enhancements to these interventions were site-specific and designed to promote the adoption of risk reduction strategies. At 6-month follow-up, statistically significant reductions in the number of IDUs engaging in the following high risk behaviors were found for both intervention assignments: frequency of injecting drugs (28% reduction), use of non-injection drugs, use of borrowed injection equipment (24% reduction), and number of sex partners (8% reduction).

Individual Level Intervention

Individual Level Intervention for African American Women
African American female heterosexual IDUs were randomly assigned to one of two enhanced gender and culturally specific interventions. The motivational enhanced intervention consisted of 4 individual sessions. The first session involved general risk reduction counseling as well as a discussion of the impact of race and gender on HIV risk and protective behaviors. Participants were asked to consider what things they would be motivated to change in their lives. During the second session, participants developed short- and long-term goals and discussed any ambivalences regarding change. In the third session, participants' experiences with short-term behavior change goals were reviewed.

This discussion continued in the fourth session, which also included risk reduction messages tailored to participants' level of readiness for change.

The negotiation enhanced intervention also involved 4 individual sessions. The first session was similar to the other intervention, although it ended with a skills training component on condom use and safe injection. In addition, participants were asked to consider which intended behavioral changes would be easier or more complicated to control. During the second session the intended behavioral changes and level of control were reviewed. General communication and assertiveness skills were discussed. Short-term goals for communication, gaining control and developing assertiveness were set. In the third session, participants' experiences with the short-term goals were discussed, as well as triggers for deviating from intended goals. Negotiation and conflict resolution skills were introduced. The fourth session built upon the previous sessions, including the development of tailored negotiation and conflict resolution styles.

In comparison to the standard informational session, those who participated in both enhanced interventions reported substantial decreases in frequency of drug use and drug injection, as well as in the sharing of injection works and water and the number of injections. Trading sex for drugs or money, having sex while high, and other sexual risk were also reduced significantly (Sterk et al., 2003).

GROUP LEVEL INTERVENTIONS

Holistic Health Recovery Program (DEBI)

The Holistic Health Recovery Program (HHRP) is based on an intervention study conducted by Margolin et al. (2003). Participants were inner city HIV positive IDUs with mild to moderate cognitive impairment who were dually addicted to heroin and cocaine and had a history of unsuccessful drug treatment. HHRP has since been adapted so that it can be used with HIV positive and HIV negative IDUs. HHRP is a 12-session, manual-guided, group level intervention to promote health and improve quality of life. More specific goals include a reduction of or abstinence from illicit drug use and sexual risk behaviors; reduced risk for HIV transmission; and improved medical, psychological and social functioning. Participants in the study demonstrated a decrease in addiction severity, a decrease in risk behavior, and significant improvement in behavioral skills, motivation and quality of life.

Core Elements of HHRP

HHRP teaches participants the following:

- Harm reduction skills related to injection drug use and unprotected sexual activities
- Negotiation skills to reduce unsafe sexual behaviors
- Decision making and problem solving skills
- Goal setting and action plan development skills
- Stress management skills
- Skills to improve health, health care participation, and adherence to medical treatments
- Skills to increase clients' access to their self-defined spiritual beliefs to increase motivation to engage in harm reduction
- Skills to increase self awareness

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Skills Building Sessions in Methadone Treatment (Compendium)
Five 2-hour sessions were delivered to groups of African American and Latina women in methadone maintenance clinics. The sessions provided information on HIV transmission and prevention; condom use; assertiveness training; problem solving; and communication skills using videos, visual presentation, didactic exercises, and role playing. Participants received modest incentives for attending the sessions. Women who participated in the intervention significantly increased the frequency of condom use with their partners, as compared with women in the comparison condition (El-Bassel and Schilling, 1992).

Group Sessions Targeting Intranasal Heroin Users (Compendium)
Adult drug users (26% African American, 23% Latino, 51% White) who used heroin intranasally were recruited to a 4-session intervention to determine the effects of a small group intervention in preventing transition from sniffing heroin to injecting heroin. The intervention covered HIV information, risks of drug use and drug injection, and how to seek entry into drug abuse treatment programs. Presentations, group discussion, and role play were used. People who participated in the intervention were significantly less likely to inject drugs than those in the comparison condition (Des Jarlais et al., 1992).

Informational and Enhanced AIDS Education (Compendium)
A study was conducted to determine the effects of small group informational and enhanced education sessions on drug- and sex-related HIV risk behaviors. The informational intervention consisted of two 1-hour sessions and a 30 minute individual health educational consultation. The enhanced intervention focused on personal susceptibility, situation analysis, and skills building. Participants engaged in group discussion and practiced skills. Additional strategies included role playing, peer feedback, tension release exercises, and an emphasis on experiential learning techniques to enhance self-efficacy regarding ability to initiate and maintain HIV harm reduction behaviors. After exit from the program, participants in both interventions reported significant reduction in drug- and sex-related risk behaviors compared with baseline of risk. However, the enhanced education intervention had significantly greater effects than the informational intervention (McCusker et al., 1992).

Project Neighborhoods in Action
Project Neighborhoods in Action was a program conducted with 1,631 IDUs and crack users (97% African American) in several inner city neighborhoods in Washington DC. Participants were randomly assigned to an enhanced intervention or a standard intervention. The standard 2-session intervention consisted of risk assessment, voluntary counseling and testing, and referral to drug treatment and medical services. In addition to the standard 2 sessions, participants in the enhanced intervention participated in a group intervention that included a video with African American actors that focused on awareness of HIV, risk of transmission through needles and other injection paraphernalia, sexual transmission of HIV, and the benefits of drug treatment. The video was shown in short segments, with participants then practicing risk reduction behavior through role plays and demonstrations, and discussing the video and role plays. At 3-month follow-up, the frequency of drug use decreased. The frequency of drug injection also decreased, as did the sharing of needles and works. In addition, the number of sexual partners and having sex while high both decreased, as did trading sex for money and/or drugs. Condom use increased. These findings were found among both male and female participants. The study results indicate that the standard intervention and the enhanced intervention were about equally effective in reducing HIV-related risk behaviors among drug users (Hoffman et al., 1999).

Group Intervention in Methadone Maintenance Treatment
A 12-session harm reduction group intervention delivered in the context of a methadone maintenance treatment program was found to be effective in reducing risk behaviors. Both the control group and the intervention group received 2 hours of individual counseling/case management per month and a single session individual risk reduction intervention. Additionally, the intervention group participated in a 12-session weekly harm reduction group intervention, which covered the following topics: 1) setting and reaching treatment goals; 2) HIV transmission; 3) safer injection drug use practices; 4) condom use and eroticizing safer sex; 5) negotiating harm reduction with partners; 6) preventing drug use and HIV risk behavior relapse; 7) making healthy lifestyle choices; 8) adapting the traditional "12 steps" to include HIV prevention; 9) understanding addiction and its relationship to continued high risk behavior; 10) overcoming negative emotions, such as helplessness; 11) understanding and overcoming grief and fear; and 12) developing healthy social relationships and activities.

During methadone maintenance treatment, patients who participated in the 12-session harm reduction intervention were more likely to refrain from cocaine use and to report fewer unsafe sexual practices than participants in the control group. After treatment, the intervention group scored higher on a sexual risk quiz and reported increased self-efficacy in high risk sexual situations than the control group (Avants et al., 2004).

COMPREHENSIVE PROGRAMMING

Safety Counts (DEBI)
Safety Counts is a client-centered, comprehensive intervention targeting HIV positive and HIV negative individuals who are currently using injection or non-injection drugs. The intervention is not specific to gender, race/ethnicity, or sexual orientation. The goal of the program is to reduce risk of becoming infected with or transmitting HIV and hepatitis viruses, and involves individual and group level activities, as well as social events over a period of 4 to 6 months. The intervention focuses on setting personal risk reduction goals, assessing progress, discussing barriers, and identifying next steps. Staff discuss the importance of knowing HIV status upon program enrollment and offer CTR services at each session for HIV negative clients.

Compared to persons enrolled in the comparison condition, clients who participated in Safety Counts were about 1.5 times more likely to reduce their drug and sex-related risks, were more than 2.5 times more likely to report an increase in condom use, were significantly more likely to report a

Core Elements of Safety Counts
The five core elements of Safety Counts are:
- **Group Sessions One and Two** involve hearing clients' HIV risks and current stage of change, hearing risk reduction success stories, setting personal goals, identifying first steps to reduce HIV risk, and making referrals to CTR and medical/social services
- **One (or more) Individual Counseling Session** involves discussing/refining risk reduction goals, assessing client's needs, and providing referrals
- **Two (or more) Social Events** are designed for socializing, participating in risk reduction activities, and receiving reinforcement for personal risk reduction
- **Two (or more) Follow-up Contacts** involve reviewing client's progress, discussing barriers encountered, identifying concrete next steps and possible barriers/solutions, and referrals
- **HIV/HCV Counseling and Testing** is offered through the service or referral to another agency

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reduction in the number of times they inject, and more likely to test negative for opiates through urinalysis (Rhodes and Humfleet, 1993; Rhodes and Wood, 1999).

Comprehensive Programming

Community PROMISE (DEBI)

As previously described on page 313, Community PROMISE is based on the AIDS Community Demonstration Projects. This intervention has been tested with African American, White, and Latino communities, including injection drug users and their sexual partners.

Community PROMISE begins with a community identification process, which involves interviewing and holding focus groups with stakeholders in the community to identify why people engage in risk behaviors, what barriers exist to changing behavior, what will encourage them to change behaviors, and locations where they engage in risk behaviors. This helps with identifying target populations and appropriate tailoring of the intervention. Members of the target population who have made positive behavior change are interviewed and role model stories are written based upon their interviews. Peer advocates from the target populations are recruited and trained to distribute the role model stories and other materials. The final core element is formative evaluation to capture behavior change within the target population.