

***Effective HIV Interventions and Strategies
(Volume 1)***

Original Draft presented to State Planning Group on February 25, 1999
Updated and presented to the State Planning Group in February 2004
Updated and presented to the State Planning Group on May 31, 2007
Updated and presented to the State Planning Group in January 2009

Publication Number 430-027

2008 State Planning Group Effective Interventions and Strategies
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The 2008 committee would like to give a special thanks to the work accomplished on this document by the 1999, 2004, and 2007 State Planning Group's Effective Interventions and Strategies Committee.

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1. How to Use Social and Behavioral Theory in Your HIV Prevention Programs Going From Theory to Practice

Like the CDC, the State Planning Group strongly recommends using HIV prevention interventions that are based on social and behavioral theory. CDC also stipulates these interventions must have been proven to be effective through a thorough evaluation. If your desired population fits into the intervention chosen, you may replicate the intervention without any changes and feel fairly confident that the intervention will have the same positive outcome as the original research. However, if for any reason you must adapt the intervention, you **MUST** maintain the core elements of the originally evaluated intervention. Fortunately, if you have modeled your program after an **evidenced-based** intervention, ensuring you have maintained the core elements, your program will likely be effective in reducing the risk of HIV transmission.

Evidenced-based means that the behavioral, social, and structural interventions that are relevant to HIV risk reduction, have been tested using a methodologically rigorous design, and have been shown to be effective in research settings.

These evidence or science-based interventions have been evaluated using behavioral or health outcomes; have been compared to a control/comparison group(s) (or pre-post data without a comparison group (s) if a policy study); had no apparent bias when assigning persons to interventions or control groups or were adjusted for any apparent assignment bias; and, produced significantly greater positive results when compared to control/comparison group(s), while not producing negative results.

For example, let's say you want to institute [*Safety Counts*](#). This is a cognitive-behavioral intervention to reduce HIV risk among active drug users. The intervention is a GLI (with ILI and SCO activities). The literature states that you are able to use this intervention with HIV-positive or HIV-negative active drug users. If you need/want to adapt this intervention, you **MUST** maintain the core elements. The intervention also contains key characteristics that could be changed based on the needs/input of your population. The core elements of this intervention are as follows:

- 1) Two group sessions (identify the client's HIV risk and current stage of change, hear risk reduction stories, set personal goal and identify first step to reduce HIV risk).
- 2) One individual counseling session (discuss/refine risk-reduction goal, assess client's needs and provide indicated referrals to C&T and medical/social services).
- 3) Two (or more) group social events (share meal and socialize, participate in planned HIV related risk-reduction activities, and receive reinforcement for personal risk reduction).
- 4) Two (or more) follow-up contacts (review client's progress in achieving risk-reduction goal, discuss barriers encountered, identify concrete next steps and discuss possible barriers/solutions, and make referrals to C&T and medical/social services).

The key characteristics that can be changed are:

| KEY CHARACTERISTICS | HOW THEY CAN BE CHANGED |
|---|--|
| Provide planned HIV-related risk reduction component in the group social event. | The component can be in the form of educational games, workshops, roundtables, or a featured speaker. The form used should be based on community involvement in the intervention planning process. |
| The Safety Counts kit comes with a video of risk-reduction success stories. | Make your own video, produce audio tapes, written stories or arrange live testimonials describing personal risk-reduction successes using the local IDU population. |
| Individual contracting sessions are 15-30 minutes in length. | Increase the length of the contracting sessions based on community and participant needs/input. |

2. Defining Intervention and Strategy

Intervention - a specific activity (or set of related activities) intended to change the knowledge, attitudes, beliefs, behaviors, or practices of individuals and populations, to reduce their health risk. An intervention has a distinct process, outcome objectives, and a protocol outlining the steps for implementation.

Strategy – a strategy is a particular method or approach consistently used in the course of the intervention. An example of a strategy would be to use peers to provide the instruction during a group level intervention presentation.

Regardless if you use an evaluated intervention, which demonstrates effectiveness or one that you are creating using a scientifically based theory, **there are five important things that you must know about your population.**

1. What community or prioritized population are you trying to reach (MSM, IDU, Heterosexual)?
2. What specific behaviors place them at risk (MSM engaging in unprotected anal intercourse, IDUs sharing needles and/or having unprotected sex with multiple partners; those engaging in unprotected intercourse with multiple partners; or heterosexually identified MSM engaging in unprotected anal intercourse)?
3. What factors impact their risk taking behavior (risk appraisal – stereotype who is at most risk, fatalism, hierarchy; self-protection – self-efficacy expected outcome; emotion and arousal: relationship issues – gender roles, peer pressure, interpersonal power dynamics; structural and environmental factors – racism, sexism, and social policy)?
4. What intervention type best addresses these factors? and
5. What theories or models best address these factors?

3. Quick Guide to Intervention Types (Health Education and Risk Reduction)

INTERVENTION TYPE DEFINITIONS

| INTERVENTION TYPE | INCLUDES | EXCLUDES |
|---|---|---|
| A. Individual-Level Intervention (ILI) | Health education and risk-reduction counseling provided to one individual at a time. ILIs assist clients in making plans for individual behavior change and ongoing appraisals of their own behavior. These interventions also facilitate linkages to services in both clinic and community settings (e.g., substance abuse treatment settings) in support of behaviors and practices that prevent transmission of HIV, and they help clients make plans to obtain these services. (DOH has added the stipulation that a single session individual level intervention must be research based and not just theory based). | Outreach and prevention case management. Each constitutes its own category. Also excludes HIV counseling and testing which is reported in a separate category using a standard bubble sheet. |
| B. Group-Level Intervention (GLI) | Health education and risk reduction counseling (see above) that shifts the delivery of service from the individual to groups of varying sizes. GLIs use peer and non-peer models involving a wide range of skills, information, education, and support. Just so there is not any misunderstanding what group means, group DOES NOT mean a gathering of two or more. (DOH has added the requirement that the GLI must contain skills building and have multiple sessions). | Excludes group education that lacks a skills component (e.g., information only as “one short” presentations). These types should be included in the Health Communication/Public Information category. |

| INTERVENTION TYPE | INCLUDES | EXCLUDES |
|---|---|--|
| C. Outreach | <p>HIV/AIDS educational interventions generally conducted by peer or paraprofessional educators face-to-face with high-risk individuals in the clients' neighborhoods or other areas where clients typically congregate. Outreach usually includes distribution of condoms, bleach, sexual responsibility kits, and educational materials. Includes peer opinion leaders.</p> <p>In the new HIV Prevention Community Planning Guidance of 2003, pg 42, CDC emphasizes that a major purpose of outreach activities is to encourage those at high risk to learn their HIV status.</p> | <p>Excludes condom or material drop offs and other outreach activities that lack face-to-face contact with a client.</p> |
| D. Comprehensive Risk Counseling and Services (CRCS) (Formerly Prevention Case Management (PCM)) | <p>Individualized client-centered counseling for adopting and maintaining HIV risk-reduction behaviors. CRCS is designed for HIV-positive and HIV-negative individuals who are at high risk for acquiring or transmitting HIV and STDs and struggle with issues such as substance use and abuse, physical and mental health, and social and cultural factors that affect HIV risk. CRCS implementation manual hyperlink.</p> | <p>Excludes one-to-one counseling that lacks ongoing and individualized prevention counseling, support, and service brokerage.</p> |
| E. Partner Counseling and Referral Services (PCRS) | <p>A systematic approach to notify sex and needle-sharing partners of HIV-infected persons of their possible exposure to HIV so they can avoid infection or, if already infected, can prevent transmission to others. PCRS helps partners gain earlier access to individualized counseling, HIV testing, medical evaluation, treatment, and other prevention services.</p> | <p>Excludes HIV counseling and testing which is reported in its own category using the standard bubble sheets.</p> |

| INTERVENTION TYPE | INCLUDES | EXCLUDES |
|--|--|--|
| F. Health Communication/ Public Information (HC/PI) | <p>The delivery of planned HIV/AIDS prevention messages through one or more channels to target audiences to build general support for safe behavior, support personal risk-reduction efforts, and/or inform persons at risk for infection how to obtain specific services</p> <p>Electronic Media: Means by which information is electronically conveyed to large groups of people; includes radio, television, public service announcements, news broadcast, infomercials, etc., which reach a large-scale (e.g., city, region, or statewide) audience.</p> <p>Print Media: These formats also reach a large-scale or nationwide audience; includes any printed material, such as newspapers, magazines, pamphlets, and “environmental media” such as billboards and transportation signage.</p> <p>Hotline: Telephone service (local or toll free) offering up-to-date information and referral to local services, e.g., counseling/testing and support services</p> <p>Clearinghouse: Interactive electronic outreach systems using telephones, mail, and the Internet/Worldwide Web to provide responsive information service to the general public as well as high-risk populations.</p> <p>Presentations/Lectures: These are information-only activities conducted in-group settings; often called “one-shot” education interventions.</p> <p>Social Marketing: Uses techniques adapted from commercial marketing to identify specific audiences called segments and their perceived needs, and then constructs a program of services, support, and communication to meet those needs.</p> | <p>Excludes group interventions with a skills building component, which constitutes its own intervention category.</p> |

| INTERVENTION TYPE | INCLUDES | EXCLUDES |
|--|--|--|
| G. Counseling, Testing and Referral (CTR) | An individualized intervention of usually two sessions (pre-test and post-test aimed at learning current serostatus; increasing understanding of HIV infection; assessing risk of HIV acquisition and transmission; negotiating behavior change to reduce risk of acquiring or transmitting HIV; and providing referrals for additional medical, preventive, and psychosocial needs. | HIV counseling and testing is more than an information session; however, it is not therapy. This intervention is closely linked with Partner Counseling and Referral Services (PCRS). |
| Other Interventions | <p>Category to be used for those interventions funded with CDC Announcement 99004 funds that cannot be described by the definitions provided for the other six types of interventions (example forms A-F). This category includes community level interventions (CLI).</p> <p>CLI are interventions that seek to improve the risk conditions and behaviors in a community through a focus on the community as a whole, rather than by intervening with individuals or small groups. This is often done by attempting to alter social norms, policies, or characteristics of the environment. Examples of CLI include community mobilization, social marketing campaigns, community-wide events, policy interventions, and structural interventions. Based on DOH's interpretation of Chapter 3: Intervention and Population Definitions, pages III 9 – III 10 of the 2002 version of "Evaluation Guidance Handbook: Strategies for Implementing the Evaluation Guidance for CDC-Funded HIV Prevention Programs" The organizations receiving CDC funds have been asked to separate the CLI "programs" into specific intervention types. This allows for better measuring of the activities that take place.</p> | Excludes any intervention that can be described by one of the existing categories. |

Effective Interventions for HIV Positive Persons

Individual-level Interventions

Sterk, C. E. (2002) The health intervention project: HIV risk reduction among African America women drug users. *Public Health Reports*. 2002 Volume 117, Supplemental 1, S88-S95.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------------------------|---|--|
| African American women who use crack | This Health Intervention Project (HIP) was conducted in Georgia for African American crack users. The HIP consisted of two interventions based on the Stages of Change Model. The four session motivation intervention, including HIV pre and posttest counseling. During the sessions, the women developed an action plan, reviewed successes and failures, revised personal goals, recognized triggers for relapse and developed ways to avoid or respond to those cues. The four session negotiation intervention focused on technical and communication skills. The women developed an action plan and reviewed the plan during each session. | No specific information about this intervention was provided. However, lessons learned from this intervention determined successful interventions must be holistic. Effective prevention intervention programs must be framed within appropriate racial, ethnic, and cultural context. |

Fisher, J. D., Cornman, D.H., Osborn, C. Y., Amico K. R., Fisher, W. A., & Friedland, G., A.. (2004) Clinician-initiated HIV risk reduction intervention for HIV-positive persons; Formative research, acceptability, and fidelity of the Options project. *Journal of Acquired Immunodeficiency Syndromes*, 37, S78-S87.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------------------|---|---|
| HIV positive Heterosexual | The theoretical foundations for this intervention are motivational interviewing (MI) and information-motivation behavioral skills (IMB). Research with 231 clients and practitioners resulted in the formulation of this intervention. Options is a “shell” or framework a clinician uses to elicit the dynamics of HIV risk behavior and to assist in creating a tailored HIV risk reduction intervention for their HIV positive clients. Options is a 5 – 10 minute collaborative client-centered discussion. There was a 9 step protocol outlined for the clinician to follow. Each clinician received practitioner training in order to conduct the intervention. | The Options intervention was well accepted as a component of routine HIV care. It was found to be acceptable and capable of being delivered with fidelity in clinical care. The results revealed patients exposed to the protocol reduced HIV sexual risk behavior significantly over time. |

Effective Interventions for HIV Positive Persons

Individual-level Interventions (continued)

| Patterson, T. L., Shaw, W. S., & Semple, S. J. (2003) Reducing the sexual risk behaviors of HIV-positive individuals: Outcome of a randomized control trial. <i>Annals of Behavioral Medicine</i> , 25, 137-145 | | |
|---|---|---|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| HIV positive person | This study evaluated an intervention designed to reduce sexual risk behaviors of HIV positive persons. The basis for this intervention was the social-cognitive theory (SCT). There were 387 HIV positive persons who reported having unprotected sex with HIV negative partners or partners of unknown status selected and randomly assigned to one of four intervention conditions. (1) a single counseling sessions targeting problem areas identified by the participant; 2) a single session that covered all three intervention domains; 3) the same comprehensive intervention followed by 2 monthly boosters; and 4) a three session diet and exercise attention-control conditions. The ethnic minority composure of those participating in the intervention consisted of the following: 65% non-Hispanic white, 15% African American, 12% Hispanic and 8% other. The majority of the participants were male (91%); female participants consisted of 9%. | The results suggest that brief behavioral interventions designed to promote safer sex among HIV positive persons can result in large reductions in HIV transmission. The use of a brief SCT-based intervention for HIV positive persons, targeting condom use, negotiation of safer sex practices, and disclosure can result in reductions in sexual behavior associated with HIV transmission. |

| Richardson, J. L., Milam, J., McCutchan, A., Stoyanoff, S., Bolan, R., Weiss, J., Kemper, C., Larson, R. A., Hollander, H., Weismuller, P., Chou, C. P., & Marks, G. (2004). Effects of brief provider safer-sex counseling of HIV-1 seropositive patients: A multi-clinic assessment. <i>AIDS</i> , 18, 1179-1186 | | |
|--|--|---|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| HIV positive person <i>Implementing of Integrating Prevention Services into Medical Care for People Living with HIV</i> | The objective of this intervention was to test the efficacy of a brief safer-sex counseling intervention for HIV positive clients conducted by their medical providers. Six HIV clinics participated in the intervention. Two clinics (214 clients) used gain-frame messages, two clinics (175 clients) used loss-frame messages, and two clinics (196) were attention-control clinics. The counseling was a short 3-5 minute session and delivered to all HIV positive clients who agreed to participate. The short messages were delivered each time the client visited the medical provider's office. Listed in the 2007 Updated Compendium – Promising Evidence (Partnerships for Health) | The intervention trail found that brief safer sex counseling provided by medical providers can be effective in reducing risky sexual behavior. The lost-frame intervention reduced unsafe sex in clients with multiple or casual partners. There was not a reduction in those clients who had one partner at baseline interviews; those clients had a much lower prevalence of UAV at intake making it difficult for the intervention to reduce the occurrence. |

Effective Interventions for HIV Positive Persons

Individual-level Interventions (continued)

Wyatt, G. E., Lonngshore, D., Chin, D., Carmona, J. H., & Rivkin, I. (2004). The efficacy of an integrated risk reduction intervention for HIV-positive women with child sexual abuse histories. *AIDS and Behavior*, 8, 453-462

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------|--|--|
| HIV positive Women | It was believed that child sexual abuse history (CSA) is associated with HIV risk behaviors. This randomized trial tested the impact of a culturally psychoeducational intervention designed to reduce sexual risk and increase HIV medication adherence for HIV positive women with a history of CSA. The study included African American, European America, English-speaking and monolingual Spanish-speaking Latina. Once recruited, 147 women were randomly assigned to an 11 session “Enhanced Sexual Health Intervention (ESHI)” or an attention control group. Women assigned to the control group received a one-time group meeting where they received HIV prevention and CSA information. Women assigned to the ESHI condition attended 11 weekly sessions each lasting approximately 2.5 hours. | Women in the ESHI condition reported greater sexual risk reduction than the women in the control condition. The difference between the intervention (75.6%) and control group (73/3%) were roughly the same concerning medication adherence. However, women in the ESHI condition who attended at least 8 sessions reported great medication adherence (91.3%) at the posttest than the women who attended seven or fewer sessions (49.7%). The unadjusted percentage of women reporting sexual risk reduction at posttest was higher in the ESHI group (63.6%) than in the attention control group (56.8%). This was not considered statistically significant. When adjusted for covariates, the results were ESHI 74.5% and attention control group 54.4%. |

El-Bassel, N., Witte, S.S., Gilbert, L., Wu, E., Chang, M., Hill, J., and Steinglass, P. (2005) Long-Term Effects of an HIV/STI Sexual Risk Reduction Intervention for Heterosexual Couples. *AIDS and Behavior*, Vol. 9, No. 1, 1 - 13

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------------|---|---|
| Heterosexual Couples | This randomized trial wanted to examine the efficacy of a relationship based HIV/STI prevention intervention. A total of 217 heterosexual couples were randomly assigned to one of three intervention conditions. 1) Six sessions to both partners, 2) the same intervention to the woman alone, or 3) a one session health education (control) provided to the female participant only. Each intervention incorporated concepts from the ARRM, ecological perspective, information from the development phase, and an NIMH HIV/STI prevention with couples trial from 1998. | During the 12 month follow-up post intervention interview, results showed that the intervention was effective in reducing unprotected sex for those who participated in the intervention conditions 1 and 2 compared to those who participated in the health education intervention. However, there was not a significant difference when comparing whether couples attended together or the woman received the intervention alone. |

Effective Interventions for HIV Positive Persons

Individual-level Interventions (continued)

Padian, N.S., O'Brien, T.R., et al. (1993) Prevention of Heterosexual Transmission of Human Immunodeficiency Virus Through Couple Counseling. *Journal of Acquired Immunodeficiency Syndrome*. 6(9): 1043-8

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------------|---|---|
| HIV+ Heterosexual | 144 HIV infected individuals and their heterosexual partners. Every six months, each member of the couple was interview separately by a staff member to obtain epi information and offered couple counseling. Couples were counseled together for first session on how to purchase, store and use condoms; how to refrain from practicing anal sex; how to choose abstinence; and how not to enter into sexual relations with new partners. | The intervention was effective at improving safer sex behaviors, with behavior change occurring between initial enrollment and the first follow up. 85% of the couples who did not use condoms at initial enrollment did so by the most recent follow-up. 49% reported consistent condom use increased from 49% at enrollment to 88% at first follow-up. Other behavior changes were also made. |

Fisher, D., Ryan, R., et al. (1999). Using a community partnership and motivational interviewing to serve HIV+ gay and bisexual men. *National HIV Prevention Conference, 1999* [Abstract no. 680].

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| HIV+ | Preliminary report. 107 HIV+ MSM who had anal sex in preceding 4 months with a male partner. Using motivational interviewing, assess values, beliefs, attitudes, and details on 4 most recent anal sex partners. In discussion, highlight discrepancies between values, beliefs, and risky sexual behaviors. | Six-month follow-up data show a 31% reduction in the proportions of participants reporting unprotected anal sex with a partner of negative or unknown serostatus. |

Effective Interventions for HIV Positive Persons

Individual-level Interventions (continued)

| Rotheram-Borus, MJ, Swendeman, D, Comulada, WS, Weiss, RE, Lightfoot, M. Prevention for Substance-using HIV-positive Young People: Telephone and in-person Delivery. <i>Journal of Acquired Immunodeficiency Syndrome</i> . 2004; 37(supplement 2):S68-S77 | | |
|--|---|--|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| HIV+ Substance Using Youth <u>Added to matrix in 2007</u> Listed in the 2007 Updated Compendium – Best Evidence (CLEAR) | This intervention is an adaptation of “ <i>Teens Linked to Care</i> ”. The goal was to reduce unprotected sex acts, drug use, and improve physical and mental health among young people living with HIV (YPLH). The adaptations were: shifted the delivery format, decreased the number of module sessions, and focused on drug using youth. From 1999 to 2002, 175 YPLH aged 16 – 29 recruited in Los Angeles, San Francisco, and New York were deemed eligible to participate. Participates were randomly assigned to the telephone, in-person or delayed condition. Researches felt to motivate YPLH to reduce transmission, it was necessary to address their need to improve physical and mental health, especially adherence to health regimes. All 3 modules (Six 2-hour sessions each) focused on different behaviors. Module 1 focused on improving one’s physical health regime; module 2 aimed to reduce unprotected sexual acts and substance use; and module 3 aimed to reduce emotional distress and improve the quality of life. | The proportion of protected sexual risk acts, especially with seronegative partners was significantly higher among youth randomized to the in-person intervention condition delivered individually. Youth assigned to the in-person condition significantly increased their condom use compared with other groups. YPLH in the delayed-control condition improved over time on many outcome measures with repeated assessment. |

Effective Interventions for HIV Positive Persons

Individual-level Interventions (continued)

Fisher, J.D., Fisher, W.A., Corman, D.H. et al. Clinician-Delivered Intervention During Routine Clinical Care Reduces Unprotected Sexual Behavior Among HIV-Infected Patients. *Journal of Acquired Immune Deficiency Syndrome*. January 01, 2006. Volume 41, Iss 1; pg 44

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|--|
| <p><u>Added to matrix in 2007</u></p> | <p>Options/Opcions project” is a clinician-initiated intervention. The theoretical framework for this intervention is information-motivation-behavioral skills. It was delivered using techniques drawn from motivational interviewing. The objective of the study was to evaluate the effectiveness of a client-centered intervention (delivered during routine clinical care) in reducing unprotected sex of HIV positive clients. Between October 2000 and August 2003, 497 clients participated in the study. Participation in this intervention was strictly voluntary; there was a control clinic (clients received the standard of care) and there was another clinic which conducted the intervention. The risk reduction intervention consisted of a 5 – 10 minute collaborative, client-centered discussion between the health care provider and the client. There were 9 steps accomplished during the allotted time: (1) risk assessment; (2) selection of risk behaviors to focus on (two maximum); (3) identify conditions which behaviors happen; (4) client and health care provider select one identified behavior to rate importance to change (5) client rates importance of changing the behavior; (6) client rates self-confidence to change behavior; (7) health care provider seeks strategies from client for changing the behavior; (8) client and health care provider negotiate plan for change; and (9) health care provider writes the goal as a prescription and gives it to the client.</p> | <p>The broad outcome analysis of the study showed that unprotected vaginal, anal, and oral insertive sex events decreased significantly over time among those HIV positive clients who received the intervention. In contacts, those same events increased steadily and significantly over time in those HIV positive clients who did not receive the intervention (control clinic).</p> |

Effective Interventions for HIV Positive Persons

Individual-level Intervention (continued)

Mausbach, B.T., Semple, S.J., Strathdee, S.A., Zians, J., Patterson, T.L. Efficacy of a behavioral intervention for increasing safer sex behaviors in HIV positive MSM methamphetamine users: results from the EDGE study. *Drug and Alcohol Dependence*. Volume 87, issue 2-3 March 2007. pages 249-257

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| <p>HIV Positive Methamphetamine using MSM</p> | <p>The EDGE intervention examined the efficacy of a theory based psychosocial intervention for reducing sexual risk behavior among HIV positive actively using methamphetamine MSM. Motivational interviewing, social cognitive theory and theory of reasoned action were the theoretical framework for EDGE. Between November 1999 and November 2004, 341 HIV positive methamphetamine using MSM were recruited (using various methods) in San Diego County, California. After determining eligibility and completing the base-line assessment, participants were randomly assigned to the EGDE intervention or the control conditions. EGDE consisted of eight 90 minute sessions. The intervention was not designed to arrest drug use; it focused on reducing the high risk behavior of methamphetamine users. The first five sessions consisted of: context of unsafe sex, condom use, negotiations of safer sex practices, disclosure of HIV seropositivity to sex partners, and enhancement of social support. The three booster sessions followed the same domains covered in the five core sessions. The control condition also consisted of eight 90 minute sessions that addressed issues surrounding diet and exercise as they impact the health of methamphetamine using HIV positive MSM.</p> | <p>Strengths: In order to minimize the attrition rate of this population, post-baseline assessments were conducted at 4, 8, and 12 month interval. The researcher found that by the end of the active phase of the intervention, the two groups did not differ in their safer sex behaviors. However, by the 8 month assessment, EGDE participants engaged in significantly more safes sex acts and the difference was maintained at the 12 month assessment. EDGE participants engaged in a greater percent of safer sex behaviors. The EDGE intervention was also superior to the control conditions for increasing self-efficacy for condom use. The researches stated they thought augmenting the intervention with ongoing substance abuse treatment could possibly produce even longer gains in safer sex behaviors.</p> <p>Limitations: The intervention did not actively address the participants' methamphetamine use. The researches also noted that the attrition from the project was higher than they would have liked; they provided a few observations that may guide those who with this population.</p> |

Effective Interventions for HIV Positive Persons

Individual-level Intervention (continued)

| Gilbert, P., Ciccarone, D., Gansky, S. A., Bangsberg, D. R., Clanon, K., McPhee, S. J., et al. (2008). Interactive “Video Doctor” counseling reduces drug and sexual risk behaviors among HIV-positive patients in diverse outpatient settings. <i>PLoS ONE</i> , 3(4), 1-10. | | |
|---|---|---|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| <p>HIV-positive clinic patients</p> <p>Interactive computer</p> | <p>Between December 2003 and September 2006 recruiting HIV positive clients visiting 5 outpatient clinics in the San Francisco Bay area occurred. Interested clients used a laptop (with headphones) to complete the <i>Positive Choices</i> risk assessment survey. To ensure privacy, clients completed the survey in a private examination room. The assessment captured days of 10 illicit drugs used in the past month and the number of sexual partners (anal and vaginal) in the last three months without the use of a condom. Immediately after completing the assessment, those who reported one or more risky behaviors were stratified by risk and randomly assigned to the intervention (243 clients) or control group (233 clients). The computer played the Video Doctor clips for those assigned to the <i>Positive Choices</i> intervention. The interactive risk reduction messages were delivered by an actor portrayed Video Doctor and based on motivational interviewing principles. Using digital video clips, logic, and participants input, the program was tailored to the participants’ gender, risk profile, and readiness to change. The intervention participants received the “booster” Video Doctor counseling at 3 months. The computer also produced an educational worksheet and a cueing sheet. Following completion of the risk assessment, those assigned to the control group continued with their medial appointment and received the normal standard of care. Participants in both arms completed a follow-up risk assessment at 3 and 6 months after their baseline assessment.</p> | <p>Strength – The intervention group was significantly less likely than the control group to report any ongoing drug use at 3 months; at 6 months even fewer interventions participants reported drug use. At 3 months, both groups reported less ongoing unprotected sexual intercourse; at 6 months, there was a statistically significant reduction in the intervention group. Absolute risk behavior declined over time among all participants Limitation - There may have been differential disclosure of sensitive behaviors. Risk assessment questions did not assess contextual sexual risk reduction strategies. The research failed to find a significant intervention effect for alcohol risk.</p> |

Effective Interventions for HIV Positive Persons

Comprehensive Risk Counseling and Services (formerly Prevention Case Management)

The CDC has endorsed Comprehensive Risk Counseling and Services (CRCS) (formerly Prevention Case Management (PCM) as an effective intervention to reach HIV- positive and/or very high-risk HIV-negative persons. CRCS is a client-centered HIV prevention activity with the fundamental goal of promoting the adoption and maintenance of HIV risk reduction behaviors by clients with multiple, complex problems and risk reduction needs. CRCS provides client-centered, multiple-session HIV risk reduction counseling while using the service brokerage of traditional case management to address competing needs that may make HIV prevention a lower priority. This HIV prevention activity addresses the relationship between HIV risk and other issues such as substance use, mental health, adherence issues, social and cultural factors, and physical health problems. While CRCS has yet to be rigorously evaluated, intensive case management interventions for clients with multiple, complex problems have been shown to be effective in other health fields. ([Guidance](#)) ([Literature Review](#)) ([Acronyms](#))

Group-level Interventions

Fogarty, L.A., Heilig, C.M., Armstrong K, et al. (2001). Long-Term Effectiveness of a Peer-Based Intervention to Promote Condom and Contraceptive Use among HIV-Positive and At-Risk Women. *Public Health Reports* 116: S103-S119.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| HIV+ women | HIV-infected women in one study (N=322, Baltimore) and women at high risk for HIV infection in a second study (N=1289, Philadelphia) assigned to a standard or enhanced HIV prevention treatment group. Standard intervention was access to Title X comprehensive health services throughout study. The enhanced intervention added support groups and one-on-one contacts with peer advocates tailored to clients' needs. Based on Stage of Change Theory. | Measurements at baseline, 6 months, 12 months, and 18 months. For HIV-infected women, enhanced group had improved consistency in condom use, increased perceived advantages of condom use, and increased self-efficacy. For women at-risk, enhanced group showed no sustained advantage over standard group. |

Coates, T.J., McKusick, L., et al. (1989). Stress-reduction training changed numbers of sexual partners but not immune function in men with HIV. *American Journal of Public Health* 79: 885-7.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| HIV + MSM | 64 HIV+ gay men randomly assigned to 1) eight 2-hour weekly group stress reduction training session plus one all day retreat, or 2) a 2 month wait-list control. | At 2-month follow-up, experimental group had fewer sexual partners in the past month than control group (1.1 vs. 2.3). |

Effective Interventions for HIV Positive Persons

Group-level Interventions (continued)

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| <p>Wolitski, RJ, Gomez, CA, Parsons, JT: The Summit Study Group. Effects of a Peer-led Behavioral Intervention to Reduce HIV Transmission and promote Serostatus Disclosure Among HIV-seropositive Gay and Bisexual Men. <i>AIDS</i>. 2005;19 (suppl 1):S99-S109</p> <p>HIV+ MSM</p> <p><i>Added to matrix in 2007</i></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (SUMIT Enhanced Peer-led)</p> | <p>The SUMIT (Seropositive Urban Men’s Intervention trial) desired to test the efficacy of a peer-led behavioral intervention for HIV positive gay and bisexual men. Between January 2000 and June 2001, 811 MSM were recruited from six communities in New York and six communities in San Francisco. Upon completion of the baseline assessment, participants were randomly assigned to either the comparison group or the intervention conditions. The comparison condition was a single session intervention that was modeled after community forums conducted in each city. This “standard-of-care” intervention lasted for approximately 1½ - 2 hours; the main feature was a panel presentation. The enhanced intervention was a six-session peer-led intervention that was based on; social cognitive theory, information-motivation-behavioral skills model, the theory of planned behavior, formative research, and feedback from community advisory boards. Each session lasted for approximately 3 hours and addressed sexual and romantic relationships, HIV and STI transmission, drug and alcohol use, assumptions about HIV status of sex partners, disclosure of HIV status, and mental health. Sessions included large group activities covering issues covered during the session, small peer-led group activities led by HIV positive peer, and time for socializing.</p> | <p>Of primary interest was whether men who participated in the enhanced intervention would, in comparison to those in the comparison intervention conditions, report lower rates of unprotected sex with partners who were HIV positive or unknown status. At both 3 and 6 months, fewer men in the enhanced intervention reported unprotected sex with HIV positive or unknown status partner. The magnitude was small and there was no significant difference that was observed at both the 3 and 6 month follow-up assessments. The enhanced intervention may have limited its efficacy because of the small group activities; the efficacy may have been also limited by the broad goals.</p> |

Effective Interventions for HIV Positive Persons

Group-level Interventions (continued)

Kalichman, S.C., Rompa, D., Cage, M., et al. (2001). Effectiveness of an Intervention to Reduce HIV Transmission Risks in HIV-Positive People. *American Journal Preventive Medicine* 21(2): 84-92.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|---|
| HIV+ and African-American “ <i>Health Relationships</i> ” Listed in the 2007 Updated Compendium – Best Evidence (Healthy Relationships) | 233 men and 99 women living with HIV/AIDS randomly assigned to receive either 1) a five-session group intervention focused on strategies for practicing safer sexual behavior, or 2) a five-session, contact-matched, health-maintenance support group (standard-of-care comparison). 74% of participants were African-American. Based on Social Cognitive Theory, emphasizing building behavioral skills, enhancing self-efficacy for practicing risk-reduction behaviors, promoting intentions to change, and developing strategies for change. Framed intervention content within context of managing stress related to HIV disclosure and practicing safer sexual behavior. The five 120-minute sessions were delivered at the rate of two per week. Used gender-specific presentations. This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064. | Outcomes measured immediately post intervention, 3 months, and 6 months. 78% retention at 6 months. At 6-month follow-up, intervention group reported fewer HIV-negative partners, less unprotected anal and vaginal intercourse, and greater condom use. |

Kelly, J.A., St. Lawrence, J.S., et al. (1989). Behavioral intervention to reduce AIDS risk activities. *Journal of Consulting and Clinical Psychology* 57: 60-7.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|---|
| HIV +, negative, or unknown status high-risk MSM “ <i>Many Men, Men Voices</i> ” | 104 participants randomly assigned to 1) 12 weekly sessions, 75-90 min small group counseling which provided AIDS risk information, behavioral self-management, assertiveness training, and relationship-building skills or 2) a wait-list control. This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064. | Skills training resulted in less unprotected anal sex (mean=2.3 for experimental group; 3.3 for control group) and higher condom use during anal sex in the past 4 months (experimental group used condoms during 66% of all anal episodes; 19% for control group). Behavior change maintained at 8-month follow-up |

Effective Interventions for HIV Positive Persons

Group-level Interventions (continued)

Kelly, J.A., St. Lawrence, J.S., et al. (1990). A skills-training group intervention model to assist persons in reducing risk behaviors for HIV infection. *Education and Prevention 2*: 24-35.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| HIV +, unknown, status, or negative high-risk MSM | Purpose of study to evaluate impact of more abbreviated intervention than Kelly et al. (1989) above. 15 participants received 7 small group sessions, 60-90 min each. Covered AIDS risk information, behavioral self-management, assertiveness training, and pride and support issues. One 3-month follow-up booster session. | At 8-month follow-up, UAI in past 4 months fell from .93 to .21 mean occurrences. Proportion of all intercourse occasions where condoms used increased from 72% to 90%. Risk index (risky practices x no of partners) decreased from 4.7 to 1.4. |

Rotheram-Borus, M.J., Lee, M.B., Murphy, D.A., et al. (2001) Efficacy of a prevention intervention for youths living with HIV. *American Journal of Public Health 91*: 400-5.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| <p>Youth/ HIV+ (Mostly MSM)</p> <p><i>“Teens Linked to Care”</i></p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (TLC)</p> | <p>310 youths, 72% male (mostly MSM) and 28% female, aged 13-24, 27% African-Am and 37% Latino. Study conducted at 9 adolescent clinical care sites in 4 cities. Assigned by small cohort to a 2-module (“Stay Healthy” and “Act Safe”) intervention with 23 sessions or to a control condition. In intervention condition, 73% attended at least 1 session. Assessment of module 1 conducted 6 months after completion. Assessment of module 2 conducted 3 months after completion. Cohorts mixed according to sex. (Detailed manual available on web at http://chipts.ucla.edu.) Had difficulty getting youths to attend sessions.</p> <p>This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064.</p> | <p>Following “Stay Healthy” module, number of positive lifestyle changes and active coping styles increased among intervention females vs. control. Social support coping increased for all intervention clients vs. controls.</p> <p>Following “Act Safe” module, intervention youths reported 82% fewer unprotected sexual acts, 45% fewer sexual partners, 50% fewer HIV-negative partners, and 31% less substance use than controls.</p> |

Effective Interventions for HIV Positive Persons

Group-level Interventions (continued)

Rhodes, F., Wood, M.M., Hershberger, S. (2000) A cognitive-behavioral intervention to reduce HIV risk among active drug users. In staying negative in a positive world: HIV prevention strategies that work (pp. 113-124). Sacramento: California Department of Health Services, Office of AIDS.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|---|
| HIV + or negative IDUs “Safety Counts” Listed in the 2007 Updated Compendium – Promising Evidence | This intervention (<i>Safety Counts</i>) is aimed at reducing high-risk drug use and sexual behaviors of injective drug and crack cocaine users not in treatment. This seven-session behaviorally focused intervention includes both structured and unstructured psychoeducational activities. These sessions were both in group and individual settings over four to six months. This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064. | Participants were more than 2.5 times more likely to self-report an increase in condom use at follow-up (5-9 months following enrollment). They were also more likely to report a reduction in the number of times they inject and more likely to test negative for opiates through urinalysis. Plus, they were also more likely to enter drug treatment. |

Carey, M. P., Carey, K. B., Maisto, S. A., Gordon, C. M., Schroder, K. E. E., & Venable, P. A. (2004). Reducing HIV risk behavior among adults receiving outpatient psychiatric treatment: results from a randomized controlled trial. *Journal of Counseling Clinical Psychology*. April 2004 v74 i2 p252 (17)

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------------------|--|---|
| HIV positive Heterosexual | This study investigated the efficacy of a 10 session, HIV risk reduction intervention. There were 211 women and 187 men, receiving outpatient psychiatric care for mental illness, who participated in this intervention. Clients were randomly assigned to one of three situations: HIV risk reduction intervention, structurally equivalent substance use reduction intervention, or standard care. Clients were assessed pre and post intervention and at 3 and 6 month follow-up appointments. | Compared to clients assigned to the other two situations, clients assigned to the HIV risk reduction intervention reported less unprotected sex, fewer casual partners and fewer new sexually transmitted infections. They also reported more- safer sex communications, improved knowledge, behavioral skills, more positive condom attitudes, and stronger condom use intentions. |

Effective Interventions for HIV Positive Persons

Group-level Interventions (continued)

Kalichman, S.C., Sikkema, J., Kelly, J.A., Bulto, M., (1995) Use of a brief Behavioral Skills Intervention to Prevent HIV Infection Among Chronic Mentally Ill Adults. *Psychiatric Services* 46 (3), 275-280.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|---|
| Heterosexual An intervention package, Let's Chat, is available from Sociometrics (www.socio.com). Check web site for the package price. | This is a brief behavioral skills intervention conducted in small groups during four 90 minute sessions. Sessions were: 1) AIDS risk reduction education; 2) behavioral skills to reduce AIDS risk; 3) communication and negotiation skills; and 4) review & reinforcement. The goal of the intervention was to inform adults about HIV/AIDS and ways they can protect themselves and others from contracting HIV. The intervention is based on theory of reasoned action, social cognitive theory, and information-motivation-behavior skills (IMB) model. The intervention was originally conducted in two psychiatric clinics in Milwaukee, Wisconsin. The participants (27 men and 25 women) were recruited and randomly assigned to either the immediate intervention, or the four-week waiting list control group. | Overall, the researchers concluded the intervention had a positive, short-term effect on sexual risk behaviors. Of the 52 participants who completed the baseline assessment, 44 (85%) completed the intervention. Completion was defined as having attended a minimum of two of the four sessions. When compared with the waiting list control group, the immediate intervention group reported changes in condom-use and AIDS risk knowledge, and intentions to change their risk behavior. The immediate group also reported a substantial reduction in rates of unprotected sexual intercourse and an increase in condom use. |

Wingood, G. M., DiClemente, R. J., Mikhail, I., Lang, D. L., McCree, D. H., Davies, S. L., Mardin, J. W., Hook, E. W. 3rd, Saag, M. (2004). A randomized controlled trial to reduce HIV transmission risk behaviors and sexually diseases among women living with HIV: The WILLOW program. *Journal of Acquired Immunodeficiency Syndromes*, S58-S67

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| HIV positive Women Listed in the 2007 Updated Compendium – Best Evidence (WiLLOW) | The WiLLOW (women involved in life learning from other women) object was to evaluate the efficacy of this intervention to reduce HIV transmission risk behavior, STDs and enhance HIV prevention psychosocial and structural factors among women living with HIV. Once recruited, 366 women were randomly assigned to the comparison group or to the intervention. Women assigned to the comparison group participated in four 4 hour sessions that addressed: medication adherence, nutrition, and provided interaction skill. Women assigned the intervention group also attended four 4 hour sessions, but there sessions focused on knowledge, attitudes, self-efficacy, and skills regarding safer sex. | Over the 12 month follow-up, women in the intervention reported: fewer episodes of unprotected vaginal intercourse, less likely to report never using condoms; lower incidence of bacterial infections; greater knowledge and condom self-effeminacy; more network members; fewer beliefs that condoms interfere with sex; fewer partner related barriers to using condom use; and demonstrated grater skills in using condoms. |

Effective Interventions for HIV Positive Persons

Group-level Interventions (continued)

Margolin, A., Avants, S.K., Warburton, L.A., Hawkins, K.A., Shi, J. (2003). A randomized clinical trial of a manual-guided risk reduction intervention for HIV-positive injecting drug users. *Health Psychology, 22*(2) 223-228.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|---|
| HIV + IDUs <i>“Holistic Harm Reduction Program (HHRP)”</i> | This intervention uses a 12-session, manual-guided, group level program to reduce harm, promote health, and improve quality of life. The program is based on the Information, Motivation, Behavior (IMB) model of behavior change. In this program, HIV- positive IDUs are viewed as autonomous individuals responsible for making informed choices concerning behaviors that pose risk to themselves and others. Activities in this intervention are designed to address clients as complex human beings in search of physical, emotional, social, and spiritual well-being. (HHRP training manuals and other intervention materials) This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064. | Participants in this intervention exhibited many significant improvements. They included: measures of addiction severity, harm reduction behaviors, harm reduction knowledge, motivation, behavioral skills, and quality of life. After three months, the participants displayed a greater improvement in behavioral skills and showed a continued decrease in addiction severity and risk behavior. Members in a control group did not maintain gains. |

Effective Interventions for HIV Positive Persons

Group-level Intervention (continued)

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------------|--|--|
| HIV Positive Persons | <p>The purpose of the Healthy Living Project was to examine the effect of a cognitive behavioral intervention on people living with HIV at risk of transmitting the virus to others. Social action theory (SAT) was the basis of this intervention; this theory states that behaviors such as risky sexual activity are framed as the results of: 1) environmental context; 2) responses to internal affective states (i.e. depression and anxiety); and 3) self-regulation capacities of an individual. Between April 2000 and January 2002, HIV positive persons in four cities (New York, San Francisco, Los Angeles, and Milwaukee) were recruited to participate in this intervention. After determining eligibility, 936 clients were randomly assigned to the intervention or control group. The intervention involved 15 90-minute sessions that were divided into 3 modules of 5 sessions each. <u>Module 1</u> addressed stress, coping, and adjustment. <u>Module 2</u> addressed safer behaviors. <u>Module 3</u> addressed health behaviors. The sessions were tailored to individuals within the problem-solving and goal setting technique structure. Those assigned to the control group did not receive any psychosocial intervention during the 25 month trial. Each participant (control and intervention) was assigned to 5, 10, 15, 20, and 25 month assessments after the random assignment. Those clients who were assigned to the control group received the intervention at the end of the trial. To view the assessments and study protocol, visit: http://chipts.ucla.edu/projects/chipts/hlp.asp</p> | <p>The Healthy Living Project was successful in helping HIV positive persons reduce unprotected sexual intercourse with HIV negative partners or partners of unknown status. When the 20 month assessment was completed (5 months after completing the intervention), the intervention participants had reduced transmission acts by 36% compared to those who were in the control group. In the research setting, this intervention was delivered as 15 sessions. As stated in the intervention design, those in the control group received the same intervention at the end of the trial, but the sessions were adapted to 8. The writer expressed this intervention is intense and would only be feasible for complex cases in which less intense interventions did not seem to be sufficient in reducing transmission risks. The researchers also stated that the most appropriate adaptation of the intervention would be in the context of CRCS such as PCM, where significant resources are already being directed to specific clients.</p> |

Effective Interventions for HIV Positive Persons

Group and Individual-level Intervention

Purcell, DW, JD, PhD; Metsch, LR PhD; Latka, M, PhD; Santibanez, S. MD, MPHTM; Gomez, CA, PhD; Eldred, L. MPH, DrPH; Latkin, CA. PhD; for the INSPIRE Study Group. Interventions for Seropositive Injectors-Research and Evaluation: An Integrated Behavioral Intervention With HIV-Positive Injection Drug Users to Address Medical Care, Adherence, and Risk Reduction. *Journal of Acquired Immune Deficiency Syndromes*. 37 Supplement 2:S110-S118, October 1, 2004.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------------|---|---|
| Injection Drug Users | <p>The purpose of Intervention for Seropositive Injectors (INSPIRE) was to test the efficacy of an integrated behavioral intervention to increase utilization of medical care, increase adherence of HIV medication, reduce injection risk behavior, and reduce sexual risk behavior. Using active and passive outreach in various community settings, HIV positive IDUs were recruited in Miami, Baltimore, San Francisco, and New York. Of the 4,263-screened potential participants, 1,162 were eligible and completed the baseline assessment. During the baseline assessment, participants received an appointment to return for the first intervention session. Participants were assigned to the <i>peer mentoring intervention</i> (PMI) or the <i>video discussion intervention</i> (VDI - control). PMI was based on the concepts of empowerment and peer leadership or advocacy. Exercises were grounded in social learning theory, social identity theory, and the information-motivation-behavior skills model. PMI consisted of 10 sessions over a 5-week period. Seven of the sessions were GLI and three were ILI. Sessions addressed using HIV primary care and adherence; sex and drug risk behaviors; motivation; and skills of behavior. Sessions lasted for approximately 2 hours. The VDI participants took part in 8 sessions. One session was devoted to HIV prevention information. Each session involved brief check-in, viewing videotapes, and facilitator led discussions.</p> | <p>Strength - The study continues to work in the cities to determine the efficacy of INSPIRE. The diversity and size of the sample are two of the major strengths. The researchers concluded there was a need for an integrated intervention reaching out to HIV positive IDU. They also stated that the data collected to this point show acceptability of such an approach.</p> <p>Limitation - Trial was not designed to recruit a representative sample size of HIV positive IDUs. Findings may not be generalizable beyond populations of HIV IDUs who are inclined to join an intensive study.</p> <p>COMMENT: Once the results of the intervention are made public/published, the <i>Evaluated Outcome</i> section will be updated with the latest information.</p> |

Effective Interventions for HIV Positive Persons

Group-level Intervention (continued)

Sikkema, K. J., Wilson, P. A., Hansen, N. B., Kochman, A., Neufeld, S., Ghebremichael, M. S., et al. (2008). Effects of a coping intervention on transmission risk behavior among people living with HIV/AIDS and a history of childhood sexual abuse. *Journal of Acquired Immune Deficiency Syndromes*, 47, 506-513.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| <p>HIV-positive adults with childhood sexual abuse (CSA) histories</p> | <p>The objective of Living in the Face of Trauma (LIFT) was to examine the effect of a 15-session intervention on sexual transmission risk behavior of men and women with a history of childhood sexual abuse (CSA). Between March 2002 and January 2004, 333 HIV positive adults with a history of CSA were recruited In New York City. Upon determining eligibility, 247 persons completed the assessment; after the assessment, they were randomly assigned to 1 of 2 study conditions (participants were homogenous groups). The <i>HIV and trauma coping group intervention</i> (15 weekly 90-minute sessions) integrated the cognitive theory of stress and coping and cognitive-behavioral treatment strategies within a framework for understanding sexual abuse outcomes which was utilized to demonstrate appraisal of stressors related to HIV infection and sexual trauma. Other activities included identification of triggers, selected realistic goals, risk reduction skills building exercises, and exposure. The purpose of the <i>HIV support group</i> was to provide a supportive environment where participants could address issues of HIV and trauma. Length and time were identical to the other intervention. Study participants represented a highly depressed group with multiple challenges and extensive sexual trauma.</p> | <p>All participants completed baseline, immediately post intervention, and at 4, 8, and 12 month assessment. The sample consisted of 130 women and 117 men (all MSM identified)</p> <p>Strength – LIFT participants demonstrated greater risk reduction activities. At the 12-month follow-up assessment, they had reduced unprotected anal and vaginal intercourse (with all partners) by an average of 45%. Researches felt the methodology, moderate effect sizes for risk reduction, this was one of the first interventions trials to address coping with HIV & CSA, and using a three level generalized linear mixed model ruled out differential group level effects strengthen the intervention.</p> <p>Limitations The researchers noted four limitations. 1) Attrition was slightly higher than other trails with HIV positive adults; 2) the effect size at the 12-month follow-up was diminished; 3) unable to enroll a sufficient number of heterosexual men; and 4) the findings are based on self-reported sexual behaviors.</p> |

Effective Interventions for HIV Positive Persons

Group-level Intervention (continued)

Sikkema, K. J., Hansen, N. B., Kochman, A., Tarakeshwar, N., Neufeld, S., Meade, C. S., et al. (2007). Effects of a coping intervention on transmission risk behavior among people living with HIV/AIDS and a history of childhood sexual abuse: Reduction in Traumatic Stress. *AIDS and Behavior*, 11, 49-60.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|---|
| HIV-positive adults with childhood sexual abuse (CSA) histories | This study hypothesized both treatment conditions would produce greater positive change in childhood sexual abuse (CSA) trauma symptoms than those in the waitlist and specifically tailored coping group for sexual trauma and HIV infection would produce greater positive changes in CSA trauma symptoms than the comparison group. Between March 2002 and January 2004, HIV positive persons were recruited in New York City to participate; 253 HIV positive men and women completed a baseline assessment and were randomly assigned to the HIV and trauma coping group intervention, HIV support group, or waiting (control group). All of the men in the study were MSM; attempts to recruit heterosexual men had limited success, therefore further attempts ceased. The cognitive theory of stress and coping and cognitive-behavioral treatment strategies were the theoretical basis for the <i>HIV and trauma coping group intervention</i> (15 weekly 90-minute sessions). Participants identified stressors related to their sexual experience and those related to their HIV diagnosis. Other activities included appraisal and identification of triggers, selected realistic goals, and utilized role-playing to learn coping and risk reduction skills. The purpose of the <i>HIV support group</i> was to provide a supportive environment where participants could address issues of HIV and trauma. Length and time were identical to the other intervention. <i>Control group</i> participants waited approximately four months before they were assigned to one of the other groups. This condition was essential to determine any changes could be attributed to the intervention exposure. | Strength – The study demonstrated the efficacy of a theoretically based group-level intervention for coping with the trauma associated with CSA in HIV positive men and women. Participants in the coping intervention displayed the most benefit in addressing avoidance symptoms. Limitation – Limitations mentioned were; 1) Variable rate of intervention exposure; 2) attrition from the study was somewhat that other mental health HIV interventions; 3) more comprehensive PTSD measures may have been beneficial in assessment of PTSD related to behavioral outcomes; and 4) unable to enroll heterosexual men. |

Partner Notification (Procedural Guidance)

No reviews on Mass & Other Media, Social Marketing, Hotlines, and Clearinghouse.

Effective Interventions for Men Who Have Sex with Men

Individual-level Interventions

Dilley JW, Woods WJ, Sabatino J, et al. Changing sexual behavior among gay male repeat testers for HIV: a randomized, controlled trial of a single-session intervention. *Journal of Acquired Immune Deficiency Syndrome*. 2002;30:177-186

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|--|
| <p><u>Added to matrix in 2007</u></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Personalized Cognitive Risk-Reduction Counseling)</p> | <p>The goal of the study was to assess if one counseling intervention session, focusing on self-justification is effective in reducing future high-risk behavior. The intervention was conducted in a single clinic from May 1997 and January 2000. A total of 248 MSM, with a history of at least one negative test result and self-reported UAI in the previous 12 months, were recruited from a single testing site in San Francisco, California. Participants were randomly assigned to one of four groups: <u>A1 - standard HIV counseling (control group); A2 - standard counseling plus a sex diary; B1 - standard counseling plus a one-time intervention counseling targeting self-justifications; or B2 - standard counseling, intervention counseling and sex diary.</u> Participants keeping the diary were asked to identify the kinds of sex, condom use, relationship to partner, and their partner's HIV serostatus.</p> | <p>The proportion of subjects reporting UAI decreased in all four groups. Group A1 45 at baseline, 31 at 6 months and 44 at 12 months; group A2 61 at baseline 40 at 6 months, and 35 at 12 months; group B1 66 at baseline, 21 at 6 months, and 26 at 12 months; and group B2 61 at baseline, 25 at 6 months, and 33 at 12 months. Changes in the episodes of UAI decreased in all study conditions; however the decrease in the control arm was not considered statically significant. In contrast, participants significantly decreased there episodes of UAI, with the greatest decrease in B1 at 6 months. The researchers concluded that a single-session, self-justification counseling and testing intervention decreased high-risk sexual behavior beyond that achieved by standard HIV counseling and testing alone. More importantly, the effect of the self-justification counseling was sustained over the period of one year. The cost was one of the potential limitations of the intervention.</p> |

Effective Interventions for Men Who Have Sex with Men

Individual-level Interventions (continued)

Effects of a behavioral intervention to reduce acquisition of HIV infection among men who have sex with men: The EXPLORE randomized controlled study. *The Lancet*. July 3, 2004; Volume 364:41-50.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|---|
| <p><i>Added to matrix in 2007</i></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (EXPLORE)</p> | <p>EXPLORE was designed as a multisite two-group randomized intervention based on motivational interviewing, the information-motivation-behavior model and social learning theory. The primary objective of this intervention was to test the effect of a behavioral intervention in prevention acquisition of HIV among MSM. From January 1999 to February 2001, study participants were recruited (various methods) from six large cities (Boston, Chicago, Denver, New York, San Francisco, and Seattle). After completing the screening, participants were tested for HIV. During the post test counseling, MSM who tested HIV positive were referred to medical and social services. The 4,295 MSM who tested HIV negative were randomly assigned to one of the study conditions. The experimental intervention consisted of ten core modules delivered at one-on-one counseling sessions over a period of four to six months. The sessions were designed to address: personalized risk assessment, sexual communication, knowledge of personal and other' HIV serostatus in making sexual decisions, and alcohol drug use in conjunction with risk behaviors. Maintenance sessions were scheduled every 3 months. The standard condition consisted of a twice yearly counseling on risk reduction based on the CDC <i>Project Respect</i> (two-session behavioral) model. Participants in both conditions received 8 follow-up sessions conducted every 6 months.</p> | <p>The acquisition rate of HIV was lower in those who were assigned to the enhanced intervention group than those who participated in the standard group. The effect was more favorable in the first 12-18 months of the follow-up. The occurrence of unprotected receptive anal intercourse with HIV positive and unknown status partners was lower in the enhanced intervention participants than those assigned to the standard conditions. To review the intervention and training manuals, protocol, outcome measures and intervention details, visit www.explorestudy.org. The study sample recruitment, the full effect of the intervention may have been muted and a differential in retention were considered limitations.</p> |

Effective Interventions for Men Who Have Sex with Men

Individual-level Interventions (continued)

Williams, ML, Bowen, AM, Timpson, SC, Ross, MW, and Atkinson, JS. HIV Prevention and Street-Based Male Sex Workers: An Evaluation of Brief Interventions. *AIDS Education and Prevention*. 18(3), 204-215, 2006

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| <p>Male Sex Workers</p> <p><u>Added to matrix in 2007</u></p> | <p>Studies of street-based male sex workers (MSW) have shown these men engage in high risk behavior that place them and their partners at risk. The purpose of this study was to evaluate the acceptability and the efficacy of a brief intervention to increase condom use during paid anal sex. Between May 1998 and June 2001, 399 street-based MSW were recruited to participate in the intervention. Participants completed a baseline survey; the survey showed that almost all of the street-based MSW smoked crack and more than 1/3 injected drugs. Of the IDUs, more than 1/3 injected with used syringes and more than 1/10 were HIV+. After completing the baseline survey, participants were randomly assigned to: the standard intervention - composed of elements of the CDC HIV risk reduction intervention (1994) and the National Institute on Drug Abuse standard risk intervention (Coyle, 1993); or the standard plus intervention - consisted of elements of the standard intervention, plus elements designed to increase condom use intentions, based on the theory of reasoned action and the social cognitive theory. Both interventions were delivered in two one-hour small groups by a moderator.</p> | <p>Acceptability- was defined as completing the intervention. The researched felt returning for the second session, men signified that they found the intervention acceptable (almost two thirds completed the intervention). Efficacy - Sessions were tape-recorded and elements activity coded by a trained researched to evaluate the interventions efficacy. Sessions exceeded 90% compatibility for both the standard intervention and the standard-plus intervention. Intervention benefits - Of the men who completed the 1 and 3 month assessments, drug use, injection drug use, sharing works, times trading sex, and number of sex partners decreased. Intention to use condoms and condom use during anal sex with paying partners significantly increased from intake to 1 and 3 month post intervention. Condom use self-efficacy and normative expectations significantly decreased from intake to 1 month post intervention, but rebounded to pre intervention levels. There were no significant differences between the standard and the standard-plus interventions. Researchers felt that the lack of difference may be due to the power of the standard intervention or because all brief interventions produce similar results.</p> |

Effective Interventions for Men Who Have Sex with Men

Individual-level Intervention (Internet-delivered)

Bowen, A.M., Horvath, K., and Williams, M.L. A Randomized Control Trial of Internet-delivered HIV Prevention Targeting Rural MSM. *Health Education Research* 2007 Volume 22, Number 1 : 120-127.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| Rural MSM | <p>The goals of this randomized control trial (RTC) were to determine if the internet was a viable approach and to increase precursors of sexual risk reductions (HIV knowledge, sexual self efficacy, and outcome expectations). Development was guided by using the social cognitive theory. The content was determined from focus groups and an internet-based assessment; content included HIV prevention information not generally known to MSM residing in rural areas. In April & May of 2004, 90 MSM from 29 states, who used the internet and lived in rural areas, were recruited face-to-face and using banners at popular web sites. Rural was defined as living in a town of 75,000 or less and more than a 60 minute drive from an urban area. After determining eligibility (completing a screening questionnaire), participants viewed an online informed consent form and were randomly assigned to the intervention group or to the wait list (control group). The intervention was delivered in two 20 minute modules presented as a conversation between an HIV positive gay man (expert) and an HIV negative man who had recently engaged in high-risk sex (inexperienced). Module 1 focused on the inexperienced man's risky sexual encounter and the possibility he had been infected. Module 2 was set 6 months later after the inexperienced man received his negative results.</p> | <p>Strengths: The most promising outcome of the study was the significant increases in knowledge and safer sex attitudes related to HIV/AIDS. Although the study did not allow time to examine behavior change, social cognitive theory and theory of reasoned action suggest that behavior follows changes in attitudes. The second focus was to determine the acceptability of the RTC on the internet. The intervention was composed of a storyline presented in text bubbles and interactive graphics; the completion rate was very good and responses to acceptability questions were very positive.</p> <p>Limitations: There was a lack of sufficient time to examine behavior change; the intervention emphasized HIV/AIDS knowledge in rural areas, so it may be less effective with urban MSM; did not evaluate the relative effects of the interactive versus peer story aspects; and the two different recruiting methods may have an effect on outcomes. The researches felt that those limitations notwithstanding, the results indicated that an RTC testing the efficacy of internet-based delivered interventions targeting psychosocial precursors to AIDS related behavior change are feasible and potentially effective.</p> |

Effective Interventions for Men Who Have Sex with Men

Individual-level Intervention (continued)

| Bowen, AM, Williams, ML, Daniel, CM, and Clayton, S. Internet based HIV prevention research targeting Rural MSM: feasibility, acceptability, and preliminary efficacy. <i>Journal of Behavioral Medicine</i> . DOI 10.1007/s10865-008-9171-6 | | |
|--|---|--|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| <p>Internet Delivered</p> <p>IMB Skills Model - Providing HIV prevention information, motivation to engage in HIV prevention and opportunities to practice behavior skills for HIV prevention.</p> <p>To view the modules, visit http://www.wrapp.home.net/</p> | <p>Using the internet in reaching hard to reach populations is growing. Advantages include: providing information can be inexpensive, participants can remain anonymous, accessible from any computer connected to the world wide web, the intervention is private, and can be accessed any time of day. Wyoming Rural AIDS Prevention Project (WRAPP) is based on a pilot study (A Randomized Control Trial of Internet-delivered HIV Prevention Targeting Rural MSM – page #####). From recruitment to randomizing participants to the sessions, the intervention was totally automated. The interventions’ theoretical foundation is the Information-Motivation-Behavioral skills model. The four primary goals were: (1) examine the feasibility of an electronic research study, (2) access the acceptability of the program (retention across multiple sessions), (3) identify module specific effects on IMB skills, and (4) determine if the modules had a dose response on cognitive variables. After completing the pre-test questionnaire, 425 men were randomly assigned into the first intervention. The intervention consisted of three modules; each module included two 20-minute interactive sessions. The printable feedback form was tailored to the participants’ responses during the intervention. At 5, 12, and 14 days after beginning a module, email reminders were sent to encourage module completion. Participants were required to wait at least 48 hours between sessions.</p> | <p>Strength - Overall, this and the initial study indicated an online short-term RTC could be successfully implemented. Participants completing all sessions were separated into three groups; men who reported zero partners, those who reported one sex partner, and those who reported two or more in the 30 days prior to the beginning of the study. At the follow-up interview, men in the first group had an average of one sex partner, but reported anal sex with less than half of the partners and 90% reported using condoms all the time. Men who reported one partner at intake increased their number of partners, but the average was less than two (anal sex decreased and condom use increased; and men in the third group reported fewer partners; percent of partners with whom they had anal sex did not change, but more of these episodes included condoms. Limitation - Generalizability is limited due to the focus of the study and the recruitment strategy (young gay white sample).</p> |

Effective Interventions for Men Who Have Sex with Men

Comprehensive Risk Counseling and Services (formerly Prevention Case Management)

The CDC has endorsed Comprehensive Risk Counseling and Services (CRCS) (formerly Prevention Case Management (PCM) as an effective intervention to reach HIV- positive and/or very high-risk HIV-negative persons. CRCS is a client-centered HIV prevention activity with the fundamental goal of promoting the adoption and maintenance of HIV risk reduction behaviors by clients with multiple, complex problems and risk reduction needs. CRCS provides client-centered, multiple-session HIV risk reduction counseling while using the service brokerage of traditional case management to address competing needs that may make HIV prevention a lower priority. This HIV prevention activity addresses the relationship between HIV risk and other issues such as substance use, mental health, adherence issues, social and cultural factors, and physical health problems. While CRCS has yet to be rigorously evaluated, intensive case management interventions for clients with multiple, complex problems have been shown to be effective in other health fields. ([Guidance](#)) ([Literature Review](#)) ([Acronyms](#))

Group-level Interventions

Choi, K-H., Lew, S., Vittinghoff, E., et al. (1996). The efficacy of brief group counseling in HIV risk reduction among homosexual Asian and Pacific Islander men. *AIDS* 10: 81-87.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| POC (API) Listed in the 2007 Updated Compendium – Best Evidence (Brief Group Counseling) | Brief group counseling for self-identified gay API in SF. N = 329 (208 intervention, 121 control). Randomized in single-session, 3-hr skills training group or wait-list control. 4 components: development of positive identity and social support, safer sex education, eroticizing safer sex, negotiation. | Baseline and 3-month follow-up. 46% reduction in expected number of partners at follow-up for intervention group. Chinese and Filipino men reduced UAI by more than 50%. <u>Comment:</u> The stats for change in number of partners in past 3 mos. are odd and I don't understand Poisson modeling well enough to understand them. Avg. change for experimental group -.28 (median 0, range -25 to +45) compared with +13.9 for controls (median 0, range -15 to +98). Poisson model shows 46% reduction in expected number of partners at follow-up. |

Effective Interventions for Men Who Have Sex with Men

Group-level Interventions (continued)

D'Emaro, J.E., Quadland, M.C., et al. (1988). The '800 Men' project: a systematic evaluation of AIDS prevention programs demonstrating the efficacy of erotic, sexually explicit safer sex education on gay and bisexual men at risk of AIDS. *IV International Conference on AIDS* (Abstract 8086) Stockholm, Sweden.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| | 619 participants placed into four programs; 1) safer sex written guidelines; 2) lecture/discussion on AIDS information and safer sex guidelines; 3) verbal and written presentation of eroticized safer sex guidelines; and 4) visual presentation of sexually explicit safer sex guidelines. | Participants in program 4 were most effective in reducing unsafe sex at 2-month follow-up. |

Rotheram-Borus, M.J., Reid, H., et al. (1994) Factors mediating changes in sexual HIV risk behaviors among gay and bisexual male adolescents. *American Journal of Public Health* 84:1938-1946.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| Youth/ Street | 138 participated, age range 14-19. 20-session intervention, 90-120 min/session, offered 2-3 times/week after school. Non-peer led with HIV information, coping, skills training, access to health care, social support, private counseling. 20 session intervention, 90-120 min. each, 10 youth per session. No control group. | Follow-up at 3, 6, & 12 months. Protected AI increased from 60% to 78%. Less risk in past, no commercial sex work, and attending more sessions = more risk reduction. Of racial/ethnic groups African-Am reduced risk most (PAI increased from 36% to 84%). <u>Comment:</u> Complicated multivariate analysis, hard to summarize adequately. |

Effective Interventions for Men Who Have Sex with Men

Group-level Interventions (continued)

| Huerts, M. (2001) <i>Hermanos de Luna y Sol: The Building of an Empowered Community. First Annual CAPS Conference, April 2001.</i> | | |
|--|---|---|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| Latino | Intervention for Latino MSM engaging in UAI, mostly self-identified as gay or bisexual and born abroad. Program includes: 1) six-week discussion workshop with HIV prevention curriculum promoting social connectedness, critical thinking and exploration of factors and barriers that compete with safer sex intentions; 2) weekly discussion/support group for graduates of main program; and 3) individual, client –centered risk-reduction counseling to address individual prevention needs. Ethnically, culturally, and linguistically appropriate. Sessions addressed main issues Latino gay men face, exploring strategies for survival, sharing the role sex has in their lives, emotional challenges, exploring AIDS impact on their lives, and exploring diversity. | Preliminary evaluation data show increased condom use for anal sex, self-esteem, and social networks. |

Peterson, J.L., Coates, T.L., et al. (1992). High-risk sexual behavior and condom use among gay and bisexual African-American men. *American Journal of Public Health* 82: 1490-4.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------|---|---|
| POC (African-Am) | 318 African-American MSM in SF from 1989-1991. Randomly assigned to 1- session, 3-session, or wait-list control group. 3-session non-peer mediated counseling consisted of 3-hour group sessions one week apart with 10 participants in each group. Components: self-identity and development of social support, AIDS risk education, assertiveness training, and behavioral commitment. Attendance problems: 53% of men in 3-session attended at least 1 session (12%, 16%, 25% respectively). 45% of men in 1-session group attended. | Participants in 3-session intervention showed significant reduction in UAI at both 12 and 18-month follow-ups. Reduction from baseline was 45% to 20%. Risk behavior in control group remained constant and declined only slightly in 1-session group. <u>Comment:</u> In spite of blocked randomization, control group was much less risky at baseline. No significant differences between control group and 3-session at follow-ups. |

Effective Interventions for Men Who Have Sex with Men

Group-level Interventions (continued)

Rosser, S.B.R., Bockting, W.O., Rugg, D.L., et al. (2002). A Randomized Controlled Intervention Trial of a Sexual Health Approach to Long-Term HIV Risk Reduction for Men Who Have Sex with Men: Effects of the Intervention on Unsafe Sexual Behavior. *AIDS Education and Prevention* 14, Supplement A: 59-71.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| | Sexual Health approach (“an approach to sexuality founded in accurate knowledge, personal awareness and self-acceptance and in which one’s behavior, values, and emotions are congruent and integrated into one’s personality and self-definition”). N=422 Midwestern MSM. Random assignment to either 1) 2-day comprehensive human sexuality seminar designed to contextually address long-term risk factors and cofactors or 2) control group who watched 3 hours of HIV prevention videos. (Only 17% attrition at 12-month follow-up, but ultimately only 40% completed all questions necessary for inclusion in analysis. Prevalence of unsafe sex at baseline only 14.2%) | Risk behaviors in preceding 3 months measured at baseline, 3 months, and 12 months. Measured any UAI outside of long-term seroconcordant relationship. At 12 months, control group reported 29% decrease in use of condoms during anal intercourse; intervention group reported 8% increase in condom use. Both groups appear to be making contextual decisions about risk (engaging in UAI when they have estimated the risk is low). |

Valdiseri, R.O., Lyter, D.W., et al. (1989). AIDS Prevention in homosexual and bisexual men: results of a randomized trial evaluating two risk-reduction interventions. *AIDS* 3:21-6.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| | 584 participants randomly assigned to 2 peer-led interventions: 1) a 1-session, 60-90 minute small group lecture on HIV transmission, clinical manifestations of HIV infection, condom use, and meaning of HIV antibody test results or 2) small group lecture plus 50 minute skills training on safer sex negotiation. | Condom use during insertive AI higher among skills training (36% at baseline, 69% at 6-month follow-up, and 80% at 12 months than among single lecture group (44% at baseline, 43% at 6 months and 55% at 12 months). No difference in condom use during receptive AI at both follow-ups. Assessment of cost effectiveness showed cost savings from program. Results robust to changes in modeling assumptions (Pinkerton SD, Holtgrave DR, and Valdiserri RO (1997). Cost-effectiveness of HIV-prevention skills training for men who have sex with men. <i>AIDS</i> 11: 347-357). |

Effective Interventions for Men Who Have Sex with Men

Group-level Intervention (continued)

Shoptaw, S., Reback, C.J., Peck, J.A., Yang, X., Rotheram-Fuller, E., Larkins, S., Veniegas, R.C., Freese, T.E., Hucks-Ortiz, C. Behavioral treatment approach for methamphetamine dependence and HIV related sexual risk behavior among urban gay and bisexual men. *Drug and Alcohol Dependence* 2005;78: 125-134

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| | <p>The purpose of the project was to evaluate the efficacy of four behavioral drug abuse treatments for reducing Meth use and sexual risk behaviors among gay & bisexual men (GBM). The study used two behavioral therapy models used for cocaine dependence that have sufficient efficacy to warrant consideration for Meth treatment. From 1998 to 2000, 162 Meth using gay & bisexual men were recruited to participate in this study. Once recruitment was completed and eligibility determined, each participant was randomly assigned to one of the four treatment conditions. Each condition lasted 16 weeks and consisted of meetings three times per week for approximately 90 minutes. Conditions were: 1) cognitive behavioral therapy (CBT) – used a group format to provide education on triggers, stages of recovery, and emotions states that can signal relapse; cognitive skills were also taught. 2) contingency management (CM) – this condition used voucher-based reinforcement therapy. 3) CBT + CM – participants who were assigned to this condition received all elements of the CM and CBT interventions during each clinic visit. 4) GBM-specific cognitive behavioral therapy (GCBT) – this condition was developed to equally address drug abuse treatment and reduction in HIV related sexual risk behavior. The condition integrated core concepts from the CBT intervention and added relevant behavioral and cultural aspects of methamphetamine use by gay and bisexual men.</p> | <p>Strengths: Reported measures included a two-week baseline period; follow-up evaluations were conducted at 6 and 12 months post intervention condition. The results were outlined: <u>demographics</u> (similar across all conditions); <u>adherence to treatment conditions</u> (CBT participants attended 40.8% of the total sessions possible; CM used 32.4% of the total vouchers possible; CBT + CM participants attended 73.8% of the total sessions possible, and GCBT participants attended 55.8% of the sessions possible); <u>retention and methamphetamine use outcomes</u> (all conditions produced significantly more negative urine samples than the standard CBT condition); and <u>sexual risk behavior outcomes</u> (Reports of sexual risk reductions were maintained at the 6 and 12 month follow-up by all conditions. GCBT participants achieved greater initial reductions in unprotected receptive anal intercourse in the first four weeks of treatment). Limitations: The results of drug use and sexual behaviors among men not receiving treatment is unknown and it is unknown whether the intervention would have the same effect with younger GBM, GBM of ethnic minority status, or heterosexually identified MSM.</p> |

Effective Interventions for Men Who Have Sex with Men

Community-level Interventions

Kelly, J.A., St. Lawrence, J.S., et al. (1992). Community AIDS/HIV risk reduction: The effects of endorsements by popular people in three cities. *American Journal of Public Health* 82: 1483-9.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------------------------|--|--|
| <p>“Popular Opinion Leader”</p> | <p>Trained 924 opinion leaders (POLs) in an intervention city. Lagged implementation into 2 other cities. Surveyed bar patrons in all 3 cities at same time points. POLs received 4 sessions, 90 minutes each, covered HIV education and communication strategies. POLs then agreed to have 14 peer conversations about AIDS risk reduction (personal endorsement). Study conducted from 1989-1991.</p> <p>This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064</p> | <p>Significant reductions in the mean % of men who practiced UAI in Biloxi (24% at 3 month follow-up) and Monroe (21%) but the 15% decline observed in Hattiesburg insignificant. Also, significant change in the % of men with multiple sexual partners. At 3-year follow-up, reductions in UAI and increases in condom use continued to occur (St Lawrence JS, Brasfield TL, Diaz YE, et al. (1994) Three-year follow-up of an HIV risk-reduction intervention that used popular peers [letter]. <i>American Journal of Public Health</i> 84: 2027-2028.).</p> |

Kelly, J.A., Winett, R.A., et al. (1993). Social diffusion models can produce population-level HIV risk-behavior reduction: field trial results and mechanisms underlying change. *IX International Conference on AIDS/IV STD World Conference* Berlin, Germany (Abstract POC23-3167).

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| | <p>For a 5-week period, trained opinion leader in four experimental cities engaged in peer conversations about the benefits and appropriateness of risk behavior and change, strategies to implement change, and risk misconception at local gay bars. Four matched cities were selected as control. 701 participants. (See also Kelly JA, Murphy DA, Sikkema KJ, et al. (1997) Community HIV Prevention Research Collaborative: randomized, controlled community-level intervention for sexual risk behavior among homosexual men in US cities. <i>Lancet</i> 350: 1500-1505.)</p> | <p>The community intervention led to decreased proportions of men who engaged in any UAI (from 33% at baseline to 25% at 9 month follow-up), unprotected insertive anal sex (27% to 17%), and unprotected receptive anal sex (22% to 16%) in the experimental relative to control cities (little change observed at the follow-up).</p> |

Effective Interventions for Men Who Have Sex with Men

Community-level Interventions (continued)

AIDS Community Demonstration Projects Research Group (1999). Community-Level HIV Intervention in 5 cities: Final Outcome Data From the CDC AIDS Community Demonstration Projects. *American Journal of Public Health*: 89, 336-345.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| Non-Gay-Identified <i>“Community Promise”</i> | <p><i>Community Promise</i> (Peers Reaching Out and Modeling Intervention Strategies) is included on CDC’s Replicating Effective Programs web page (http://www.cdc.gov/hiv/topics/prev_prog/rep/package/promise.htm).</p> <p>Populations that intervention used with: <i>injection drug users, their female sex partners, sex workers, non-gay identified men who have sex with men, high risk youth and residents in areas with high rates of sexually transmitted disease.</i></p> <p>Persons from the at-risk communities are recruited and trained to be community advocates and to distribute role model stories and risk reduction supplies on the streets of their communities. Role model stories are personal accounts from individuals in the target population explaining how and why they took steps to practice HIV risk-reduction behaviors and the positive effects the choice has had on their lives. The messages in the role model stories are reinforced by interpersonal communication with the community advocates. Each week, community advocates distribute stories and supplies to 10 to 20 of their peers.</p> <p>This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064</p> | Communities where Community PROMISE was conducted showed increased consistent condom use by community members with their main and non-main partners and increased condom carrying among members of the communities. |

Effective Interventions for Men Who Have Sex with Men

Community-level Interventions (continued)

| Kegeles, S.M., Hays, R.B., et al. (1996) The Mpowerment Project: A community-level HIV prevention intervention for young gay and bisexual men. <i>American Journal of Public Health</i> 86: 1129-36. | | |
|--|--|--|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| Young Gay men (18-29) <i>“Mpowerment Project”</i> | Peer-led program with three components: outreach (formal and informal), small group and publicity campaign. Program run by Core Group and community advisory board of “elders”. Groups were one-time 3-hour small group meetings (8-10 people), which focused on safer sex and HIV information, communication and interpersonal skills. Independently from the prevention program, a cohort of young gay men (n=300) surveyed in intervention and comparison community. Wait-list control design. This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064 | Reduction in all UAI from 41% to 30%, from 20.2% to 11.2% with non-primary partners and from 58.9% to 44.7% with boyfriends. No significant changes in comparison community. Reductions sustained 1 year later with non-primary partners, mixed results for sex with boyfriends (Kegeles SM, Hays RB, Pollack LM, Coates TJ (1999) Mobilizing young gay and bisexual men for HIV prevention: a two-community study. <i>AIDS</i> 13: 1753-1762.). 87% of intervention community respondents had heard of project and 77% had experienced at least two project activities. High risk-taking men less likely to attend small groups, volunteer for outreach, or be Core Group member. Cost-effectiveness data: Kahn JG, Kegeles SM, Hays R, Beltzer N (2001). Cost-effectiveness of the Mpowerment Project, a community-level intervention for young gay men. <i>JAIDS</i> 27(5): 482-91. |

Effective Interventions for Men Who Have Sex with Men

Community-level Intervention (continued)

Godin, G., Naccache, H., Cote, F., Leclerc, R., Frechette, M., Alary, M. Promotion of safer sex; evaluation of a community-level intervention program in gay bars, saunas and sex shops. Health Education Research. July 2007

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| | <p>The main objective of this intervention was to promote the use of condoms during anal intercourse. Theory of Implementation Intentions, Social Cognitive Theory, and the Theory of Reasoned Action were the theoretical frameworks. To achieve the objective, four performance objectives (plan, negotiate, refuse, and maintain) were formulated. Self-efficacy, subjective norm, anticipated regret, and intention were the psychosocial factors retained with the performance objectives. The primary population was MSM in Quebec City who socialize in gay bars, saunas, and sex shops. The program was developed using the guidelines of “intervention mapping”. The intervention consisted of 24 prevention activities that were delivered in three series offered over a period of 15 months in three bars, three saunas, and one sex shop. There were three months between each intervention series and no intervention period. A total of 1921 MSM, in the aforementioned venues, were recruited at different assessment times. Activity contents were developed in order to address the performance objectives. The types of activities consisted of: group activities (quiz shows, writing contest, and a rally led by popular community figure), individual counseling (offered onsite by community worker), free condom packets which contained prevention messages, and posters with prevention messages at each venue.</p> | <p>Strengths: Data was collected two weeks prior to each intervention series and one week after the end of the prevention activities. The analysis was performed for 1757 MSM who had been recruited to answer the questionnaire. The researchers were able to say the intervention had a significant impact on reducing risky unprotected anal intercourse. They also felt the outcome provides support that theory and evidenced based health promotion programs are most likely to be effective. The findings demonstrated that if prevention activities are not maintained on a regular basis, unsafe practices are likely to resume; it is important to maintain continuous prevention activities in order to assist MSM maintain safer sexual practices. This supports recommendations by researchers who had conducted other studies.</p> <p>Limitations: There were a few cautions or limitations mentioned concerning the outcome: 1) the intervention was conducted in a middle-sized city of a French speaking population. Caution should be taken in generalizing the findings to other settings; 2) recruitment was based on a non-probabilistic and convenience sample; and 3) there was no control over the number of times participants were exposed to the prevention activities.</p> |

Effective Interventions for Men Who Have Sex with Men

Street and Community Outreach Interventions

Hospers, H.J., Debets, W, Ross, M.W., and Kok, G. (1999). Evaluation of an HIV prevention intervention for men who have sex with men at cruising areas in the Netherlands. *Aids and Behavior* 3: 359-366.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| | Program in the Netherlands that trains volunteers to go into cruising areas (CA) to talk with CA visitors about importance of safer sex. Give risk information, explain why safer sex important, brochure, condom and lube. No conversations with visitors that didn't want to talk. | Post-intervention survey of people who said had at least one conversation with a volunteer (conversation group, n=172)) and those who hadn't been approached but would have had a conversation (no conversation control group, n=190). Conversation group had significantly higher condom use for insertive and receptive AI. MSM increased condom use more than MSMW. Conversations had no effect on intention to use condoms for AI. |

HIV Antibody Counseling & Testing [CDC Revised Guidance for HIV Counseling, Testing, and Referral. MMWR 2001, 50 \(RR-19\); 1-58](#)

Higgins, D.L., Galavotti, C., et al. (1991) Evidence for the Effects of HIV Antibody Counseling and Testing on Risk Behaviors. *Journal of American Medical Association* 266(17): 2419-2429.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| | Overall review of 50 C&T studies. 17 of these look at effect of C&T on behavior change (condom use, reduction of sexual partners) of MSM. | For MSM: All studies reported risk reduction among tested and untested men, a few reported greater decreases in seropositive than seronegative. States that it is hard to draw firm conclusions about impact of C&T on MSM risk behavior. |

Effective Interventions for Men Who Have Sex with Men

Counseling and Testing

Huebner, DM, PhD, Binson, D, PhD, Dilworth, SE, MS, Neilands, TB, PhD, and Grinstead, O, PhD. Bathhouse-Based Voluntary Counseling and Testing Is feasible and Shows Preliminary Evidence of Effectiveness. *Journal of Acquired Immune Deficiency Syndrome*. Volume 43, Number 2 October 2006. Page 249 - 246

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------------------|---|---|
| MSM Who frequent a bathhouse | <p>The primary goals of the intervention were to document the feasibility of recruiting high risk MSM from bathhouses into onsite voluntary counseling and testing (VCT) and to provide preliminary evidence for the effectiveness of VCT in that setting. Due to financial resource limitations, it was not feasibly to conduct a randomized control trial; they opted for a simpler design that was agreeable with everyone involved. The intervention was a community collaborative effort. Outreach workers actively recruited patrons as they passed through the area of the club where they were set up. Recruitment was also accomplished by placing flyers in the club and periodic announcements were made over the public address system. During the interventions' 13 month evaluation period, 492 men were tested in the bathhouse. The testing program followed California State outreach C & T protocol. Those interested in testing received the pretest counseling session from a health department counselor trained in harm reduction. A client centered approach was used in addressing issues thought to be of particular relevance to the bathhouse population. Attention was also paid to encouraging the men seek out social support. After the counseling, the client was escorted to where oral secretions were collected. Test results/posttest counseling occurred a week or more later. To address a concern that the men might not want to return to the bathhouse for results, several venues were offered.</p> | <p>Strengths: Of the men tested, 133 men were approached to complete an initial and three month follow-up survey that had been approved by the Committee on Human Research at the University of California, San Francisco. The follow up interviews were scheduled via telephone or email correspondence and conducted at three possible sites. Data collected, indicated that men who had a recent history of HIV risk related behavior would test if VCT was offered in a gay bathhouse setting; additionally most men would return for their test results (70.5% returned). The researcher also found initial evidence of the effectiveness of VCT offered. Three months after testing, the MSM were less likely to engage in unprotected anal intercourse or report having sex under the influence of alcohol or drugs. There was also more communication with sexual partners about HIV status. Limitations: Due to design, could not rule out the possibility that other factors contributed to the positive effect of VCT, only collected information on sexual partners during a three-month time period, and only interviewed a small convenience sample of men who requested testing.</p> |

Effective Interventions for Men Who Have Sex with Men

Counseling and Testing (continued)

Spielberg, F., MD, MPH, Branson, B.M., MD, Goldbaum, G.M., MD, MPH, Lockhart, D., BS, Kurth, A., CNM, PhD, Rossini, A., ScD, and Woods, R.W., MD. Choosing HIV Counseling and Testing Strategies for Outreach Settings A Randomized Trial. *Journal of Acquired Immune Deficiency Syndrome*, March 2005. Volume 38 Number 3, pages 348-355.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| IDU and MSM | <p>The study's objective was to determine the effect on how many clients received test results from outreach conducted in specific areas. The tests were conducted at a needle exchange program and two bathhouses in Seattle. The four testing strategies used in the three locations were: 1) traditional serum testing with standard face to face counseling before testing; 2) rapid serum testing with same-day test results and standard single-session counseling; 3) oral fluid testing with standard counseling; and 4) traditional serum testing with the choice of pretest written material or standard counseling. In keeping with the practice of Public Health Seattle & King County, all participants were also offered the choice of receiving their results by telephone or in person. The testing strategies used were based on results of focus groups, interviews, and preference surveys which gathered input from the desired populations. During the 122 days at the syringe exchange and 99 days at the bathhouses, clients entering the location were offered free HIV testing. Once it was determined the client met eligibility and accepted the offer to test, the interviewer gave the client the estimate time it would take to get results. The testing strategy used at each site was randomly selected for the day.</p> | <p>Strengths: Effectiveness was defined as the proportion of eligible clients that received test results. Oral fluid testing was the most effective strategy for the <i>needle exchange</i>. Of the approached participants, 200 met eligibility and accepted testing; of those completing the test, 75 received their results. Rapid testing was the most effective strategy at the <i>bathhouses</i>. Of the approached participants, 135 met eligibility and accepted testing; of those completing the test, 102 received results. The data for all strategies were: <u>needle exchange</u> - 532 eligible participants accepted testing. Of those completing the test (324), 216 received their results. <u>Bathhouses</u> -561 eligible participants accepted testing of those completing the test (437), 348 received results. The researchers felt the study suggested including active recruiting, using rapid & oral fluid test, offering pretest counseling options, and providing the option of receiving test results telephonically, could help clients using needle exchanges and bathhouses learn their HIV status. Limitations: Since 90% of the individuals had prior testing, the data may not be generalized to populations with less testing experience; differences between testing at the bathhouses may have reached significance if the study had been longer; and more simple rapid test and additional staff may have decreased waiting time and increased testing rates for some strategies.</p> |

Effective Interventions for Men Who Have Sex with Men

Counseling (in conjunction w/Counseling and Testing)

Dilley, JW, MD, Woods, WJ, PhD, Loeb, L, MPH, et. al, Brief Cognitive Counseling With HIV Testing To Reduce Sexual Risk Among Men Who Have Sex With Men. Results From a Randomized Controlled Trial Using Paraprofessional Counselors. *Journal of Acquired Immune Deficiency Syndromes*. Volume 44, Number 5, April 15 2007; 596-577

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------------|---|---|
| Multiple Testing MSM | <p>The objective of this intervention was to test the efficacy and acceptability of a single session intervention delivered by a paraprofessional during voluntary counseling and testing. Cognitive theory is the basis for the intervention along with work by Gold that targeted “self-justification” (thoughts attitudes, or beliefs). Between October 2002 and September 2005, 305 MSM participated in the study. The men were randomly assigned to the personalized cognitive counseling (PCC) or the usual care (UC) conditions. All participants (PCC and UC) received the standard pre and posttest counseling associated with HIV testing according the CDC guidelines. Those assigned to PCC group received the additional experimental intervention for an average of 50 minutes. The single-session counseling was conducted by a bachelor level-trained and certified HIV test counselor with a minimum of 1 year experience. Study conditions consisted of three visits; visit 1 - baseline assessment, HIV test and other STD test; visit 2 – six month later included an assessment and optional HIV test; and visit 3 – 12 months after baseline included assessment and exit HIV and STD test.</p> | <p>Strength - The study demonstrated that an experienced paraprofessional HIV test counselor could be taught and successfully execute the PCC intervention. Those assigned to the PCC had a stronger immediate effect at reducing UAI and the effect was persistent. The sharp decrease in risk behavior from baseline to 6 months was sustained at 12 months after the intervention. The same long-term effect was demonstrated when the intervention was conducted by a licensed mental health paraprofessional. Limitation – PCC participants received more counselor time; researchers could not tell if the time difference in attention may have played a role. The study was limited to MSM only. Persons reporting nonprescription injection drug use during the prior 12 months were excluded.</p> |

Effective Interventions for Men Who Have Sex with Men

Health Communication/Public Information

Kanouse, D.E., Bluthenthal, R.N., Bogart, L., Iguchi, M.Y., Perry, S., Shoptaw, S. Recruiting Drug-Using Men Who Have Sex With men in to Behavioral Interventions: A Two-Stage Approach. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, Volume 82, Number 1, (supplement 1), March 2005, pp i109-i119

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------|--|---|
| Drug Using MSM | <p>This article reports on strategies used to recruit drug using MSM into behavioral interventions. This pilot study was conducted to explore promising approaches to address two issues concerning public health needs. Those being: 1) effective interventions that are more acceptable to drug using MSM and 2) effective marketing strategies for getting large numbers of at risk MSM to enter programs. Participants were recruited from Los Angeles County using advertising and community outreach. One advertisement described and offered counseling and the other was an invitation to participate in a discussion group. The men also had to meet certain criteria (had sex with a man and having used Meth, ecstasy, cocaine, ketamine, Rohypnol, lysergic acid diethylamide, or gamma-hydroxybutyrate in the past 30 days). Over a 6-month period, 158 men were screened for the intervention (83 MSM enrolled and completed the baseline assessment). Eligible men were randomly assigned to motivational interviewing (MI) alone or a combination of MI and contingency management. MI participants received two to four counseling sessions; those assigned to the MI plus contingency management received eight counseling sessions.</p> | <p>Strengths: At baseline, 4, 6, 12, and 26 weeks, questionnaires measuring sociodemographic characteristics, current sexual behavior, and substance use were completed. Recruitment for the discussion group yielded nearly a four-fold higher rate than direct marketing, at about a quarter of the cost per participant. The two-stage recruitment procedure was successful in: excellent yield, successful recruitment of MSM not seeking treatment, substantially increased the number of men enrolled in response to each advertisement. The article clearly started the discussion groups facilitated a venue that MSM would be open to discussing counseling interventions; they referenced Shoptaw 2005 (page 4 this document) to validate the effectiveness of combining interviewing with contingency management. The researchers felt that it is important to recognize the discussion groups created openness to counseling that could constitute a preliminary intervention that could lead to changes in risky behavior. Limitations: The researchers stated that the small sample size did not permit examining possible differences in the type of MSM recruited through marketing venues, assess the staged recruitment approach yield differences in demographics, and due to additional incentives, further research is needed to examine the cost effectiveness of direct recruitment.</p> |

Effective Interventions for Men Who Have Sex with Men

Drug Treatment

Shoptaw, S., Reback, C.J., Frosch, D.L., Rawson, R.A. (1998). Stimulant Abuse Treatment as HIV Prevention. *Journal of Addictive Diseases* 17(4): 19-32.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------|---|---|
| Non-IDU drug users | Individuals who use illicit stimulants, primarily cocaine and methamphetamine, engage in substantial amounts of HIV-related sexual risk behaviors when under the influence. This paper presents the idea that reductions in stimulant use consequent to drug treatment makes stimulant drug treatment an important HIV prevention tool for this high-risk population. | Presents data to describe HIV-related sexual risks reported by out-of-treatment methamphetamine users and by cocaine and methamphetamine abusers at treatment entry and six months post treatment entry. Overall, findings demonstrate that following initiation of a treatment episode, stimulant abusers demonstrate significant reductions in HIV-related sexual behaviors, primarily by reducing the number of sexual partners. |

Stall, R., Paul, J.P., Barrett, D.C., Crosby, G.M., Bein, E. (1999). An Outcome Evaluation to Measure Changes in Sexual Risk-Taking among Gay Men Undergoing Substance Use Disorder Treatment. *Journal of Studies on Alcohol* 60: 837-845.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------|---|---|
| Non-IDU drug users | Men recruited as they entered substance use treatment. Five waves of data collection, each wave measuring the previous 90 days. 82 men assigned to the experimental condition (treatment plus a safe sex intervention); 65 were assigned to the regular substance use treatment. CONCLUSIONS: (1) substantial HIV risk reductions can occur after initiation of treatment for substance use; (2) risk reductions begin soon after treatment begins; (3) lapses to unsafe sex are common; (4) continued UAI most likely among those men who are riskier at intake, who continue to be more sexually active and who combine substance use and sexual behavior; (5) AIDS prevention activities conducted at treatment agencies cannot reach all high-risk substance-using gay men. | Although levels of risk within each wave were never significantly different between the two treatment groups, reductions in unprotected anal intercourse (UAI) with a monogamous partner for both groups from the baseline Wave-1 levels were uniformly significant. Such high-risk sex in the year-long follow-up period was correlated with UAI reported at intake, enjoyment of UAI, relative youth, heavier concurrent use of alcohol or amphetamines and greater numbers of sexual partners. |

[Partner Notification](#) ([Procedural Guidance](#))

No reviews on Mass & Other Media, Social Marketing, Hotlines, and Clearinghouse.

Effective Interventions for Injection Drug Users

Methadone Treatment

Many articles support the effectiveness of methadone treatment as an HIV prevention intervention for heroin users. The studies show that methadone treatment reduces needle use, sharing and number of sex partners. The studies also show that treatment increases use of condoms. Rather than summarizing each article, this document provides several citations to help users begin to access the literature on this topic.

Gibson, D.R., Flynn, N.M., and McCarthy, J.J. (1999). Effectiveness of methadone treatment in reducing HIV risk behavior and HIV seroconversion among injecting drug users. *AIDS* 13: 1807-1818.

Hubbard, R.L., Marsden, M.E., Rachel, J.V., et al. (1989). *Drug Abuse Treatment: A National Study of Effectiveness* (Chapel Hill, NC: University of North Carolina Press, 1989), cited in *The Effectiveness of AIDS Prevention Efforts* (Washington DC: Office of Technology Assessment).

Langendam, M.W., van Brussel, G.H.A., Coutinho, R.A., et al. (1999). Methadone maintenance treatment modalities in relation to incidence of HIV: results of the Amsterdam cohort study. *AIDS* 13: 1711-1716.

Rhoades, H.M., Creson, D., Elk, R., et al. (1998). Retention, HIV risk, and illicit drug use during treatment: methadone dose and visit frequency. *American Journal of Public Health* 88: 34-39.

Effective Interventions for Injection Drug Users

Syringe Exchange

Many articles support the effectiveness of syringe exchange as an HIV prevention intervention for injection drug users. The studies show that syringe exchange programs reduce sharing and increase referrals to drug treatment programs, without increasing injection drug use. Rather than summarizing each article, this document provides several citations to help users begin to access the literature on this topic.

Ashery, R.S., Davis, H., Davis, W.H., et al. (1993). Entry into treatment of IDUs based on the association of outreach workers with treatment programs. Handbook on Risk of AIDS, Brown, B.S. and Beschner, G.M. (eds.) (Westport, CT: Greenwood Press), cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

Bluthenthal, R.N., Kral, A.H., Gee, L., et al. (2000). The effect of syringe exchange use on high-risk injection drug users: a cohort study. *AIDS* 14: 605-611.

Hagan, H., Des Jarlais, D.C., Friedman, S.R., et al. (1995). Reduced risk of Hepatitis B and Hepatitis C among injecting drug users participating in the Tacoma Syringe Exchange Program. *American Journal of Public Health* 85: 1531-1537.

O'Brien, M., Murray, J.R., Rahemian, A., et al. (1994). Three topics from the Chicago Needle Exchange Cohort Study: seroconversion; the behavior of HIV-positive NX users; and the need for additional prevention around non-needle injection risks. *Annual North American Syringe Exchange Conference*, Santa Cruz, CA, cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

O'Keefe, E., Kaplan, E. and Khoshnood, K., (1991). *Preliminary Report: City of New Haven Needle Exchange Program* (New Haven, CT: New Haven Health Department), cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

Oliver, K., Maynard, H., Friedman, S.R., et al. (1994). Behavioral and community impact of the Portland Syringe Exchange Program. *Proceedings of the Workshop on Needle Exchange and Bleach Distribution Programs* (Washington, DC: National Academy Press), cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

Effective Interventions for Injection Drug Users

Individual-level Interventions

Stephens, R.C., Feucht, T.E., et al. (1993) Effects of an Intervention Program on AIDS-Related Drug and Needle Behavior Among Intravenous Drug Users. *American Journal of Public Health* 81(5): 568-571.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------------------|---|---|
| POC (African-American Male) | 322 (mostly street addicts not in tx) participated in 1:1 counseling delivered by a professionally trained health educator and lasted 45-60 minutes. Session provided basic information on HIV transmission using a segment of a film; discussed sexual risk reduction and condom use; covered ways to reduce risk due to injection drug use and ended with information on HIV testing. | Pre-post results compared baseline to 3-month follow-up interview. Percent reporting injecting decreased from 92 to 71, sharing decreased from 67 to 24. Didn't ask questions about sexual risks. |

Effective Interventions for Injection Drug Users

Individual-level Interventions (continued)

Robles RR, Reyes JC, Colon HM, et al. Effects of combined counseling and case management to reduce HIV risk behaviors among Hispanic drug injectors in Puerto Rico: A randomized controlled study. *Journal of Substance Abuse Treatment*. 2004; 27:145-152.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|--|
| <p>Hispanic Drug Users</p> <p><i>Added to matrix in 2007</i></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (MIP)</p> | <p>The primary purpose of this intervention was to test the effectiveness of combining counseling and a case management behavioral intervention that utilized motivational interviewing strategies. There were several hypotheses the researchers had concerning injection drug users. From November 1998 to January 2001, 557 IDUs between the ages of 18 to 65, not in treatment, were recruited in the municipality of Vega Baja, Puerto Rico. There were two arms to this study; prior to randomly assigning participants to the experimental arm, all clients participated in the two session control arm of the intervention. Those who were randomly assigned to the control arm were then told that they were finished and would be contacted again in 6 weeks. Those who were assigned to the experimental arm participated in six-sessions and offered active assistance from care manager. Motivational interviewing was used in counseling sessions addressed goal setting, decision-making, reinforcement, self-monitoring, and attitude change.</p> | <p>The intervention was directly associated with discontinuing drug injection. Six months after the baseline interview and the intervention, 440 of the 557 participants were contacted for the follow-up interview. Among IDUs not in treatment, the study showed that a six-session counseling intervention which used the motivational interviewing strategy, in conjunction with case management, was effective.</p> <p>Participants in the experimental arm were nearly two times more likely to enter drug treatment, and half as likely to continue drug injection. Among those who continued to inject, those who participated in the experimental arm were less likely to share needles. There did not appear to be a difference in either group when it came to sharing cotton or pooling money to purchase drugs.</p> |

Effective Interventions for Injection Drug Users

Individual-level Interventions (continued)

Sterk, CE, Theall, KP, Elifson, KW. Effectiveness of a Risk reduction Intervention Among African American Women Who use Crack Cocaine. *AIDS Education and Prevention*. 2003;15:15-32

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|---|
| <p>Out-of-treatment Crack and IDU African American Women</p> <p><u>Added to matrix in 2007</u></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Female-& Culturally Specific-Negations)</p> | <p>The primary objective of this intervention was to evaluate the effectiveness of an HIV prevention intervention for African American women who use crack. From June 1998 and January 2001, 265 crack cocaine using women were enrolled. The intervention was conducted in a “block” design. This simply means that only one intervention condition was conducted at a given time. Women recruited during the time the intervention was being conducted, received the intervention. The three conditions were: a four-session enhanced motivation intervention, a four session enhanced negotiation intervention, or a two-session NIDA (National Institute on Drug Abuse) standard intervention for drug users. The enhanced interventions were based on: social cognitive theory, the theory of planned behavior, the Transtheoretical model of change, and theory of gender and power.</p> | <p>Significant time by intervention interaction terms were identified for: number of days crack was used; number of paying vaginal and oral sex partners; number of vaginal, oral, or anal sex was had with paying partners; frequency of condom use for vaginal steady partners; and use of crack before, during, and after sex. Women in the motivation conditioned fared better with respect to reduction in using crack in riskier settings; women in the standard and negotiation conditions reported greater reduction in the number of days in which crack was used, the number of times used, and were more likely to communicate with casual partners about drug use, STD history, HIV status, or past sex partners. Women in the standard and motivation conditions reported significant reduction in the use of crack before, during and after sex and sex with an IDU. Differences between the enhanced and standard interventions indicate that including additional components to female interventions may be more effective with respect to behaviors that place these women at greatest risk of infection with HIV.</p> |

Effective Interventions for Injection Drug Users

Individual and Group-level Interventions

Wechsberg, WM, Lam, WK, Zuel, WA, Bobashev, G. Efficacy of a Women-focused Intervention to reduce HIV Risk and Increase Self-sufficiency Among African American Crack Users. *American Journal of Public Health*. 2004;94:1165-1173

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|--|
| <p>Out of treatment Crack Using African American Women</p> <p><u>Added to matrix in 2007</u></p> <p>Listed in the 2007 Updated Compendium – Best Evidence Women’s Co-Op)</p> | <p>The purpose of the study was to compare 3 and 6 month outcomes of: a woman-focused intervention for crack users, a revised NIDA (National Institute on Drug Abuse) standard intervention (standard-R), and a control group (delayed treatment). Recruitment started in January 1999 and ended in August 2001. After part two of the intake, women were randomly assigned to one of the three study conditions. The women-focused and standard-R interventions had 4 modules that included two individual sessions (30-40 minutes each) and two group sessions (60-90 minutes each). Both of the interventions were similar in educational content, but the standard-R intervention did not discuss the gender or culture-specific empowerment approach which was in the women-enhanced intervention. The participants assigned to the control group did not receive any intervention for the first 6 month of enrollment. At the six month follow-up, those participants were invited to participate in the standard-R intervention.</p> | <p>Results are consistent with other research findings that out-of-drug-treatment African American women who use crack and are at high risk for acquiring HIV who receive either standard or tailored education and skill-building interventions made significant reductions in crack use and sex behaviors. All groups significantly reduced crack use and high-risk sex at each follow-up, but only the women-focused intervention participants consistently improved employment and housing status. Additionally at six months, the women-focused intervention participants were least likely to engage in unprotected sex. However, the revised standard intervention participants reported the greatest reduction in crack use.</p> |

Effective Interventions for Injection Drug Users

Individual and Group-level Interventions (continued)

Hershberger, S. L., Wood, M. M., Fisher, D. G. (2003). A cognitive-behavioral intervention to reduce HIV risk behaviors in crack and injection drug users. *AIDS and Behavior*, 7, 229-243.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| <p>Active drug users (not in treatment)</p> <p><i>Added to matrix in 2007</i></p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (Safety Counts)</p> | <p>The purposes of this study was to evaluate the efficacy of a behavioral intervention to reduce HIV risk among street-based crack and injection drug users (not in treatment) and differences in intervention efficacy between injection drug users, non-injection crack users, and others who engage in both forms of drug use. Between January 1992 and December 1996, 1,362 eligible out of treatment IDUs and crack users in Long Beach California were recruited to participate and randomly assigned to one of the two conditions. The standard conditions consisted of two 20 - 30 minute sessions that incorporated drug-focused prevention education as mandated by NIDA to review HIV/AIDS information and provide optional testing. The enhanced conditions consisted of two group workshops (employed stage-of-change framework to assist clients develop personal HIV risk reduction plan), one individual counseling (refine risk reduction plan), a minimum of two social events focused on HIV risk reduction (peer support for risk reduction, with lunch and planned risk reduction activities), a minimum of two field-based outreach follow-up contacts (reinforce progress towards risk reduction and encouragement of personal risk reduction goals), and two “standard” pre- and posttest counseling sessions); activities were spread over four months.</p> <p>This intervention was outlined in CDC’s Procedural Guidance (Safety Counts) for selected strategies and interventions for CBOs under program announcement 04064. This intervention is also available from Sociometrics (Safety point)</p> | <p>Intervention effects were few. For all three drug user groups combined, the percentage of participants having sex within the past 30 days was significantly less in the enhanced intervention and the percentage who had injected within the past 30 days was significantly less in the enhanced intervention. For injectors, participants in the enhanced intervention used their own works more frequently. For crack smokers that participated in the enhanced intervention, significant effects were found for people who smoked crack in the past 30 days, people who had sex in the last 30 days, and the percentage of people who always used barrier protection. The most noticeable result of the study was the almost complete absence of differences between the enhanced and standard interventions. The researchers provided a few reasons why there were few significant differences. Some were: failure of the enhanced intervention to significantly reduce risk behavior may lie with the already strong NIDA standard intervention, participant’s knowledge of their HIV status, and significant effects are more likely to occur among smoking injectors than the other groups.</p> |

Effective Interventions for Injection Drug Users

Individual-level Intervention

Stein, M.D., Charuvastra, A., Maksad, J., & Anderson, B.J. (2002). A randomized trial of a brief alcohol intervention for needle exchangers (BRAINE). *Addiction*, 97, 691-700

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|--|
| <p>Needle Exchange Participants</p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (BRief Alcohol Intervention for Needle Exchangers)</p> | <p>The purpose of the study was to test if using a brief motivational interviewing (MI) intervention, would reduce alcohol use in needle exchangers. Between February 1998 and October 1999, the study was advertised at three needle exchange program (NEP) sites in Providence, RI; NEP volunteers offered all clients a referral card. Interested clients were screened via telephone; of the 434 individuals screened, 187 of those eligible were enrolled. During the initial visit, all clients had a blood alcohol test and received a 60–70 minute face face-to-face interview. Following the interview, participants were randomly assigned to the receive MI intervention or not. All participants returned for a 1 & six month 60-70 minute assessment. The MI intervention consisted of the 60 minute initial session which had three goals: 1) assess the degree the participation in hazardous drinking; 2) identify the relationship between alcohol consumption and alcohol related negative consequences (including HIV risk behavior); and 3) identify goals of behavior change. One month after the one month assessment, the MI participants received a booster MI session; the goals of the 30-45 minute session were: 1) review the change plan; 2) talk about negative consequences from drinking; and 3) assist participant in assessing their own alcohol related health risks.</p> | <p>Strengths: Based on the outcome measures, the MI intervention was successful in reaching the stated purpose. Participant retention at 6 months was 96.8%. The average number of drinking days reported at the baseline interview was 12.0, at the 6 month interview the reported average was 8.3. Reducing the number of drinking days was reported by all participants (MI intervention and control group). However, the MI intervention participants were two times more likely to report a reduction of 7 days or more. There was no evidence that treatment significantly effected the reduction in the number of drinking days for participants whose reported frequency was below the median at the baseline interview. The article reported that there was marginal, yet significant evidence that treatment reduced the overall frequency of heroin use by the MI intervention participants. Limitations: A couple of the limitations were mentioned: they relied on self reporting (participants may have underestimated the frequency of alcohol use) and the final assessment occurred at 6 months (longer lasting effects could not be explored). The article stated a brief intervention that connects alcohol and HIV risk behaviors could be sufficient to assist the drinker make a decision to reduce alcohol consumption.</p> |

Effective Interventions for Injection Drug Users

Individual-level Intervention (continued)

Stein, M.D., Anderson, B., Charuvastra, J.M., Maksad, J., & Friedmann, P.D. (2002). A brief intervention for hazardous drinkers in a needle exchange program. *Journal of Substance Abuse Treatment*, 22, 23-31.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|--|
| <p>Active users who drink hazardously, but use a syringe exchange</p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (Brief Alcohol Intervention for Needle Exchangers)</p> | <p>The purpose of this study was to test the effect of a brief intervention on the frequency of injection related HIV risk behavior (IRRB); the foundation for the intervention was motivational interviewing (MI). Between February 1998 and October 1999, IDUs using the syringe exchange, in Providence, R.I., were recruited to participate. Because of the anonymous nature of the exchange, posters and volunteers who offered all exchangers referrals cards were used as recruitment tools; interested participants would call the number on the card to be screened. Of those screened and found to be eligible, 187 were enrolled. During the initial visit, each person underwent blood alcohol testing and received a 60-75 minute interview with study staff. A randomization schedule was used to assign participants to the treatment conditions. The MI consisted of one meeting at baseline and again one month later. The primary goals were to bring about change concerning alcohol use and HIV risk taking behavior. There were four aspects of the MI and the role of the counselor was to provide an atmosphere that enhanced the client's motivation to change. One month after enrollment, all participants returned for another 60-75 minute face-to-face interview. The information discussed was similar to what was discussed at the baseline interview. Those assigned to the MI condition, received a second session after the one month assessment. At six months, all participants returned for the final assessment.</p> | <p>Strengths: IRRB is defined as having used needles, cotton, or a cooker after it had been used. There was not an exception made it had been cleaned with bleach prior to being used. When compared to the information gathered at baseline, the frequency of IRRB decreased during the 1 month and the 6 month follow-ups (self reporting). The reductions were substantially larger at the 6 month follow-up. The researches stated they felt that since there was not a significant change after one month, both MI sessions were necessary to have a significant treatment effect. The researches also felt that the intervention provided direct evidence that IDUs respond to brief counseling and reduce their HIV risk. Limitations: A few of the limitation noted by the researchers were: the trial did not address biological endpoints; the study was limited to syringe exchange clients who drank hazardously and may not be used as a generalization of other IDUs; and they relied on self reported drug risk days.</p> |

Effective Interventions for Injection Drug Users

Comprehensive Risk Counseling and Services (formerly Prevention Case Management)

The CDC has endorsed Comprehensive Risk Counseling and Services (CRCS) (formerly Prevention Case Management (PCM)) as an effective intervention to reach HIV- positive and/or very high-risk HIV-negative persons. CRCS is a client-centered HIV prevention activity with the fundamental goal of promoting the adoption and maintenance of HIV risk reduction behaviors by clients with multiple, complex problems and risk reduction needs. CRCS provides client-centered, multiple-session HIV risk reduction counseling while using the service brokerage of traditional case management to address competing needs that may make HIV prevention a lower priority. This HIV prevention activity addresses the relationship between HIV risk and other issues such as substance use, mental health, adherence issues, social and cultural factors, and physical health problems. While CRCS has yet to be rigorously evaluated, intensive case management interventions for clients with multiple, complex problems have been shown to be effective in other health fields. ([Guidance](#)) ([Literature Review](#)) ([Acronyms](#))

Group-level Interventions

Cottler, L.B., Compton, W.M., et al. (1998) Peer-Delivered Intervention Reduces HIV Risk Behaviors among Out-of-Treatment Drug Abusers. *Public Health Report* 113(1): 31-41

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|-----------------|---|---|
| POC/ African-Am | St. Louis Program (Each OneTeach One). N=725, 61% male, 93% African-American. A peer role model for out-of-tx crack cocaine users and IDU. Role Models conducted outreach to reach persons on the street spending 5 to 15 minutes contact with users, then random assignment to standard (SI) or enhanced intervention (EI). All participants in two sessions of drug and HIV info and C&T, then EI participants randomly selected to attend four 2-hour peer-led intervention groups on drug awareness, stress management, AIDS, risk reduction for sexual behavior. | 3-month follow-up. Over 80% of the sample (both groups) maintained their crack cocaine use at low-level or reduced their use. Enhanced group more likely to reduce risk. Condom use in both groups decreased. Men in EI more likely to reduce crack use than SI men. No difference between women in two groups. |

Effective Interventions for Injection Drug Users

Group-level Interventions (continued)

Latkin CA, Sherman S, Knowlton A. HIV prevention among drug users: outcome of a network-oriented peer outreach intervention. *Health Psychology*. 2003; 22:332-339.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|--|
| <p>African American Drug Users</p> <p><i>Added to matrix in 2007</i></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (SHIELD)</p> | <p>This intervention is based on the social identity theory and peer outreach. The intent was to affect drug and sex behavior risk reduction in low-income African Americans. The strategy was to combine social-cognitive skills training and peer outreach. The intervention included psychosocial training and skills building to teach personal risk reduction and negotiation skills. Participants in the SHIELD (Self-Help in Elimination Life-Threatening Diseases) study were recruited through outreach in Baltimore City. A total of 250 participants met eligibility and participated in the intervention. Participants were randomly assigned to the intervention or the control condition at a 2:1 ratio; the purpose of this ratio was to maximize the outreach component of the intervention. The experimental condition was a 10 session (90 minutes each) highly scripted interactive format. The training incorporated components from “<i>Project Light</i>” which focused on sexual risk reduction and “<i>Stop AIDS for Everybody</i>” (SAFE) which focused on drug risk reduction among networks. Training techniques included modeling, practicing, giving and receiving feedback, and public goal setting. The control condition was designed to be equal in the number of sessions, duration, and interest level. Each session consisted of a 1 hr video, 30 minute group discussion, and focused on addiction and family psychodynamics.</p> | <p>The results indicated that participants in the experimental conditions reported significantly greater sex and drug related behavior risk reduction 6 months after the intervention than did those in the control condition. Experimental conditions participants were: 3 times as likely to report cessation of drug injection, almost 3 times as likely to report reduction in needle sharing, over 7 times more likely to report increased condom use with casual partners and more likely to report talking about HIV with family members, sex partners, and drug users.</p> |

Effective Interventions for Injection Drug Users

Group-level Interventions (continued)

Deren, S, Tortu, S., et al. (1993) An AIDS Risk Reduction Project with Inner-city Women, *Women and AIDS: Psychological Perspectives*. London: Sage.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| POC/ Women (African- Am/ Latino) | Women were randomly assigned to two groups. Group 1: a single group session providing AIDS education and testing/risk reduction referral information. Group 2: three group session, covering the above plus condom use/needle-cleaning and negotiation skills. | Women in both interventions showed significant decrease in average monthly number of unprotected sex acts (37 to 19) and number of partners (31 to 15) in the last 6 months. Increased percent condoms use with main partner (18% to 43%) and with multiple partners (43% to 64%) at 6-month follow-up. |

Des Jarlais, C.C., Casriel, C., et al. (1992) AIDS and the Transition to Illicit Drug Injection – Results of a Randomized Trial Prevention Program. *British Journal of Addiction* 87(3): 493-498.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| Listed in the 2007 Updated Compendium – Promising Evidence (SNIFFER) | Study to see if teaching safer injecting practices would cause injecting to increase among drug sniffers. 104 NYC HIV- heroin users who were using intranasal (sniffing) as their primary route of heroin use and who had injected no more than 60 times in the previous two years. Trained peer-mediator conducted four 60-90 minute group sessions over a two-week period, which included AIDS 101, safer injection, sexual behavior, and drug abuse treatment programs. Controls filled out surveys that were in-depth interviews. | Significant lower level of injection at follow-up (average follow-up period = 9 months). Did not prevent all drug injection. 15% assigned to the intervention injected during the follow-up period, compared with 33% of those assigned to the control group. There however was no evidence that the intervention was effect at improving safer sex. |

Effective Interventions for Injection Drug Users

Group-level Interventions (continued)

El-Bassel, N., Schilling, R.F. (1992) 15- Month Follow-up of Women Methadone Patients Taught Skills to reduce Heterosexual HIV Transmission. *Public Health Reports* 107(5): 500-4.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|--|
| IDU/ POC (African-Am/ Hispanic) | 15-month follow-up of study summarized above (Schilling, R.F., EL-Bassel, N., et al. (1991) Building Skills of Recovering Women Drug Users to Reduce Heterosexual AIDS Transmission. <i>Public Health Reports</i> 106(3): 297-304). | Compared to the information-only group, women in the skills-building group showed an increase in frequency of condom use at 15-month follow-up. The groups did not differ significantly in number of sex partners. |

Magura S, Kang S. et al. (1994) Outcomes of Intensive AIDS Education for Male Adolescent Drug Users in Jail. *Journal of Adolescent Health* 15(6): 457-463

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|--|
| Young POC/ drug users Listed in the 2007 Updated Compendium – Promising Evidence (Intensive AIDS Education) | NYC Department of Corrections Adolescent Reception and Detention Center. 157 youths aged 16-19, most were African-American or Hispanic. 4 1-hour small-group sessions of eight led by male counselor. Sessions focused on health education issues relevant to male adolescent drug users, with an emphasis on HIV/AIDS. Group activities included role-play and rehearsal techniques. | Youth in the intervention were more likely to use condoms during vaginal, oral or anal sex, had fewer high-risk sex partners, and had more favorable attitudes toward condoms than youth not in the intervention. <u>Comment:</u> None of youth admitted to using injection drugs. Curriculum focused on sexual risk reduction. |

Malow, R.E., West, J.A., et al. (1994) Outcome of Psychoeducation of HIV risk reduction. *AIDS Education and Prevention* 6(2): 113-125.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| POC/ Drug use (African American cocaine users) | 152 African American males at in-patient tx program participated in group-level sessions. Non-peer led, held for 2 hours over 3 consecutive days, 6-8 people. Sessions included HIV knowledge/ risk, demonstrated cleaning works; condom use, condom negotiating, and skills-building exercises; review and discussion of HIV testing procedures. | 47.5% of intervention group participants reported having more than one partner at three-month follow-up compared to 76% at the baseline. In the comparison group. The change from 76% at baseline to 59% at the follow was considered to be not statistically significant. Sexual risk taking decreased from 75% at baseline to 32% at follow-up. |

Effective Interventions for Injection Drug Users

Group-level Interventions (continued)

McCusker, J., Stoodard, A.M., et al. (1992) AIDS Education for Drug Abusers: Evaluation of Short-term Effectiveness. *American Journal of Public Health* 82(4): 533-540.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| In drug tx | <p>Massachusetts. 567 clients in a 21-day inpatient drug detoxification program. 67% male, 81% white. Blocked randomization. Group 1: standard AIDS education program typically provided in treatment settings, consisted of two 1-hour group sessions given early or late in tx involving video, lectures, homework, discussion, and demonstrations of condom use and of cleaning drug equipment. Group 2: enhanced intervention, six 1-hour group sessions and a 30 min individual health education consultation that focused on personal susceptibility, situational analysis and skills-building.</p> <p>This intervention is available from Sociometrics (Project Smart)</p> | <p>Authors disappointed in results. Reduction in risky drug use reported by all groups. Only significant result: enhanced group reported significantly greater reduction in injection frequency than did group 1.</p> |

Schilling, R.F., EL-Bassel, N., et al. (1991) Building Skills of Recovering Women Drug Users to Reduce Heterosexual AIDS Transmission. *Public Health Reports* 106(3): 297-304.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| Women/ POC | <p>91 African-American and Hispanic women enrolled for at least 3 months in five clinics in large methadone maintenance program in NYC. Non-peer led skills-building groups held five 2-hour sessions offered to groups of 9-10. Topics included: HIV 101; identification of high-risk sexual practices; discussion of barriers to adopting safer sex practices; discussion of negative associations with condoms; condom use skills; role-played negotiation of condom use; assertiveness; problem solving; and communication skills involving safer sex scenarios. Comparison group received one session of AIDS information routinely provided by the clinic.</p> | <p>The skill-building intervention group showed statistically significant higher use of condoms than those in the control group at follow-up. Participants also more comfortable taking and carrying condoms, talking about safer sex with partners, had more favorable attitudes toward condoms. No drug use differences between groups. <u>Comment:</u> Initial follow-up was 2-week post.</p> |

Effective Interventions for Injection Drug Users

Group-level Intervention (continued)

St. Lawrence, J. S., Crosby, R. A., Brasfield, T. L., & O'Bannon III, R. E. (2002). Reducing STD and HIV risk behavior of substance-dependent adolescents: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 70*, 1010 – 1021.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|---|
| <p>Substance dependent adolescents</p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (Assisting in Rehabilitating Kids)</p> | <p>The objectives were: to assess the impact of a sexual risk-reduction program when integrated with a drug treatment program and determine the additive efficacy of the information-motivation-behavioral skills model of AIDS prevention behavior. <u>Information-motivation-behavioral skills model</u> (<i>the three fundamental components of successful sexual risk-reduction programs</i>) and <u>extended parallel process model</u> (<i>fear arousing messages prompt an appraisal of the threat and an appraisal of the perceived efficacy for the recommended response</i>) were the theoretical basis of the intervention. Between the summers of 1995 & 1998, youth admitted to two Mississippi residential drug treatment facilities were recruited. At the end of the three week detoxification period, the 161 remaining recruited participants were randomly assigned to: 1) information only (I) – standard health education curriculum delivered in a student-centered format; 2) information + behavior (I+B) - the first two sessions were the same as the <u>I</u> only condition. The remaining sessions were based on BART (page 70 this document). BART was expanded to provide problem-solving skills and two additional sessions taught anger management, based on the Positive Adolescent Choices Training program; 3) information+ motivation+ behavior condition (I+M+B) – identical to the I+B condition. The one addition was based on the Cary and Lewis study (1999) that demonstrated motivational strategies could enhance the outcomes from HIV risk-reduction programs. All conditions met for 90 minutes, three times a week for four weeks.</p> | <p>Strengths: All participants increased their pre-intervention scores on the AIDS Knowledge Test. I+B participants sustained their scores the following year, but I+M+B participants' scores decreased by follow-up. Participants in I+B & I+M+B demonstrated immediate changes in risky behavior. Adding motivational risk-sensitization produced incremental benefits by: reducing reported frequency of unprotected sex, increasing the frequency of condom protected sex, increase sexual abstinence, and increased the percentage of sexual intercourse that included condom use. Limitations: The researchers listed five: 1) study was only conducted in two facilities in the southeaster US; 2) generalizability is compromised because 84 adolescents completing the baseline left treatment before completing the stabilization period; 3) repeated testing may have interacted with one or both of the experimental conditions; 4) perceived risk and self-efficacy were addressed only with single item measures; and 5) minority adolescents composed one quarter of the sample.</p> |

Effective Interventions for Injection Drug Users

Group-level Intervention (continued)

Garfein, R.S., Golub, E.T., Greenberg, A.E., Hagan, H., Hanson, D. L., Hudson, S. M., et al. (2007). A peer-education intervention to reduce injection risk behaviors for HIV and hepatitis C virus infection in young injection drug users. *AIDS, 21*, 1923-1932.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| <p>Young HIV-negative and hepatitis C virus (HCV)-negative injection drug users (IDUs)</p> | <p>The purpose of the intervention was to evaluate whether a behavioral intervention could reduce injection and sexual risk behavior associated with HIV and hepatitis C infection. Drug Users Intervention Trial study (DUIIT) was a randomized controlled trial. Between May 2002 and January 2004, IDUs in Baltimore, Chicago, Los Angeles, New York, and Seattle were recruited through street outreach and referrals. After determining eligibility, 431 participants were assigned to the <i>peer education intervention</i> (PEI) and 423 were assigned to the <i>video discussion intervention</i> (VDI). Participants completed a behavioral risk interview at baseline, 3 months, and 6 months. PEIs' theoretical basis was social learning theory and the information- motivation- behavior skills model. PEI was composed of six two-hour sessions presented over three weeks. <u>Session 1</u> – described HIV and HCV transmission; <u>sessions 2 and 3</u> – provided safer injection and sexual practices peer education; <u>session 4</u>- skills building activities and preparation of participants to provide peer education; <u>session 5</u> – teams of participants conducted 90 minute peer education sessions; and <u>session 6</u> – large group debriefing, goal-setting, graduation ceremony. The DVI also consisted of six sessions with the equivalent number of hours. The group watched hour-long films addressing social and health issues followed by discussion using scripted questions. Risk reduction topics were diverted by offering the same education pamphlets given PEI participants.</p> | <p>Strength – The use of a randomized controlled trial design with a does-equivalent control condition that minimized the effect of simply paying attention to participants assigned to the intervention group. The PEI produced a 29% greater reduction across six injection risk behaviors. Additional analysis revealed a greater reduction in the frequency anal sex with a main partner among PEI vs VDI.</p> <p>Limitation – 1) Participants loss due to the necessity to return for results to determine eligibility. 2) PEI training may have caused VID participants to underreport risk behavior. 3) Attrition rate may have biased results. 4) Unknown whether sample is representative of all young IDUs. 5) Intention to treat analysis may be subject to bias if attendance is low or uneven.</p> |

Effective Interventions for Injection Drug Users

Group-level Intervention (continued)

Latka, M. H., Hagan, H., Kapadia, F., Golub, E. T., Bonner, S., Campbell, J. V., et al. (2008). A randomized intervention trial to reduce the lending of used injection equipment among injection drug users infected with hepatitis C. *American Journal of Public Health*, 98, 853-861.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|---|
| <p>HIV-negative injection drug users with hepatitis C virus (HCV) infection</p> | <p>The Study to Reduce Intravenous Exposures (STRIVE) sought to evaluate the efficacy of a peer-mentoring behavioral intervention designed to reduce risky distributive injection practices. To save costs, IDUs were recruited from those deemed not eligible to participate in the Drug Users Intervention Trial study (DUI). STRIVE was an unblinded two-armed randomized control trial of a behavioral intervention. Participants were randomly assigned to a <i>peer-mentoring</i> (intervention) – 222 participants or <i>video discussion</i> (control) - 196 participants. Each arm of the intervention consisted of 6 two-hour sessions held twice weekly. The first session of each arm included two additional facilitators; the same-trained facilitators who followed scripted manuals led all other sessions. The social cognitive theory guided the <i>peer mentoring</i> intervention. The intervention delivered risk reduction information to mentor other injection drug users about reducing HCV transmission risks. During the fifth session, participants conducted street outreach about HCV prevention in IDU communities. Participants in the <i>video discussion</i> group watch a docudrama television series about IDUs and then engaged in a facilitated group discussion. All participants completed an assessment prior to the intervention and again at 3 months & 6 months after the intervention.</p> | <p>Strength – The researchers felt the strengths included the randomized study design, use of audio computer assisted self-interview and inclusion of an attention control group. Curbing injection behaviors that transmit HCV (26% reduction in distributive risk) were observed over short and long-term periods. While intervention participants embraced peer monitoring, the change in behavior was mediated only through increased self-efficacy. Limitations – The study was unmasked and lacked sufficient statistical power to detect small differences. The retention rate was suboptimal at 3 months. Sample was only half of original design because of multiple visits required to determine eligibility.</p> |

Effective Interventions for Injection Drug Users

Community-level Interventions

Jamner, M.S., Wolitski, R.J., et al. (1997) Impact of a Longitudinal Community HIV Intervention Targeting Injecting Drug Users Stage of Change for Condom and Bleach Use. *American Journal of Health Promotion* 12(1): 15-24.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| General | AIDS Community Demonstration Project in Long Beach California. 3081 IDU who were sexually active in the past 30 days or who had shared injection equipment in the past 60 days. Peer volunteers distributed fliers featuring role-model stories targeted to the population's stage of change. Fliers were packaged with bleach kits, condoms, or both. The intervention was designed to influence behavior through the dissemination of information, the development of behavioral skills and the positive reinforcement of progress toward the consistent use of condoms and bleach. (Transtheoretical model of behavior change) | Repeated cross-sectional sampling with matched intervention and comparison communities. Compared with injecting drug users in the comparison area, IDUs in the intervention area showed a significant increase in condom use with other partners. Subjects with recent project exposure had higher stage-of-change scores for using condoms with main and other partners and for cleaning injection equipment with bleach. |

Rietmeijer, C.A., Kane, M.S., et al. (1996) Increasing the Use of Bleach and Condoms Among Injecting Drug Users in Denver: Outcomes of a Targeted, Community-level HIV Prevention Program. *AIDS* 10(3): 291-298.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| General | AIDS Community Demonstration Project in Denver. N=1997 IDUs interviewed (89% male, 66% African- American or Latino. Volunteers discussed and distributed intervention kits with small-media behavior intervention materials, role model stories, bleach kits and condoms to 890 individuals in high-risk population in Denver on a monthly basis over a 2.5 year period. Workers received training on basic HIV/AIDS education, role-playing interactions, methods of street approach and non-threatening conversation, and methods of dealing with individuals who refuse materials. | Proportion reporting consistent bleach use to clean needles increased significantly from baseline (20%) to early (16%) to full implementation (29%) in the intervention city; but decreased from 22% at baseline to 12% at early and full implementation in the comparison city. Condom use during vaginal intercourse with occasional partner increased significantly from 2% at baseline to 7% at early implementation and to 24% at full implementation of the invention city and decreased from 12% to 10% in comparison city. No change on condom use with steady partner. |

Effective Interventions for Injection Drug Users

Street and Community Outreach Interventions

Coyle, S.L., Needle, R.H., et al. (1998) Outreach-Based HIV Prevention for Injecting Drug Users: A Review of Published Outreach Data. *Public Health Report* 113(1): 19-30.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| General | Review of 36 published studies of outreach-based HIV risk reduction interventions for out-of-tx IDUs. Reports intervention effect on HIV-related behaviors or HIV seroincidence. Most from National AIDS Demonstration Research (NADR) or Cooperative Agreement for AIDS Community-based Outreach/Intervention Research Program—both models used a standard outreach with C&T and enhanced outreach with follow-up of counseling, role-playing, etc.). 2/3 of interventions were street-based outreach followed by office-based HIV C&T. | Most results are pre-post, no controls. Consistency of results across studies. IDUs regularly reported follow-up reductions in 5 major risk behaviors: stopping injecting, reducing frequency of injecting, reducing reuse of syringes, reducing reuse of other equipment, reducing crack use. Studies also show significant effects in 3 protective behaviors: more frequent needle disinfecting, entry into drug tx, and increases in condom use. |

Latkin, C.A., (1998) Outreach in natural settings: the use of peer leaders for HIV prevention among injecting drug users' networks. *Public Health Report* 113 (Suppl 1): 151-9.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------|---|---|
| POC (African-Am) | Baltimore, Maryland. 36 peer leaders trained to promote prevention among contacts within and beyond sex and drug networks. Peer leaders participated in 10-session training groups were administered pretest and post-test surveys. Survey data also collected from 78 of the leaders' risk network members. Peer leaders had 2165 HIV prevention interactions, of which 84% were with active drug users. | Peer leaders reported a significant increase in condom use and cleaning used needles with bleach. The leaders' risk network members, compared with controls, were significantly more likely to report greater needle hygiene. |

Effective Interventions for Injection Drug Users

Street and Community Outreach Interventions (continued)

[NADR](#) (National AIDS Demonstration Research) Program and CA (Cooperative Agreement) Program for HIV/AIDS Community-based Outreach/Intervention Research)

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|---|
| <p>Out-of-treatment injection drug users and the non-injecting female sex partners of male IDUs</p> | <p>NADR: large study carried out from 1987 to 1991 in 29 sites across the US. Used indigenous outreach workers to initiate risk-reduction activities on the streets and in other settings where IDUs tend to congregate. Basic risk-reduction activities usually involved face-to-face communication; the provision of literature on HIV/AIDS transmission, prevention and treatment; and the distribution of risk reduction materials. Outreach workers also referred drug users to services, including drug treatment services as well as HIV/AIDS treatment. Outreach was generally followed with additional, structured activities, such as confidential HIV testing and counseling and individual risk assessments.</p> <p>CA: implemented in 23 U.S. sites from 1990 to 1999. Used elements of the NADR program plus clients assigned to basic or “enhanced” intervention services, with basic services held consistent across sites. Outreach activities were similar to those in the NADR program, but were defined more uniformly. The basic intervention entailed community-based outreach as a prelude to two education and counseling sessions, organized around optional HIV testing and counseling to help drug users learn about their serostatus and the behavior changes needed to reduce transmission risks.</p> | <p>Study findings indicate that the outreach-based interventions designed and tested in the NADR and CA programs were effective in reaching at-risk individuals and enabling them to reduce risk behaviors and, consequently, their risk of acquiring HIV/AIDS. Community-based outreach was found to be an effective approach for reaching out-of-treatment drug users, providing materials to support HIV risk reduction, facilitating drug treatment entry and retention, providing referrals for HIV testing and counseling, and promoting HIV risk reduction. The consistency of results is evidence that a strategy of community-based outreach, counseling, and education interventions promoted beneficial drug- and sex-risk behavior changes.</p> |

Effective Interventions for Injection Drug Users

Street and Community Outreach Interventions (continued)

Siegal, H.A., Falck, R.S., et al. (1995) Reducing HIV Needle Risk Behaviors Among Injection-Drug Users in the Midwest: An Evaluation of the Efficacy of Standard and Enhanced Interventions. *AIDS Education and Prevention* 7(4): 308-319.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------|--|---|
| POC (African Am) | NADR site. 907 participants (74% male, 75% African-Am) assigned to one of two types of standard or enhanced intervention. Standard: a one-hour session (in the field office) which the counselor-educator provided details on HIV disease and modes of transmission and an instructional session which was followed by a videotape of role plays illustrating proper condom use and needle cleaning. Bleach and condoms provided. Enhanced: added to the standard intervention three one-to two-hour sessions on the pathology of HIV disease, drug addiction and safer sex. These were delivered over a one-month period in-group sessions of 3-5 people. All participants received voluntary and confidential HIV counseling/testing as well as knowledge of negative results. | Follow-ups 5 to 9 months after baseline. Both interventions appeared to improve needle practices. The enhanced intervention showed more effectiveness in helping those with unsafe practices to become more safe, but did not appear to be more effective at helping those practicing safer needle practices maintain those practices. In multivariate analysis, subjects in enhanced more likely to change from unsafe to safe needle use. Regardless of intervention track, daily injectors less likely to adopt safer injecting practices than weekly or occasional injectors. |

Vogt, R.L., Breda, M.C., et al. (1998) Hawaii's Statewide syringe exchange program. *American Journal of Public Health* 88: 1403-1404.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| General | Needle exchange (NEP), drug treatment referral system and methadone clinic, and peer-educator program to reach IDU who do not come to the exchange. Comment: Many other studies show effectiveness of NEPs through studies of seroprevalence (Des Jarlais, et al. 1995; Hurley, et al. 1997) | Rates of HIV among IDUs have dropped from 5% in 1989 to 1.1% in 1994-96. Also, 74% of NEP clients reported no sharing of needles in the last 30 days, and 44% of those who did share reported always cleaning needles with bleach. |

Effective Interventions for Injection Drug Users

Street and Community Outreach Interventions (continued)

Wiebel, W.W., Jimenez, A., Johnson, W., et al. (1996) Risk behavior and HIV seroincidence among out-of-treatment injection drug users: A four-year prospective study. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 12: 282-289.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| POC | NADR site. Monitored trends in HIV risk behaviors and seroconversion among out-of-treatment IDUs receiving street-based outreach in Chicago. Began 1988, followed 641 HIV- IDUs for 4 years. Intervention guided by Indigenous Leader Outreach Model. Ex-addicts delivered HIV prevention services targeting IDU social networks in community settings. Collected baseline and 6 waves of follow-up interview data. Subjects came from 3 low-income neighborhoods: African-Am, ethnically mixed, and Puerto Rican. | Observed HIV incidence decreased, from 8.4 to 2.4 per 100 person-years. Prevalence of drug risk behaviors (sharing needles or equipment without disinfecting) decreased, from 100% to 14%. Sex risk behavior (multiple partners, sex with an IDU, or not always using condoms) decreased, from 71% to 45%. |

Intervention Combination

Harris, R., Kavanagh, S., Bausell, H. (1998) An intervention for changing high-risk HIV behaviors of African-American, drug dependent women. *12th World AIDS Conference, Geneva 1998* [Abstract No. 13402].

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|-------------------------------|--|--|
| POC/ Women (African-Am) | 204 methadone-dependent, African-American women randomized into experimental and control groups. Experimental group participated in peer counseling and leadership training program over an 8-week period, followed by 8 weeks of reinforcement. Program designed to reduce sexual risk behavior, increase self-esteem, decrease depressive affect, and increase AIDS knowledge. | Compared to controls, experimental group reported significant increase in numbers of safer sexual behaviors, showed decreases in depression, and reported engaging in more AIDS-related, community-based communication activities. |

Effective Interventions for Injection Drug Users

Intervention Combination (continued)

Kipke, M.D., Edgington, R., et al. (1998) HIV Prevention for Adolescent IDUs at a storefront needle exchange program in Hollywood, CA. *Presented at the 12 The World AIDS Conference, Geneva Switzerland. Abstract #23204.*

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------------|--|---|
| Youth (24 and under) | Needle exchange targeting young IDUs, which contains, art programming, peer-support groups, HIV testing and case management (largest youth NEP in the US). | Over 70% of clients reported no needle sharing in the last 30 days, and young people who used the NEP on a regular basis were less likely to share needles. |

Monterroso, E.R., Hamburger, M.E., Vlahov, D., et al. (2000) Prevention of HIV infection in street-recruited injection drug users. *Journal of Acquired Immune Deficiency Syndromes 25: 63-70.*

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| | CIDUS (Collaborative Injection Drug User Study), multicity study (Baltimore, NYC, Chicago, San Jose, LA, and a state women's correctional facility in CT). 3773 participants recruited and 2306 located and interviewed at follow-up (average follow-up period=7.8 months). HIV serostatus and participation in programs and behaviors that could reduce risk of HIV infection determined at each visit. | Not using previously used needles substantially protective against acquiring HIV and significantly associated with use of needle and syringe exchange programs. Reduction of injection frequency very protective against seroconversion and strongly associated with participation in drug tx programs. Cleaning needles not protective. |

Nyamathi, A.M., Flaskenis, J., et al. (1994) Evaluation of Two AIDS Education Programs for Impoverished Latina Women. *AIDS Education and Prevention 6(4): 296-309.*

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|-------------------------------|--|---|
| POC Women drug using/homeless | 858 women in homeless shelter participated. Control group receives 1-hour AIDS education and testing small group. The test group received a 2-hour program with testing individualized, behavior practices, coping, and self-esteem. Video in both groups. | At 2 weeks post test, both conditions associated with reduction in risk (injection drug use, non-injection drug use, and sexual activity with multiple partners). No effects of specialized intervention. <u>Concern:</u> Very short follow-up. |

Effective Interventions for Injection Drug Users

Intervention Combination (continued)

Tross, S., Abdul-Quader, A.S., et al. (1993) Evaluation of a Peer Outreach HIV Prevention Program for Female Partners of Injecting Drug users (IDUs) in New York City. *IX International Conference on AIDS* 9,840.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| Women | 658 Female sex partners of IDU residing in a high use housing project. Peer outreach/media distribution of flyers containing risk reduction strategies of actual peer models occurring in 2 randomly selected housing projects. Two non-intervention housing projects provided a comparison sample. | At follow-up, there was no change in condoms use or intention to use condoms in the comparison sample, while the intervention sample showed increased percentage always using condoms (18% to 30%) and decrease percentage never using condoms (46% to 27%). |

Powers, B., Penn, S., et al. (1990) AIDS Risk Reduction Among Female IVDUs and female sexual partners of IVDUs, 1988-1989. *VI International Conference on AIDS* 6, 421.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| Women | Female IDU and female sex partners of IDUs contract via street outreach were reached individually (4, 724) or in groups (7,829). The intervention was to study the 'early' and 'late' outreach efforts were compared, looking at reports of participants in 'safer sex workshops.' Other outreach efforts included provision of condoms and needles, referrals, group and individual counseling and client advocacy. | In early workshops, 15% reported regularly or always using condoms; in later workshops, this increased to 50% (no statistical analysis). |

HIV Antibody Counseling & Testing [CDC Revised Guidance for HIV Counseling, Testing, and Referral. MMWR 2001, 50 \(RR-19\): 1-58](#)

Casadonte, P., Des Jarlais, D. (1990) Psychological and Behavioral Impact among Intravenous Drug Users of learning HIV test results. *The International Journal of Addiction* 25(4): 4 09-426.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| POC | 81 drug users tested and informed of HIV positive results. | Giving positive test results were associated in decrease in sex (60%) at a 10 week follow up and more condom and less drug use |

Effective Interventions for Injection Drug Users

HIV Antibody Counseling & Testing (continued)

Higgins, D.L., Galavotti, C., et al. (1991) Evidence for the Effects of HIV Antibody Counseling and Testing on Risk Behaviors. *Journal of American Medical Association* 266(17): 2419-2429.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| | A review of 12 studies on the effects of C/T on behavior change (needle use, cleaning of needles and condoms use) of injection drug users (actual study reviews several populations). | From the 12 studies the results were: 50% of the studies showed some increase in needle hygiene; 42% showed decrease in needle or drug use; 25% showed increase in condom usage and, 17% showed decrease sexual partners. |

Neaigua, A, Sufian, M., et al. (1990) Effects of Outreach intervention on risk reduction among IDU. *AIDS Education and Prevention* 2(4): 253-271.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| POC | 276 IDU were reached by street educators who were ex-addicts, provided easy referral for HIV testing. No control group. | 4.5-month follow-up. Drug use is last 30 day decreased, times injected decreased; 84% tested – half not return for results. |

Partner Notification (Procedural Guidance)

Giesecke, J., Ramstedt, K., Granath, F., Ripa, T., Rado, G., Westrell, M. (1991). Efficacy of partner notification for HIV infection. *Lancet* 338(8775): 1096-1100.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| IDU | Stockholm, 1989-1990. 365 infected patients (91% of those diagnosed in Sweden during the interval) named 564 needle-sharing or sexual partners. | 390 located, 350 with known test results. 50 new seropositives identified. |

Levy, J.A., Fox, S.E. (1998) The Outreach-assisted Model of Partner Notification with IDUs. *Public Health Report* 113(S-1): 160-9

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| IDU | Stockholm, 1989-1990. 365 infected patients (91% of those diagnosed in Sweden during the interval) named 564 needle-sharing or sexual partners. | 390 located, 350 with known test results. 50 new seropositives identified. |

No reviews on Mass & Other Media, Social Marketing, Hotlines, and Clearinghouse.

Effective Interventions for Heterosexuals

Individual-level Interventions

El-Bassel, N, Wirtte, SS, Gilbert, L. et, al., The Efficacy of a Relationship-based HIV/STD Prevention program for Heterosexual Couples. *American Journal of Public Health*. 2003;93:963-969

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|--|
| <p>African American and Latino</p> <p><i>Added to matrix in 2007</i></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Project Connect)</p> | <p><i>Project Connect</i> was a randomized trial intervention designed to examine whether a six-session HIV/STD relationship-based intervention would be equally effective in increasing condom use, decreasing STD transmission and reducing the number of sexual partners among couples. The researchers also wanted to determine if the intervention would be more effective when the woman and her male partner received the relationship-based intervention together or when the woman received the intervention alone. Between 1997 and 2001, 388 women were approached and recruited from waiting rooms in outpatient clinics in the Bronx, NY; the recruitment process yielded 217 couples. The intervention had a theoretical (AIDS Risk Reduction Model) and empirical (Ecological perspective) base. Couples were randomly assigned to the couple session, women alone session, or education control session. The content for the woman alone and the couple sessions was the same and consisted of an individual session and 5 relationship-based sessions (2 hours each). The educational control session lasted 1 hour and conducted immediately after the baseline interview and random condition assignment.</p> | <p>The findings showed that a 6 session, relationship-based HIV/STD prevention intervention was efficacious in reducing the number of unprotected sexual acts and increased the proportion of protected sexual acts. There was not a significant difference in the outcomes if the woman received the intervention alone or as a couple (with her male partner).</p> |

Effective Interventions for Heterosexuals

Individual and Group-level Intervention

Shain, RN, Piper, JM, Holden, AE, et. al., Prevention of Gonorrhea and Chlamydia Through Behavioral Intervention: Results of a Two-year Controlled Randomized Trial in Minority Women. *Sexually Transmitted Diseases*. 2004;31:401-408

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| Hispanic and African American Women with STD Diagnosis <i><u>Added to matrix in 2007</u></i> | This intervention is called Project SAFE 2. The original study (Project SAFE) showed that a theory-based, risk-reduction intervention designed specifically for African and Mexican-American women was effective. The AIDS Risk Reduction Model guided the development of the intervention. In the study, the same researches, sought to accomplish: (1) confirm prior findings; (2) determine long-term efficacy; (3) determine if efficacy changed through time; and (4) determine the additional benefit of offering 5 optional support group sessions. Women of color (585 Mexican-American and 190 African-American) were randomly assigned to a standard intervention (3 small groups – 3 hours in length), enhanced intervention (5-90 minute support groups following the standard intervention) or a control group. Both interventions were cultural and gender appropriate for the participants. The overall goals of the intervention were: have women recognize their risk (STDs, including HIV), commit to behavior change, acquire skills to effect change, and be vigilant to promptly seek care for possible infection. | The standard intervention was nearly identical as the original study and results confirmed efficacy in preventing Gonorrhea and Chlamydia among relatively young women. Analysis also showed that the effects of the enhanced and standard intervention lasted for at least 2 years. Although support-group attendance was not required, relative to standard-intervention, additional infection rate reduction was found only in among women attending one or more sessions. |

Effective Interventions for Heterosexuals

| Individual-level Intervention | | |
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| <p>Roye, C., EdD, RN, CPNP, Perlmutter Silverman, P. MPH, Krauss, B, PhD. A Brief, Low-Cost, theory Based Intervention to Promote Dual Method use by Black and Latina Female Adolescents: A Randomized Clinical Trial. <i>Health Education & Behavior</i>, August 2007. Vol. 34, No. 4, 608 – 621.</p> | | |
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| <p>African and Latina Adolescent Females</p> | <p>The goal was to implement and evaluate two brief HIV prevention interventions conducted in a clinical setting, used separately and together. The theoretical foundations were the social cognitive theory, theory of reasoned action, and the health belief model. The study also tested the extended parallel process model. Four hundred women were recruited from Planned Parenthood sites in New York City. After eligibility was determined and signing the consent, 70% of the participants were randomized to receive the baseline survey and 30% were randomized to get no baseline questionnaire. This was to evaluate the independence and joint contribution of baseline assessment and the intervention. The women were randomly assigned to one of the following: Arm 1: counseling – the project RESPECT counseling protocol was amended for one session. The session was an interactive client-focused session with the goal of negotiating a realistic plan for reducing STI risks. Arm 2: video centered – This was a 21 minute video developed for the project; three important insights were incorporated into the video. Arm 3: video plus counseling – the participants watched the video and then received the counseling. Arm 4: usual care – participants received usual care only.</p> | <p>Strengths: The potential efficacy of this intervention, intended to be and specifically designed for an urban teenaged Black and Latina woman, was particularly noteworthy. The main outcome variable was condom use at last vaginal intercourse with their main partner. At the 3 month follow-up, women who received only the video or only the counseling intervention did not differ significantly from the women in the usual care group. However, condom use by those who received both the video and counseling and the usual care group were significant. The results of the study suggest that a brief, very low-cost video and counseling intervention to promote condom use among teens that use contraceptives can be effective in the short term.</p> <p>Limitations: The researches noted three limitations: 1) the follow-up was low at 3 months and 12 months; 2) the results may not be generalized to other populations of teens; and 3) because STI incidence was low the effect of the intervention on these variables could not be assessed.</p> |

Effective Interventions for Heterosexuals

Individual-level Intervention (continued)

Wolitski, RJ, PhD, and the Project START Writing Group. Relative Efficacy of a Multisession Sexual Risk Reduction Intervention for Young Men Released From Prison in 4 States. *American Journal, of Public Health*. Volume 96 number 10, October 2006 pages 1854 - 1861

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
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| <p>Incarcerated Males</p> <p>Listed in the 2007 Updated Compendium – Best Evidence (START)</p> | <p>The objective of Project START was to compare “the effects of an enhanced multisession intervention with a single session intervention on the sexual risk behavior of young men released from prison.” Between 2001 and 2002, 522 men recruited, contacted, and screened in 8 state prisons in California, Mississippi, Rhode Island, and Wisconsin met the criteria for inclusion in the intent-to-treat analysis.</p> <p>Participants were systematically assigned to a single session pre-release intervention or a six session pre and post release intervention. Both interventions incorporated features of prevention case management, motivational interviewing, and harm reduction. The single session intervention was a brief HIV-risk reduction intervention that consisted of a 60 to 90 minute session delivered approximately two weeks prior to release. The session assessed the participant’s HIV/AIDS, hepatitis, and STI knowledge and risk behavior. The participant was also assisted in developing a personal risk reduction plan. The enhanced intervention consisted of two 60 to 90 minute sessions before release. The first session was the same as the single session intervention; the second session focused on re entry into the community. There were 4 post release sessions (30 to 60 minutes each) scheduled for 1, 3, 6, and 12 weeks after release.</p> | <p>Strengths: At one week, the enhanced intervention participants reported slightly lower rates of unprotected intercourse compared to the single session group. At 12 weeks, this pattern was observed for all behaviors, but was not considered statistically significant. However, at the 24 weeks assessment (12 weeks after the last enhanced session), the enhanced intervention participants were significantly less likely, than the single session participants to report unprotected vaginal or anal intercourse (during the more recent encounter). They were also less likely to report unprotected intercourse in the reporting period. Project START demonstrated that a multisession intervention can lead to lower risks of sexual behavior among young men who are released from prison. The researchers noted limitations, but felt they were offset by the strengths.</p> <p>Limitations: The enhanced intervention was compared to a single session that was controlled for experimental demand but not attention; enhanced intervention participants were only followed for 12 weeks after the last intervention session, so could not determine if changes were sustained over a long period of time; and data on the risk of partners were not available.</p> |

Effective Interventions for Heterosexuals

| Individual-level Intervention (continued) | | |
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| Shrier, L. A., Ancheta, R., Godman, E., Chiou, V. M., Lyden, M. R. & Emans, S. J. (2001). Randomized controlled trial of a safer sex intervention for high-risk adolescent girls. <i>Archives of Pediatrics Adolescent Medicine</i> , 155, 73-79. | | |
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| <p>Adolescent females treated for an STD</p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (Safer Sex)</p> | <p>The purpose of this study was to determine whether an individually delivered safer sex theory-based intervention would reduce sexual risk behavior and recurrent STDs in high risk adolescent girls. The theoretical framework for the intervention was the social cognitive theory, transtherotical model, and motivational interviewing. Between July 1996 and July 2008, 239 females were recruited and screened from a Boston, Massachusetts hospital-based adolescent clinic; 123 of the eligible females, consented to participate, were randomly assigned to the standard education or the intervention and completed a self-administered questionnaire. The standard education consisted of STD education, which included a discussion of STD transmission and the importance of consistent condom use; this was provided at the clinician’s discretion. The intervention condition consisted of a 7 minute videotape, self assessment exercise, and education. The educator provided participants with a list of topics; participant then chose the order the topics were presented. This allowed for guiding individualized presentation and emphasis on prevention. The session lasted approximately 30 minutes with topics including: consequences of unprotected sex, risk perception, preventing pregnancy, preventing STDs, secondary abstinence, and talking about sex. Intervention participants received a booster session at 1, 3, and the 6 month follow-up. These times were chosen because it was the typical interval for clinical visits and movement in stages of change.</p> | <p>Strengths: Participants in the standard education and the intervention condition were asked to return at 1, 3, 6, and 12 month to complete a questionnaire. There were no differences between the two groups at the 3 month follow-up. However, at the 1 month follow-up, intervention participants had a greater increase in STD knowledge and positive attitudes toward condoms. The number of sexual partners may be the most important risk factor for STDs. The researchers found that 6 months after the intervention, participants were less likely to report having sex with a non-main partner in the previous 6 months. They also reported fewer nonuse of a condom with the last intercourse. The researchers stated, <i>“Individualized, theory-based safer sex education administered at the time of treatment can be effective with adolescent girls.”</i></p> <p>Limitations: The sample was drawn from an urban pediatrics clinic and might not be representative of other adolescent populations, small sample size limited the power to detect an intervention effect, and low participation rate threatens the external validity of the results.</p> |

Effective Interventions for Heterosexuals

Individual-level Intervention (continued)

Scholes, D., McBride, C., M., Grothaus, L., Civic, D., Ichikawa, L. E., Fish, L. J., et al. (2003). A tailored minimal self-help intervention to promote condom use in young women: Results from a randomized trial. *AIDS*, 17, 1547-1556.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| Sexual active non-monogamous young women Listed in the 2007 Updated Compendium – Promising Evidence (Insights) | The study intended to evaluate the efficacy of a tailored minimal self-help intervention to increase condom use in sexually active young women. The theoretical basis for the intervention was social science theory. The primary population was 18–24 year old at risk non-monogamous sexually active women. The study was conducted in managed care settings at Group Health Cooperative (Seattle) and Duke Health Systems (Durham, North Carolina) between June 1999 and April 2000. Women who had visited the clinic in the previous six months were <u>proactively</u> recruited to participate. Each woman received an introductory letter describing the study and was invited to participate. If they did not call to decline participation, they were contacted via telephone for further screening. Of the women contacted and deemed eligible, 1,210 women were enrolled and randomly assigned to the intervention or usual care group. Participants assigned to the intervention group received two rounds of tailored material. Following the baseline survey, they received a 12 page self-help magazine-style booklet entitled <i>Insights</i> . Four sections were generic; the remaining seven were tailored to address information contained on the survey. They also received a safer sex kit that included condoms (male and female), condom using instructions, and a condom carrying case. After the 3 month survey, they received a tailored booster newsletter entitled <i>Extra Insights</i> . The booster consisted of a one page folded sheet and was tailored to the 3 month survey responses; it reinforced messages from the first round. | <p>Strengths: Computer assisted telephone interviewing techniques were conducted at 3 and 6 months. Nearly all of the women assigned to the intervention group recalled receiving <i>Insights</i> and/or <i>Extra Insights</i>. About 60% reported reading all or some of the information (another 33% said they “skimmed” the material). Those women assigned to the intervention group used condoms in a higher proportion of sexual encounter episodes with any partner than did those assigned to the usual care group, increased self efficacy to use condoms, greater likelihood of carrying condoms, and greater likelihood of having condom discussions with a partner. Participants were generally receptive to receiving the self-help material. Limitations: The researchers felt while promising, the study had limitations and suggested areas of further research. They could not evaluate the long-term effects and could not assess effects on HIV/STD occurrence.</p> |

Effective Interventions for Heterosexuals

Individual-level Intervention (continued)

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| <p>Metcalf, C. A., Malotte, C. K., Douglas Jr., J. M., Paul, S. M., Dillon, B. A., Cross, H., et al. (2005). Efficacy of a booster counseling session 6 months after HIV testing and counseling: A randomized, controlled trial (RESPECT-2). <i>Sexually Transmitted Diseases</i>, 32, 123-129.</p> <p>HIV- STD Clinic Clients</p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Respect Brief Counseling plus Booster)</p> | <p>To test the efficacy of STD prevention, a single booster session was provided 6 months after HIV counseling and testing. The intervention is not based on a single theoretical model, but integrates several models as the foundation.</p> <p>Between 1999 and December 2000, clients were recruited from 3 public STD clinics in Denver, Long Beach, and Newark. Once eligibility was determined, 3342 of those eligible were enrolled and randomly assigned to receive the rapid or a standard test. The counseling they received was based on the brief 2 session model used in Project RESPECT (page 82 full document); at the same time, they were randomly assigned to receive the booster counseling session or no additional counseling. All participants were tested for HIV and given the standard 2 sessions of prevention counseling that accompanies testing (total of 40 minutes). Those assigned to receive the booster session returned in 6 months for the 20 minute session. The booster counseling intervention was similar to the initial counseling; however it was designed to reinforce the counseling they initially received during their enrollment and was not combined with testing. Booster counseling was provided between August 1999 and September 2001.</p> | <p>Strengths: The researchers found that the booster counseling, as provided in the study, was not effective at preventing STDs. There were several reason gives as to why the intervention may not have been effective in reducing STD rates. Some were: one 20 minute session may not be sufficient; counseling without testing for HIV may have an effect; and giving the booster session at a predetermined time rather than when the client was concerned about their risks. However, participants of the booster intervention reported significantly less sexual risk behavior than those who did not receive the booster session. As far as changing risky sexual behavior, the article made reference to two trials (Wegner 1991, page 24 this document and Wegner 1992, page 72 full document) that showed AIDS education with HIV testing was more effective than AIDS education alone. Limitations: Assignment of participates for the booster counseling at enrollment six-months prior to the intervention was given resulted in almost 1/3 of those assigned to the booster session not receiving the intervention. This may have possibly resulted in the underestimation of the booster session results.</p> |

Effective Interventions for Heterosexuals

Individual-level Intervention (continued)

Boyer, C.B., Barrett, D.C., Peterman, T.A., & Bolan, G. (1997). Sexually transmitted disease (STD) and HIV risk in heterosexual adults attending a public STD clinic: Evaluation of a randomized controlled behavioral risk-reduction intervention trial. *AIDS*, 11, 359-367.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|---|
| <p>Listed in the 2007 Updated Compendium – Promising Evidence (Cognitive Behavioral STD/HIV Risk-Reduction)</p> | <p>The objective was to determine the efficacy of a cognitive/behavioral skills-building intervention to prevent STDs. The theoretical foundation of this intervention is the AIDS risk-reduction model (ARRM). The goals in using ARRM were to increase knowledge, reduce high risk psychosocial factors, and build decision-making & communication skills. Recruitment for this intervention occurred in the San Francisco Department of Public Health STD clinic between January 1992 and January 1993. On the days they were recruiting, every 25 patient entering the clinic seeking treatment, was asked to participate in the study. Prior to being interviewed and seeing a clinician, those agreeing to participate were assigned to the control condition or the experimental intervention. Those assigned to the control condition received the standard 15 minute risk-reduction counseling session offered to all patients. Those assigned to the experimental intervention received four individual sessions over four consecutive weeks. Each 60 minute session was a face-to-face interactive discussion that also included hands on, written material, video, vignettes, and risk scenarios. Participants were interviewed at baseline, 3 months, and 5 months.</p> | <p>Of those assigned to the intervention, 48% attended all four sessions. Men assigned to the intervention group were more likely to drop out of the study after the baseline than men assigned to the control group. There was a greater decrease of sexual intercourse without a condom by those who were assigned to the intervention group and 51% of the study participants had sexual intercourse with only a steady partner. At 3 months those assigned to the intervention group increased the percentage of time they used condoms. At 5 months, the mean number of sexual partners without using a condom was lower in the intervention group than it was in the control group. For women, there were no statistically significant differences between the intervention and control group at 3 and 5 months. Measured knowledge and psychosocial factors showed that men in the control group were more likely to have perceptions of lower communication efficacy and perceptions of higher STD/HIV risk. Women in the control group had higher STD/HIV/AIDS knowledge, increased intention to use condoms, and were more likely to indicate willingness to look for signs of an STD; a “ceiling effect” was identified as the reason.</p> |

Effective Interventions for Heterosexuals

Individual-level Intervention (continued)

Ito, KE., Kalyanaraman, S, Ford, CA., Brown, JD., Miller, WC. "Let's Talk About Sex": Pilot Study of an Interactive CD-ROM to Prevent HIV/STIs in Female Adolescents. *AIDS Education and Prevention* 20(1), 78-98, 2008.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| | <p>The purpose of this study was to develop and test an interactive CD-ROM. The CD-ROM was developed through reviewing literature of previous HIV/STI prevention interventions, barriers the preventive behavior, and risk factors in female adolescents. The CD-ROM was designed to be fun and interactive (multiple games, video clips, and cartoons). The CD-ROM used simple language, brief bulleted text with matching audio, multiple segments, and medical terminology was used minimally. Between January 2005 and May 2005, all females (aged 15-19) presenting at Wake County Health Department's family planning clinic was approached to participate in the study; forty-seven girls were recruited and met eligibility requirements. As outlined in the clinics protocol, all new clients were required to attend a 30 minute education led group didactic session. The girls were randomly assigned to the CD-ROM intervention plus the standard of care (didactic session) or the standard care alone. The CD-ROM participants were escorted to a private space to view the CD-ROM using a laptop and headphones. The viewing occurred prior to or after the didactic session. At the start of the CD, participants were able to select their host to take them through the program. The program was designed to: increase HIV/STI knowledge, raise awareness of being tested for HIV/STIs; provide HIV/STI risk education; encourage critical appraisal of media images of sexual activity; challenge norms concerning abstinence, monogamy, and condom use; and increase self-efficacy and skills supporting abstinence and consistent condom use.</p> | <p>Strength - Baseline date was collected prior to the didactic session & viewing the CD-ROM and again after the events. Evaluated were acceptability, feasibility, behavioral intentions, and knowledge. Participants liked the CD-ROM and there were not any reported or observed difficulty in using the CD-ROM. Ninety-six percent said that they would recommend the program to their friends. Intention to engage in sexual intercourse within the next 3 months decreased in both groups; there was not a significant difference. Nearly all CD-ROM participants intended to use a condom at their next sexual intercourse; but again this did not statically differ from the other group. Limitation - The researchers felt the results were encouraging, but limited by the small sample size.</p> |

Effective Interventions for Heterosexuals

Individual-level Intervention (continued)

Di Noia, J and Schinke, SP. Gender Specific HIV Prevention with Urban Early-Adolescent Girls: Outcomes of the Keepin' It Safe program. *AIDS Education and Prevention*, 19(6), 479-488, 2007

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| | <p>Keepin' It Safe is a six-session intervention. The intervention is a CD-ROM mediated HIV prevention intervention for urban early-adolescent girls. The theoretical foundation for the intervention is the AIDS Risk Reduction Model (ARRM) and integrated concepts of the theory of reason action, theory of planned behavior, self-efficacy theory, and health belief model. The researchers chose to conduct the intervention in New York area youth services agencies. Prior to agencies acceptance to conduct the intervention, screening agencies occurred to ensure they served a minimum of 20 adolescent females, had onsite computers, agreed to comply with research protocol, and agreed to participate for the duration of the study. Thirty-one sites were randomized to the computer intervention and wait-list (control). All 204 girls enrolled girls completed the pretest; two weeks after the pretest, girls at the computer sites completed the Keepin' It Safe intervention in six 30-minute onsite weekly sessions. The sessions we facilitated, but the girls completed each session on their own. The facilitator read an introductory statement and provided assistance if needed. <u>session 1</u>- understanding HIV/AIDS; <u>session 2</u>- perceived vulnerability to HIV infection; <u>session 3</u>-sexual decision making; <u>session 4</u>- self-efficacy; <u>session 5</u>- sexual communication and assertiveness; and <u>session 6</u>- risk reduction skills building. Posttest occurred two weeks after the intervention. Girls at the control sites completed a posttest 10 weeks after the pretest, they were also offers the Keepin' It Safe Intervention.</p> | <p>Strength- Demographics: 54% non-Hispanic Blacks, 29% Hispanic, 4% non-Hispanic white or other, and 13 % not reported; mean age was 12.4 years. Keepin' It Safe program increased HIV/AIDS knowledge among the early adolescent girls. The results of the intervention also revealed there were positive effect on the girls' perceived efficacy and enjoyment of abstinence, efficacy and enjoyment of condoms, and sexual assertiveness. The researchers felt the findings added to the limited data on theory-based gender-specific HIV prevention programs for urban early adolescent girls and on programs utilizing interactive technologies for HIV prevention program delivery. Limitation – The self-selected sample limits the generalizability of study findings, self-report measures introduces the potential of bias.</p> |

Effective Interventions for Heterosexuals

Individual-level Intervention (continued)

Grinstead, O., Comfort, M., McCartney, K., Koester, K., and Neilands, T. Bringing It Home: Design and Implementation of an HIV/STD Intervention for Women Visiting Incarcerated Men. *AIDS Education and Prevention*. 20(4), 285-300, 2008

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| | <p>The purpose of the Health Options Mean Empowerment (HOME) project was to design and test an intervention to reduce HIV risk among female partners of incarcerated men. Originally, the program was for the partner of an incarcerated, but they extended the project to included mothers, sisters, friends, and other non-partner visitors. Between February 2005 and January 2006, the HOME project took place at a center for a prison visitor that is outside a northern California prison. The project researchers designed the project to address five domains that they felt contributed to HIV risk for women upon their partners' release from prison. Those domains are: isolation, misinformation, risk minimization, relationship pressures, and institutional policies. During all hours the prison was open to visitors, Thursday through Sunday, HOME staff maintained a presence in the visitors' center. They would approach women and engage them in conversation, offer refreshments and information about prison (if needed), and tell them about the HOME project. The activities which occurred once a week included: health fair, condom communications, Friday lunch, bulletin boards, letter writing, video: Inside/out", health van, stress reduction, and sexual health chat groups; activities included one-on-one, small groups, and community. During conversations, staff inquired if the visitors wanted to be a peer volunteer for the project. Those who agreed participated in training activities formulated for Peer Educators. To view more about the HOME project, including the surveys used, visit: http://www.caps.ucsf.edu/projects/Centerforce/HOME.php</p> | <p>Strength - The researchers found that peer education was a feasible method to reach women with incarcerated partners. Peer educators reacted positively with the HOME staff and voiced appreciation for the nonjudgmental approach. They also found that involving participants in a dual role (recipient and provided) was effective in imparting health information, enabling women to tailor the information to their own needs and empowering women to be change agents in their lives, the family networks, and their community.</p> <p>Limitation – There were not any limitation noted in the article.</p> |

Effective Interventions for Heterosexuals

Individual and Group-level Intervention

Choi, KH, PhD, Hoff, C, PhD, Gregorich, SE, PhD, Grinstead, O, PhD, MPH, Gomez, C, PhD, and Hussey, W, MPH.
 The Efficacy of Female Condom Skills Training in HIV Risk Reduction Among Women: A Randomized Controlled Trial. *American Journal of Public Health*. October 2008, Vol 98, No. 10; 1841-1848

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|---|
| Females attending family planning clinics | <p>The purpose of the intervention was to evaluate the efficacy of skills training designed to increase female use of female condoms. Between June 2003 and November 2004, 409 women recruited from four family planning clinics in the San Francisco Bay Area (Concord, Mountain View, Santa Cruz, and San Francisco) were randomly assigned to the intervention or control condition; each arm of the study consisted of four sessions. The social learning theory was the foundation for the female condom skills' training; the comparison intervention was designed to increase knowledge about behaviors associated with major health problems. Sessions for the female condom skills training were: <i>session 1</i> - individual sex education and condom use skills training (2 hours); <i>session 2</i>- individual discussion of personal barriers for female condom use and communication skills building (2 hours); <i>session 3</i> - group discussion of barriers to and eroticization of female condom use and negotiation skills building (2.5 hours); and <i>session 4</i> – telephone follow-up (0.5 hours). Sessions for the women's general health promotion were: <i>session 1</i> - individual women's health education and condom demonstration (2 hours); <i>session 2</i>- individual discussion of personal barriers to adopting healthy behaviors (2 hours); <i>session 3</i> - group discussion of healthy living (2.5 hours); and <i>session 4</i> – telephone follow-up (0.5 hours).</p> | <p>Strength – Female condom skills participants were more likely to have used a female condom at least once in the prior 3 months at the 3 and 6-month follow-up. There was also an increase in the percent of sexual acts involving protection by the female condom from baseline to 6-month follow-up Limitations - The researchers noted three limitations. 1) finding may be generalizable only to women attending family planning clinics; 2) they might have over sampled women who were interested in female initiated barrier methods; and 3) accuracy of data may have been compromised by reliance of self-reports.</p> |

Effective Interventions for Heterosexuals

Individual-level Intervention (continued)

Marguerita Lightfoot, PhD, W. Scott Comulada, DrPH, and Gabriel Stover, MA. Computerized HIV Prevention Intervention for Adolescents: Indications of Efficacy. *American Journal of Public Health*. 2007;97: 1027-1030.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| High Risk Adolescents (computer based) | This intervention was an adaptation of Project LIGHT (page 65 of this document). The researchers wanted to test the hypothesis that a computer deliver intervention would be as effective as an in-person small group intervention in reducing sexual risk behavior. Students recruited from three alternative education schools were assigned to the computer-based, small groups, or control intervention conditions; 133 students between the ages of 14 and 18 agreed to participate. Assessments of all students were completed at baseline and 3 months. | <p>Strength - The results showed varying rates of behavior change across intervention conditions. Over time, adolescents in the computer condition were less likely to engage in sexual activity when compared to the small group condition. Over time, computer based and small group participants had fewer sexual partners than those participants in the control group. Students in the computer group reported reductions in the percent of unprotected sex, while those students in the small group and control intervention reported and increase. Nevertheless, the researches felt the difference was not statically significant.</p> <p>Limitation – The study used self-report data. There was a small sample size and short follow-up period.</p> |

Comprehensive Risk Counseling and Services (formerly Prevention Case Management)

The CDC has endorsed Comprehensive Risk Counseling and Services (CRCS) (formerly Prevention Case Management (PCM)) as an effective intervention to reach HIV- positive and/or very high-risk HIV-negative persons. CRCS is a client-centered HIV prevention activity with the fundamental goal of promoting the adoption and maintenance of HIV risk reduction behaviors by clients with multiple, complex problems and risk reduction needs. CRCS provides client-centered, multiple-session HIV risk reduction counseling while using the service brokerage of traditional case management to address competing needs that may make HIV prevention a lower priority. This HIV prevention activity addresses the relationship between HIV risk and other issues such as substance use, mental health, adherence issues, social and cultural factors, and physical health problems. While CRCS has yet to be rigorously evaluated, intensive case management interventions for clients with multiple, complex problems have been shown to be effective in other health fields. ([Guidance](#)) ([Literature Review](#)) ([Acronyms](#))

Effective Interventions for Heterosexuals

Group-level Interventions

Baker, S., et al. (1999) Personal communication

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| Women | Choices Project. Women randomly assigned to Relapse Prevention intervention (experiment) or health education and social support intervention (control). Both interventions 16-session, 2-hour weekly groups. | Both groups reduced number of risky sexual acts at 4 months and change is sustained at 12 months. No difference between groups. Both groups also increased and maintained safer sex negotiation skills. |

Basen-Engquist, K., Coyle, K., et al. (2001) Schoolwide Effects of a Multicomponent HIV, STD, and Pregnancy Prevention Program for High School Students. *Health Education & Behavior* 28 (2): 166-185.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| Youth | School-based Safer Choices program, a multicomponent, behavioral-theory-based HIV, STD, and pregnancy prevention program. 20 urban high schools randomized into intervention and control | At 19 months, decreased frequency of sex without a condom. At 31 months, less sexual intercourse without a condom with fewer partners. Program did not influence prevalence of recent sexual intercourse. Cost-effectiveness study showed that Safer Choices is a cost saving program under a wide range of estimates (Wang LY et al.). Concern: Setting specific? |

Cohen, D., Dent, C., et al. (1991) Condom Skills Education and Sexually Transmitted Disease Reinfection. *Journal of Sex Research* 28(1): 139-144.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|-------------------------|--|--|
| POC (mostly African-Am) | Los Angeles, California. 192 STD clinic patients most of who were African-Am. Increase familiarity and skill with condoms was a single group session (30 minutes) for men and women registered at the STD clinic. The brief condom skills education session was led by a female health educator during regular clinic hours at the STD clinic. | Compared with controls, men and women exposed to the group intervention in the STD clinic waiting room were approximately half as likely to return to the clinic within the next 12 months with a new STD. This was a significant decrease in return rates. Concern: Setting specific? |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Cohen, D., MacKinnon, D.P., et al. (1992) Group Counseling at STD Clinics to Promote Use of Condoms. *Public Health Reports* 107(6): 727-730.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|--|
| POC (mostly African-Am) Listed in the 2007 Updated Compendium – Promising Evidence (Doing Something Different) | Los Angeles, California. 426 STD clinic patients most of who were African-Am. Small group format while patients were waiting for their STD clinic appointments. Groups were 10 to 25 people per session. Led by African American female health educator – soap opera-formatted video showing condom use as socially acceptable, a facilitated group discussion on methods of preventing STDs and promoting condom use and role playing, skill-building exercises to enhance condom negotiation with sex partner. | The rate of STD re-infection was significantly lower for men who participated in the intervention than for men who did not participate in the intervention. <u>Concerns:</u> No effect for women. Setting specific? |

DiClemente, R.J., Wingood, G.M. (1995) A Randomized controlled trial of an HIV sexual risk-reduction intervention for young African-American Women. *Journal of American Medical Association* October 25; 274(16): 1271-1276.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| POC/ young women “SISTA Project” | Peer mediated 128 sexually active women aged 18-29. Five 2-hour weekly group sessions. Session focused on gender, ethnic prided, knowledge of HIV risk behaviors, prevention strategies, sexual assertiveness, modeling and role playing; correct condom use; norm setting exercises and coping skills, sexual self-control, communication skills, and practicum’s. This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064. | At 3-month follow-up. The social skills intervention was effective in increasing consistent condom use. |

El-Bassel, N., Schilling, R.F. (1992) 15- Month Follow-up of Women Methadone Patients Taught Skills to reduce Heterosexual HIV Transmission. *Public Health Reports* 107(5): 500-4

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------------------------|---|--|
| IDU/ POC (African-Am/ Hispanic) | 15-month follow-up of study summarized above (Schilling RF, EL-Bassel et al. (1991) Building Skills of Recovering Women Drug Users to Reduce Heterosexual AIDS Transmission. <i>Public Health Reports</i> 106(3): 297-304). | Compared to the information-only group, women in the skills-building group showed an increase in frequency of condom use at 15-month follow-up. The groups did not differ significantly in number of sex partners. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Eldridge, G.D., St. Lawrence, J.S., Little, C.E., et al. (1997) Evaluation of an HIV risk reduction intervention for women entering inpatient substance abuse treatment. *AIDS* 9: 62-77.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------|---|--|
| Women/Drug Use | 117 drug-using women court-ordered into inpatient drug tx. Compared effectiveness of an educational intervention and a behavioral skills training intervention at reducing sexual risk. Both groups reported high rates of sexual risk prior to intervention. | At 2-month follow-up, women in skills training groups showed improvement in communication skills, condom application skill, and condom use. Both groups showed decreased drug use and drug-related high-risk sex activity. Concern: short follow-up |

Gillmore, M.R., Morrison, D.M., et al. (1997) Effects of a skill-based intervention to encourage condom use among high-risk heterosexually active adolescents. *AIDS Education and Prevention* 9, Supplement A: 22-43.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| Youth | Total of 396 high-risk youth aged 14-19. Three interventions: comic book, videotape, and group skill-based training. | All had modest pre-post effects, but there were few differences between interventions at 3 and 6-month follow-up. |

Howard, M., McCabe, J. (1990) Helping teenagers postpone sexual involvement. *Family Planning Perspectives* 22:21-6.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| POC/ Youth | Eight graders (536) recruited through medical records. Intervention was peer-led 5 sessions, emphasis on postponing sexual involvement, discussing peer pressures, skill practice to resist pressure. | 18 month follow-up fewer students initiated sex in intervention group. Concern: Emphasis on postponing sex. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Hobfoll, S.E., Jackson, A.P. (1994) Reducing Inner-City Women's AIDS Risk Activities: A Study of Single, Pregnant Women. *Health Psychology* 13(5): 397-403.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------|--|---|
| Pregnant Women | 206 participants, who were single pregnant women, attended four 90-120 min. group sessions of 2-8 women, taped segments of assertiveness, negotiation, planning, and AIDS prevention skills including role plays, cognitive rehearsal, formulate health action plan. | 6 mo. Follow-up improvement in condom use for vaginal sex, condom and spermicide acquisitions for intervention and not for control. <u>Concern:</u> Applicability to non-pregnant persons. |

Jemmott, J.B., Jemmott, L.S., et al. (1992) Reductions in HIV risk-associated sexual behaviors among black male adolescents: Effects of an AIDS Prevention Intervention. *American Journal of Public Health* 82(3): 372-377

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| POC/ Youth (African Am) Listed in the 2007 Updated Compendium – Best Evidence (Be Proud! Be Responsible!) | 157 participated in 5-hour intervention based on theory of reasoned actions. Intervention provided information, video, games, exercises, and skills building. Other group was provided different subject matter presentation. | 3 mo. follow-up, fewer sexual partners in intervention group, more condom use and less anal intercourse. Cost-effectiveness data: Pinkerton SD, Holtgrave DR, and Jemmott JB (2000). Economic Evaluation of HIV Risk Reduction Intervention in African-American Male Adolescents. <i>JAIDS</i> 25(2): 164-72. |

Kalichman, S.C., Cherry, C. and Browne-Sperling, F. (1999) Effectiveness of a Video-Based Motivational Skills-Building HIV Risk-Reduction Intervention for Inner-City African American Men. *Journal of Consulting and Clinical Psychology* 67:959-966.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| African-American men Listed in the 2007 Updated Compendium – Promising Evidence (Nia) | 117 heterosexually active African-American men recruited from public clinic. Randomly assigned to either a 6-hr video-based small group motivational-skills intervention or a 6-hr video-based HIV education comparison group. | Men in motivational-skills group decreased rate of unprotected vaginal intercourse and used more condoms at 3 months. Both groups showed increased condom use at 6-month follow-up. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Jemmott, J.B., Jemmott, L.S., Fong, G.T. (1998) Abstinence and safer sex HIV risk reduction interventions for African-American Adolescents: A randomized controlled trial. *Journal of the American Medical Association* 279: 1529-36.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------------|--|---|
| African-American Youth | Randomized controlled trial with 3-, 6-, and 12-month follow-up. 659 male and female African-American 6 th and 7 th graders. 8 1-hour modules, adult facilitators or peer co-facilitators. Abstinence intervention stressed delaying intercourse or reducing frequency; safer sex intervention stressed condom use; control intervention concerned health issues unrelated to sexual behavior. | Abstinence: less likely to report sex at 3 months, but not at 6 or 12 months. Safer-sex: more consistent condom use than control at 3 months and higher frequency of condom use at all follow-ups. Among youth sexually experienced at baseline, safer-sex intervention reported less sex at 6 months and 12 months than other two groups and less unprotected sex at all follow-ups than control. No differences in intervention effects with adult facilitators compared with peer co-facilitators. |

Kelly, J.A., Murphy, D.A., et al. (1994) The effects of HIV/AIDS Intervention Groups for High-risk Women in Urban Clinics. *American Journal of Public Health* 84(12): 1918-1922

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------------|--|--|
| Women (African-American) | 197 women at urban primary care clinic randomly assigned to intervention or control. Intervention included four 90 min group sessions and 1-month group follow-up with 8-10 women in-group with two leaders. Provided information, role-plays, managing 'triggers', group problem solving and active support. Comparison group attended sessions on health topics unrelated to AIDS. | At 3-month follow-up, intervention group had increased communication and negotiation skills, decreased UVI, and increased condom use. Control group showed no change. Concern: short follow-up |

Walters, H.J., Vaughn, R.D. (1993) AIDS risk reduction among a multi-ethnic sample of urban high school students. *Journal of American Medical Association* 270(6): 725-730.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| POC/ Youth | School-based program with two intervention schools and two comparison schools, 1316 students. Six 1-hour lessons on AIDS facts, risk appraisal, personal values, norm change, role-play, negotiating skills, and how to use condoms. | Three month follow-up and change scores on knowledge, benefits, norms, self-efficacy and risk; unavailable for follow-up were riskier at baseline, modest effects on behavior. Concern: Setting specific? |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Kirby, D., Barth, R.P., et al. (1991) Reducing the risk: Impact of a new curriculum on sexual risk taking. *Family Planning Perspectives* 23(6): 253-263

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| Youth | School-based program conducted over 15 classroom periods, with teacher-led discussion and exercises where teacher and classroom peers modeled desirable behaviors. 23 classes in ten urban and rural school districts. | Intervention group had prolonged first onset of intercourse than control group. After 18 months, 29% of the intervention group had initiated intercourse compared with 38% of the control group. Outcomes regarding unprotected sex refer generally to birth control, not specifically to condoms. <u>Concerns:</u> Small effect, if any, for high-risk sexually active youths. Setting specific? |

Levy, J.A., Fox, S.E. (1998) The Outreach-assisted Model of Partner Notification with IDUs. *Public Health Report* 113(S-1): 160-9.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| Youth | School-based program with 15 school districts randomly assigned to 3 conditions a) parent interactive; b) parent non-interactive and c) wait list. Intervention was lecture, small group discussion, and skills building to: resist social pressures; obtain preventive practices, role-play, practice, and homework. 10 session provided to 7 th graders and 5 sessions provided to the 8 th graders. | Intervention groups use of condoms and foam from 14% to 24%. Had sex less often. No difference in use of condoms alone. <u>Concern:</u> Setting specific? |

Main, D.S., Iverson, D.C., et al. (1994) Preventing HIV Infection Among Adolescents: Evaluation of School-Based Education Programs. *Preventive Medicine* 23(4):409-417.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| Youth | School-based program conducted over 15 sessions (40 hours). Program consist of 3 HIV knowledge sessions, 2 normative determinates of risky behavior, one on teen vulnerability and eight on development skills to identify and manage risking situations. | At 6-month follow-up, sexually active students reported significantly fewer partners and greater frequency of condom use. <u>Concern:</u> Setting specific? |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Magura, S., Kang, S., et al. (1994) Outcomes of Intensive AIDS Education for Male Adolescent Drug Users in Jail. *Journal of Adolescent Health* 15(6): 457-463.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------------|---|--|
| Young POC/ drug users | NYC DOC Adolescent Reception and Detention Center. 157 youths aged 16-19, most were African-American or Hispanic. 4 1-hour small-group sessions of eight led by male counselor. Sessions focused on health education issues relevant to male adolescent drug users, with an emphasis on HIV/AIDS. Group activities included role-play and rehearsal techniques. | Youth in the intervention were more likely to use condoms during vaginal, oral or anal sex, had fewer high-risk sex partners, and had more favorable attitudes toward condoms than youth not in the intervention. <u>Comment:</u> None of youth admitted to using injection drugs. Curriculum focused on sexual risk reduction. |

Malow, R.E., West, J.A., et al. (1994) Outcome of Psychoeducation of HIV risk reduction. *AIDS Education and Prevention* 6(2): 113-125.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|--|
| POC/ Drug use (African American cocaine users) | 152 African American males at in-patient tx program participated in group-level sessions. Non-peer led, held for 2 hours over 3 consecutive days, 6-8 people. Sessions included HIV knowledge/risk; demonstrated cleaning works; condom use, condom negotiating, and skills-building exercises; and review and discussion of HIV testing procedures. | 47.5% of intervention group participants reported having more than one partner at three-month follow-up compared to 76% at the baseline. In the comparison group. The change from 76% at baseline to 59% at the follow-up was considered to be not statistically significant. Sexual risk taking decreased from 75% at baseline to 32% at follow-up. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

The National Institute of Mental Health (NIMH) Multisite HIV Prevention Trial Group (1998). The NIMH Multisite HIV Prevention Trial: Reducing HIV sexual risk behavior. *Science* 280: 1889-94.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| POC Listed in the 2007 Updated Compendium – Best Evidence (“light”) | Project Light . Randomized, controlled trial with 3 high-risk populations at 37 inner city, community-based clinics at 7 US sites. 1855 control and 1851 intervention participants, mostly African-American or Hispanic. Experimental condition: Small-group (5-15), twice weekly 7 session program, 90-120 minutes per session. Separate male and female groups. Co- led by a male and a female facilitator. Control condition: 1- hour AIDS education session that included videotape and Q&A period. | Both groups decreased frequency of unprotected sex at follow-up. Compared to controls, intervention group reported fewer unprotected sexual acts, had higher levels of condom use, and were more likely to use condoms consistently over a 12-month follow-up period. In intervention group, more sessions attended associated with greater behavior change. No difference in overall STD reinfection rate. Among men recruited from STD clinics, lower gonorrhea incidence at follow-up. |

Nyamathi, A.M., Flaskenis, J., et al. (1994) Evaluation of Two AIDS Education Programs for Impoverished Latina Women. *AIDS Education and Prevention* 6(4): 296-309.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------------------|--|--|
| POC Women drug using/ homeless | 858 women in homeless shelter participated. Control group receives 1-hour AIDS education and testing small group. The test group received a 2-hour program with testing individualized, behavior practices, coping, and self-esteem. Video in both groups. | At 2 weeks post test, both conditions associated with reduction in risk (injection drug use, non-injection drug use, and sexual activity with multiple partners). No effects of specialized intervention. <u>Concern:</u> Very short follow-up. |

O’Leary, A., Jemmott, L.S., et al. (1996) Effects of an institutional AIDS prevention intervention: moderation by gender. *AIDS Education and Prevention* 8 (6): 516-28.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------|---|---|
| College students | Low-intensity, institutional safer sex campaign at NJ college. Mailed sexual behavior surveys to 1 st year students at intervention and control campuses at beginning and end of year. | Men at intervention campus (vs. control) significantly reduced risky sexual encounters. Women did not. Women at intervention campus (vs. control) showed reduced self-efficacy to perform safe sex. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

| O'Donnell, C.R., O'Donnell, L., et al. (1998) Reductions in STD infections subsequent to an STD clinic visit: Using video-based patient education to supplement provider interactions. <i>Sexually Transmitted Diseases</i> 25(3): 161-168. | | |
|---|---|--|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| POC/ African Am and Hispanic males “VOICES/VOCES” Listed in the 2007 Updated Compendium – Best Evidence (VOICES/VOCES) | 2,004 adult males in South Bronx, New York. Tested video-based STD prevention. Random assignment to three groups: video plus discussion, video only, usual clinic services (control). Interactive session was small group format (three to eight patients) at the clinic and facilitated by an STD counselor. Two culturally sensitive videos (Let’s Do Something Different for African Americans and Porque Si for Hispanics). This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064. | Men who participated in experimental groups had significantly lower rates of new STD infection than those in comparison group. No difference between video only group and video plus discussion group. Clients with multiple sex partners experienced greatest effect. |

| O’Leary, A., Ambrose, T.K., et al. (1998) Effects of an HIV risk reduction project on sexual risk behavior of low-income STD patients. <i>AIDS Education and Prevention</i> 10 (6): 483-492. | | |
|--|--|---|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| POC (mostly African-Am) | 659 patients aged 17-44, at 7 public STD clinics in 3 eastern states. Mostly African-Am. Info and skill-building intervention consisted of 7 90-minute modules, derived from successful adolescent program. Control was existing counseling at clinics. Each group completed 90-minute interview of risk behaviors, etc. | Both groups showed significant risk reduction over time, but no difference between two groups. Authors suggest 90-minute interview may have enhanced subjects’ motivation to be safer. Also, elements from adolescent program may not have been relevant to adults. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Raj, A., Amaro, H., Cranston, K., et al. (2001). Is a General Women's Health Promotion Program as Effective as an HIV-Intensive Prevention Program in Reducing HIV Risk Among Hispanic Women? *Public Health Reports* 116: 599-607.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|---|
| Latina Listed in the 2007 Updated Compendium – Best Evidence (WHP) | Study included 162 Hispanic women ages 18 to 35, most of them low-income immigrants, in Boston area. Assessed whether participation in an HIV-intensive prevention program or in a general women's health promotion program led to greater risk reduction than being in the wait-list control group. Both interventions lasted 12 weeks (12 sessions of 90-120 minutes each) and were group-level interventions. | Measurements at baseline, intervention completion, and 3 months. Both interventions showed increased condom use at post-test and follow-up. HIV-intensive program participants also reported increased safer sex negotiation. Health promotion program participants reported increased HIV testing. |

Rhodes, R., Wolitski, R.J., et al. (1992) An experiential program to reduce AIDS risk among female sex partners of injection drug users. *Health and Social Work* 17:261-272.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------------------|--|---|
| Women (Sex partners of IDUs) | 69 women recruited through street outreach participated in 3 90-min group sessions held on consecutive days then a fourth session one week later and underwent HIV C/T. Sessions focused on AIDS education, condom use, needle cleaning, negotiation, problem-solving skills building; referrals; and post-intervention weekly support groups. | At immediate post-intervention, 91% reported having made positive changes to reduce AIDS risk and 68% of women who did not use condoms before intervention reported they had since entering intervention. (no statistical analysis) |

Rotheram-Borus, M.J., Koopman, C., et al. (1991) Reducing HIV sexual risk behaviors among runaway adolescents. *Journal of American Medical Association* 266(9): 1237-1241.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| POC/ Youth "Street Smart" Listed in the 2007 Updated Compendium – Promising Evidence | Non-random control 197 runaways. Small group sessions 90-120 min., 4 days/week. Each up to 30 sessions at least 3 private sessions, develop soap opera dramas, review videos, and skills coping. This intervention was outlined in CDC's Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064. | 3 and 6-month follow-up. Increased number of sessions associated with increased condom use, and decreased risk behaviors. An update of the intervention in 1997 CDC compendium shows similar results. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Schilling, R.F., EL-Bassel, N., et al. (1991) Building Skills of Recovering Women Drug Users to Reduce Heterosexual AIDS Transmission. *Public Health Reports* 106(3): 297-304.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| Women/ POC | 91 African-American and Hispanic women enrolled for at least 3 months in five clinics in large methadone maintenance program in NYC. Non-peer led skills-building groups held five 2-hour sessions offered to groups of 9-10. Topics included: HIV 101; identification of high-risk sexual practices; discussion of barriers to adopting safer sex practices; discussion of negative associations with condoms; condom use skills; role-played negotiation of condom use; assertiveness; problem solving; and communication skills involving safer sex scenarios. Comparison group received one session of AIDS information routinely provided by the clinic. | The skill-building intervention group showed statistically significant higher use of condoms than those in the control group at follow-up. Participants also more comfortable taking and carrying condoms, talking about safer sex with partners, had more favorable attitudes toward condoms. No drug use differences between groups. Comment: Initial follow-up was 2-week post. |

Schilling, R.F., Ivanoff, A., et al. (1994) HIV-related risk reduction among women offenders in jail and in the community. *X International Conference on AIDS*. 10,43

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------|---|--|
| Women/Drug Use | 159 Drug-abusing female offenders, approaching release from a 3-12 month sentence, were recruited from Rikers Island. Women were randomly assigned to (1) 8 group session conducted in prison and 8 individual session in the community post-release, focusing on AIDS information; condom use; needle-cleaning; and negotiation skills building and social support; or (2) an information-only | At follow-up, there was a trend for intervention participants to report greater condom use improvements. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Sikkema, K.J., Winett, R.A., et al. (1995) Development and Evaluation of an HIV-Risk Reduction Program for Female College Students. *AIDS Education and Prevention* 7(2): 145-159.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| College women | 43 heterosexual college women participated in four 75 to 90-min. sessions held over a one-month period with groups of seven to 10 participants. Female doctoral students served as group mediators. The intervention covered topics such as risk behavior education, behavioral self-management, assertiveness training, decision-making, safer sex negotiation, condom use and maintenance of risk-reduction behavior. The control group received one 90-min. session covering the same topics but using a didactic education approach. | The intervention was effective at improving one key determinant of sexual risk behavior: sexual assertiveness and communication skills. The skill-building participants showed greater improvement from baseline to the immediate follow up in overall assertiveness skill, in the sum of four components of skill and in two of the four components: acknowledgment of partners' request for sex and suggestion of alternative lower-risk behavior. Concern: Applicability of results to other (non-college, high-risk) populations. |

Shain, R.N., Piper, J.M., Newton, E.R., et al. (1999) A randomized, controlled trial of a behavioral intervention to prevent sexually transmitted disease among minority women. *New England Journal of Medicine* 340: 93-100.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| Women of Color Listed in the 2007 Updated Compendium – Best Evidence (Project S.A.F.E.) | 424 Mexican-American and 193 African-American women with nonviral STDs. Randomized trial. Intervention 3 weekly small-group sessions, 3-4 hours each. 5-6 women per group and female facilitator, all of same race/ethnicity. Sessions designed to help recognize personal susceptibility, commit to changing behavior, and acquire skills. Based on AIDS Risk Reduction Model. 6 and 12 month follow-up. | High rates of session attendance and retention in study. Rates of subsequent infection significantly lower in intervention group at both follow-ups. Comment: Very strong study design. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Stanton, B.F., Li, X., et al. (1996) A Randomized, Controlled Effectiveness Trial of an AIDS Prevention Program for Low-Income African-American Youth. *Archives of Pediatrics and Adolescent Medicine*. 150(4): 363-372.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|--|
| African-American youth Listed in the 2007 Updated Compendium – Promising Evidence (Focus on Kids) | Public Housing developments/rural campsites. 383 African-American youth, 9 to 15 years of age, in peer groups. 7 weekly sessions (1- 1/2 hour each) and one day-long session. Each session led by a pair of interventionists, recruited from the community, most of whom were African-American. Group sessions included communication and negotiating skills, value clarification, goal setting and peer norms. Small-group discussions, lectures, videos etc. In session 7 the group developed community projects with intervention messages. | Condom use in the short term (6 month after intervention) showed significant improvement for intervention youth compared with control youth. Long-term follow-up (2 years) showed that intervention youth were less likely than control youth to adopt a risk behavior, though they were not less likely to experiment with a risk behavior. <u>Concern:</u> Condom use difference disappeared at 12-month follow-up. |

St. Lawrence, J.S., Brasfield, T.L., et al. (1995) Cognitive-behavioral Intervention to Reduce African-American Adolescents' Risk for HIV Infection. *Journal of Consulting and Clinical Psychology* 63(2): 221-237.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|--|
| POC/ Youth (African- Am) Listed in the 2007 Updated Compendium – Best Evidence (Becoming A Responsible Teen) | Public health clinic serving low-income families in a mid-size southern US city. 246 inner-city youth ages 14-18. Intervention was 8 group sessions (1 1/2 to 2 hours each) of 5 to 15 participants. Group sessions were co-led by trained facilitators. The group members used role-playing techniques and practiced skills-building activities in smaller groups of two to three persons. Sessions included HIV/AIDS education; peer pressure and sexual decision making; communication and assertiveness skills-building activities; meeting an HIV positive youth; discussion on the most beneficial components of the intervention and how they increased self-efficacy. Control group received 2 hours of education. | Male and female adolescents who received the intervention increased condom use significantly. The males in the group also lowered their rates of unprotected intercourse to a greater extent than did males in the information-only intervention. The females, who received skills training, compared with those who received information only, decreased the frequency of unprotected intercourse. Thus, the skills training intervention was more successful both in lowering risky behaviors and in sustaining safe alternatives such as condom use among youth who remained sexually active. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

St. Lawrence, J.S., Brasfield, T.L., and O'Bannon, R.E. (2002). Reducing STD and HIV Risk Behavior of Substance-Dependent Adolescents: A Randomized Controlled Trial. *Journal of Consulting and Clinical Psychology* 70(4): 1010-1021.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| Youth | Conducted in Mississippi with high-risk adolescents in two residential drug treatment programs. Assessed 3 interventions designed to increase safer sex behaviors of substance-dependent adolescents. Mixed gender cohorts of 6 to 10 adolescents met three times each week over a 4-week period for a total of twelve 90-minute sessions. Total N=161 participants (68% male, 75% white, 22% African American). Randomly assigned to either a health information intervention (I only); information plus behavioral skills safer sex training (i.e., correct condom use, partner negotiation, refusal of unwanted sexual invitations, and peer information provision) (I+B); or the same experimental condition plus a motivation component that confronted adolescents' illusion of invulnerability and then emphasized their ability to prevent the negative outcome (I+M+B). The intervention conditions were in addition to the existing drug treatment programs. | Assessments at baseline, 6 months, and 12 months. The I+B and I+M+B conditions, as compared with the I only condition: (a) produced more favorable attitudes toward condoms; (b) reduced the frequency of unprotected vaginal sex; and (c) increased behavioral skill performance, frequency of condom-protected sex, percentage of intercourse occasions that were condom protected, and number of adolescents who abstained from sex. The I+M+B intervention was more resistant to decay. |

Susser, E., Valencia, E., et al. (1998) Human immunodeficiency virus sexual risk reduction in homeless men with mental illness. *Archives of General Psychiatry*. 55 (3): 266-72.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| Homeless men | 97 men (of 116 eligible) from a psychiatric program at a homeless shelter participated in a randomized clinical trial. Most were African-American with a chronic psychotic disorder and substance use disorder. Two arms: 15-session group intervention or 2-session control intervention. Observed for 18 months. | For 59 participants who were sexually active before the trial, experimental groups mean score on sexual risk index was 3 times lower than control group's at 6 months and 2 times lower at 18 months. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Wenger, N.S., Greenberg, J.M., et al. (1992) Effect of HIV Antibody Testing and AIDS Education on Communication About HIV Risk and Sexual Behavior. *Annals of Internal Medicine* 117(11): 905-911.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------|---|---|
| College students | 435 university students at outpatient student health clinic. Consisted of a multimedia presentation in a single 1-hour small-group session. Led by physicians familiar with HIV counseling. The session began with an 11 min video, 15 min scripted lecture (AIDS 101, routes of transmission, and safer sex behaviors, obstacles to using condoms, communication with sex partners, and the role of drugs and alcohol in promoting unsafe sex behaviors). Following the lecture, participants engaged in 15 minutes of role-play and 15 minutes group discussion. Students randomly assigned to get HIV testing. | After 6 months, heterosexual university student who received education about HIV infection plus HIV testing were more likely compared with students in the control group to increase communication with their sexual partners about the risk of HIV infection. No difference in condom use or number of sexual partners. Concern: Applicability of results to other (non-college, high-risk) populations. |

DiClemente, RJ, Wingood, GM, Harrington, KF, et. al., Efficacy of an HIV Prevention Intervention for African American Adolescent Girls: A randomized controlled Trial. *JAMA* 2004;292:171-179

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| African American adolescent females Listed in the 2007 Updated Compendium – Best Evidence (SiHLE) | The objective of this study was to evaluate the efficacy of an intervention to reduce sexual risk behaviors, STDs and pregnancy, and enhance mediators of HIV prevention behaviors. The social cognitive theory and the theory of gender and power were the theoretical frameworks for this intervention. The intervention was conducted in Alabama between 1995 and 2002; 522 of the females (14-18 years old) were eligible, participated and were assigned to the general health promotion condition (two sessions emphasizing nutrition and two sessions emphasizing exercise) or the HIV prevention intervention group (session 1 - ethnic pride; session 2 - awareness of HIV risk; session 3 - enhanced confidence in initiating safer sex conversations; and session 4 - importance of healthy relationships). The sessions of both conditions lasted four hours each. | The 6 & 12 month assessments revealed intervention participants were more likely to report: using condoms consistently in the 30 days prior to the assessments; using condoms consistently during the 6 months prior to the assessment; significantly higher percentage of condom protected sex acts in the 30 days and 6 months preceding the assessments; significantly fewer unprotected vaginal intercourse episodes in the 30 days and 6 months prior to the assessment; and higher frequency of putting condoms on their partner. |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Ehrhardt AA, Exner TM, Hoffman S, et al. A gender specific HIV/STD risk reduction intervention for women in a health care setting; short and long term results of a randomized clinical trial. *AIDS Care*. 2002;14:147-161

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|---|
| <p>Heterosexual Women</p> <p><u>Added to matrix in 2007</u></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Project FIO (8 session))</p> | <p>The desire of this study was to assess the short and long term effects of a gender specific intervention for women. This group-level intervention, a randomized trail called Project FIO (The <i>Future Is Ours</i>), was based on the AIDS Risk Reduction Model modified specifically to address women’s risk. The researchers also examined dosage effects by comparing an eight and four-session intervention against control conditions. From January 1994 – September 1996, 360 women were recruited from a Planned Parenthood Clinic in Brooklyn, New York. The gender-specific intervention was designed to decrease unsafe sexual practices. The eight and four session interventions shared the same format which consisted of 2-hour small group sessions. Participants discussed one topic during each eight session intervention, while participants of the four session intervention discussed two topics during each session. Sessions discussed: 1) Why should I care about getting STDs and HIV?; 2) How do I avoid partners who don’t care?; 3) What’s the best way to protect myself?; 4) How can I find out if we are infected?; 5) How do I ask my partner to use protection?; 6) How do I influence my partner to use protection?; 7) How do I refuse sex or unprotected sex?; and 8) How do I continue protecting myself and others?</p> | <p>Women were assessed at one, six, and 12 month intervals using a structured format which included both closed and open-ended items. Two analyses were conducted for each intervention conditions; the first analysis included all women and the second included only “women at risk”. During the one-month assessment, relative to women in control group, those assigned to the eight-session intervention had almost twice the odds of staying safe or improving at follow-up. There were approximately 3 ½ fewer unprotected occasions in the eight session intervention group. Compared to participants in the control group, one year after the intervention, women assigned to the eight-session group had 65% greater odds of maintaining or improving safer sex behavior; averaged four fewer unprotected vaginal and/or anal intercourse occasions; and twice as likely to stay safe or improve. There was not a significant effect of being in the four-session intervention. In contrast to the findings of the eight session intervention, the researches found that their results were inconclusive on the question of whether a four session intervention for women attending a family planning clinic can effectively reduce the woman’s risk.</p> |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Hobfoll SE, Jackson AP, Lavin RJ, Schroder KE. Effects and Generalizability of Communally Oriented HIV-AIDS Prevention Versus General Health Promotion Groups for Single, Inner-city Women in Urban Clinics. *Journal of Consulting and Clinical Psychology*. 2002; 70:950-960.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| <p>Low-income Women</p> <p><i>Added to matrix in 2007</i></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Community Efficacy-AIDS Prevention)</p> | <p>The goal of this intervention was to increase the negotiations skills among single inner-city women. The Social Learning Theory was the foundation for this intervention; special emphasis was placed on the women’s sense of communal effectance (efficacy stemming from membership in families and communities that depend on them, that they depend on, and with whom they share intimate, loving ties). The research occurred between 1995 and 1999 at two clinics serving low cost populations. Approximately 1,177 single or short-term cohabitating women, between 16 and 29 years old, were recruited; 935 women met criteria and agreed to participate in the intervention.</p> <p>Women were randomly assigned to the HIV prevention group (361), the health promotion group (368) or the standard care group (206); assignment occurred prior to the baseline interview. The AIDS Prevention Intervention consisted of 6 small group sessions. Each session included two guided fantasies about expected future life if safer sex was followed and if they are not followed and HIV infection occurred. The Health Promotion Group received information about the negative consequences of smoking, alcohol, and drug use, with less than 5% information about safer sexual behavior. The Standard Group participants were offered a briefer knowledge behavioral competency intervention and these women received the standard care offered by the clinic. Women in each condition received “credit cards” to obtain condoms.</p> | <p>In comparison with those who received the health promotion intervention and those who received the standard care, the women who received the AIDS Prevention intervention reported greater and more consistent behavior change. Those in the health promotion group made more changes than those in the standard group, but to a limited degree. Learning behavioral skills in the context of HIV risk and prevention is critical. AIDS Prevention participants were more effective than the health promotion participants in motivating women to use the “credit card” to obtain condoms and showed objectively tested reductions in STD prevalence. One of the limitations of the study is that it only included single women and not in long-term relationships. It may be more difficult to motivate women in long-term relationships.</p> |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Wu Y, Stanton BF, Galbraith J, et al. Sustaining and Broadening Intervention Impact: A Longitudinal Randomized Trial of 3 Adolescent Risk Reduction Approach. *Pediatrics*. 2003;111:e32-e38

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| <p>African American low-income Adolescents</p> <p><u>Added to matrix in 2007</u></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Focus on Kids (FOK) plus ImPACT)</p> | <p>This three-celled intervention was conducted among 817 youth from 35 different sites on Baltimore, MD. The objective was to determine if the addition of parental monitoring alone or with “boosters” could enhance the effects of small group face-to-face intervention. All youth received the “Focus on Kids” (FOK) intervention. FOK is a face-to-face small group HIV risk reduction intervention delivered to adolescents in 8 sessions over a two month period. The evaluated intervention, which is based on the social cognitive and protective motivation theories, demonstrated a significant impact on the rates of protected sexual intercourse 6 months after the intervention. The impact was no longer apparent 12 months after the intervention. After completion of the FOK intervention, 496 youth were randomly assigned to receive the “Informed Parents and Children Together” (ImPACT) intervention; as implied by the name, this intervention included parental involvement. The intervention was conducted in the youth’s home. Both the youth and their parent viewed a 20 minute video which emphasized several concepts of parental monitoring and communication. Following the video, the interventionist facilitates two role play vignettes. After the role play and critique, another 20 minute video was viewed which described the process for establishing and implementing career goals. Immediately after the six month assessment, 238 ImPACT participants were randomly assigned and given “booster” sessions at the 6 and 10 month follow-ups. The sessions consisted of review of activities provided in the primary session and a few new activities that reviewed the content of the original program.</p> | <p>At the 6th month follow-up, the youth in families who were assigned to the FOK plus the ImPACT interventions, reported significantly lower rates of sexual intercourse, sex without a condom, alcohol use, and cigarette use and marginally lower rates of “risky sexual behavior”. At the 12 month assessment, rates of alcohol and marijuana use were significantly lower and cigarette use and overall risk intention were marginally lower among the FOK plus ImPACT youth compared to the FOK only youth. Crack/cocaine and drug selling were significantly lower in the youth who received the 7 and 10 month “booster” sessions. However, the rates of other risk behaviors and intentions did not differ significantly.</p> |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Carey, MP, Carey, KB, Maisto, SA, Gordon, CM, Schroder, KE, Venable, PA. Reducing HIV Risk Behavior Among Adults receiving Outpatient Psychiatric Treatment: Results from a Randomized Controlled Trial. *Journal of Consulting and Clinical Psychology*. 2004 April; 72(2): 252-268

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|--|
| <p>Mentally Ill</p> <p><i>Added to matrix in 2007</i></p> <p>Listed in the 2007 Updated Compendium – Best Evidence (HIP)</p> | <p>This HIV risk reduction intervention was developed using the information-motivation-behavioral skills model and the guide. The sample of 408 participants was drawn from two not-for-profit outpatient psychiatric clinics in Syracuse, New York. Participants were randomly assigned to: the HIV risk reduction (HIV), the substance use reduction (SUR), or the standard care control group (SCCG). The HIV and SUR interventions shared the same conceptual foundation and participants attended two sessions a week for five weeks (total of 10 sessions). The essential differences between the two interventions involved the risk behaviors that were targeted. The participants assigned to the SCCG received outpatient psychiatric care; this included medications, psychotherapy, case management services, and HIV and substance use medication which was hospital mandated as a standard of care.</p> | <p>Assessments were completed 1 to 2 weeks post intervention delivery and approximately 3 and 6 months after the last initial post intervention assessment. Compared to participants in the SCCG and the SUR, those in the HIV group showed significant stronger decrease over time in the frequency of unprotected vaginal sex, number of casual partners, and they increased the number of communications about safer sex. They also reduced the total number of partners compared to those in the SCCG group (there was not a significant difference between the HIV and SUR groups). Outcome analysis determined that the small group intervention helped psychiatric outpatients increase their HIV related knowledge. Self-reporting and brief follow-up were two of the limitations mentioned by the researchers.</p> |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|--|
| <p>Baker, SA, Beadnell, B, Stoner, S, et. al. Skills Training versus health Education to prevent STDs/HIV in Heterosexual women: A Randomized Controlled trial Utilizing Biological Outcomes. <i>AIDS Education and Prevention</i>. 2003; 15:1-14</p> <p>Added to matrix in 2007</p> <p>Listed in the 2007 Updated Compendium – Best Evidence (CHOICES)</p> | <p>The purpose of this study was to compare two equivalent length interventions. One was a skills training intervention and the other was a health education intervention. Low-income women, in Seattle-King County, Washington, were recruited through clinics, service organizations, and the media. Of the women recruited through the various methods, 287 women returned all pretest materials, were enrolled, and were randomly assigned to either the skills training or the health education intervention. Both interventions consisted of 16 weekly 2-hour group sessions. The skills training intervention was based on the relapse prevention theory and was informed by quantitative and qualitative data collected from at risk women in the community. Each session included didactic presentations, discussion, and group exercises; an emphasis was places on the use of role-play to practice skills for safer sex. The health education intervention was designed by a local health department AIDS/STD health educator. Sessions included didactic presentations on women’s health; the focus was on sexual health and nonstructural time for discussion.</p> | <p>Overall, the findings favored the skills training intervention compared to the health education intervention. Nearly 50% fewer of the women in the skills intervention acquired a new STD in the 12 months following the intervention, demonstrated significant increase in risk reduction skills, demonstrated a decrease in self-reporting risky behavior, and maintained those improvements. Even though the findings supplied evidence for the efficacy of cognitive behavioral intervention, the researchers thought it remained unclear how may sessions would promote a change in behavior and in maintaining that changed behavior.</p> |

Effective Interventions for Heterosexuals

Group-level Interventions (continued)

Wingood, Gina M, MPH, ScD, DiClemente, Ralph J, PhD, Harrington, Kathy F., MPH, MAEd, et. al. Efficacy of an HIV Prevention Program Among Female Adolescents Experiencing Gender-Based Violence. *American Journal of Public Health*. June 2006, Volume 96, Number 6 1085 - 1090

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|--|
| <p>African American female Adolescents</p> <p><u>Added to matrix in 2007</u></p> | <p>The objective of this study was to examine the efficacy of an HIV prevention intervention among African American female adolescents who reported a history of gender-based violence. The social cognitive theory and the theory of gender and power were the theoretical frameworks for this intervention. The intervention was conducted in Alabama between 1995 and 2002; 522 of the females (14-18 years old) were eligible, participated and were assigned to the general health promotion condition (two sessions emphasizing nutrition and two sessions emphasizing exercise) or the HIV prevention intervention group (session 1 - ethnic pride; session 2 - awareness of HIV risk; session 3 - enhanced confidence in initiating safer sex conversations; and session 4 - importance of healthy relationships). The sessions of both conditions lasted four hours each.</p> | <p>This analysis focused on a subset of 146 (73 randomly assigned to each study condition) women who participated in the “<i>Efficacy of an HIV Prevention Intervention for African American Adolescent Girls: A randomized controlled Trial</i>”. These participants had reported a history of gender-based violence during the baseline assessment. The intervention demonstrated that among young women who had reported a history of gender violence, the HIV prevention intervention led to substantial reductions in HIV associated sexual behaviors, resulted in favorable changes in theoretically derived psychosocial mediators, and reduced the frequency of STDs. Another noteworthy finding there was not an increase in the incidence of abuse during the 12 month follow-up period for participants of the HIV prevention intervention. Limitations noted by the researchers were: analysis included only a subgroup of the overall study, participants were limited to sexually experienced African American adolescent girls recruited from clinic venues (findings may not be applicable to females with different risk profile (i.e. IDU history)), relapse messages should be included to reinforce educational messages, the limited definition of gender-based violence did not include forms associated with HIV risk taking, and measures did not assess a defined period of time.</p> |

Effective Interventions for Heterosexuals

Group-level Intervention (continued)

Jemmott, L.S., PhD, Jemmott, J.B. III, PhD, and O'Leary, A., PhD. Effects on Sexual Risk behavior and STD Rates of Brief HIV/STD Prevention Interventions for African American Women in Primary Care Settings. *American Journal of Public Health*, June 2007, Vol. 97, Number 6 1034 - 1040

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| <p>African American women</p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Sister to Sister)</p> | <p>The purpose of “<i>Sister-to-Sister: The Black Women’s Health Project</i>” was to test the efficacy of a brief risk reduction intervention for African American women in a primary care setting. The behavioral foundation for the intervention was the social cognitive theory. This study was conducted in Newark, New Jersey between March 1993 and November 1996. Five hundred and sixty- four African American women who sought care at a large clinic were randomly assigned to one of 4 intervention conditions or the control group. The intervention was designed to be educational, entertaining, culturally sensitive and gender appropriate. Intervention #1 – a one-on-one HIV/STD skill building intervention that involved a 20 minute session tailored to the specific needs of each participant. This intervention was designed to increase condom use and negotiation of condom use. Intervention # 2 – a one-on-one HIV/STD information intervention was a 20 minute session designed to increase knowledge about transmission and prevention and personal vulnerability. Intervention # 3 – this was a 200 minute HIV/STD behavioral skills building group-level intervention conducted with 3-5 participants. The intervention was designed to increase skills regarding condom use and the allay concerns about adverse effects of condom use on sexual enjoyment. Intervention #4 - this was a 200 minute HIV/STD information intervention. This intervention was designed to increase perception of vulnerability to HIV/STD and increase knowledge about HIV/STD transmission and prevention. The control group received a general health promotion intervention that did not focus on HIV/STD risk behavior, but on behaviors associated with cancer, stroke and heart disease.</p> | <p>Strengths: Women were surveyed prior to participating in the intervention condition to which they were assigned, and at 3, 6, and 12 month after completion. Based on self-reporting, the researchers concluded that a brief culturally sensitive cognitive behavioral skills building intervention not only reduced HIV/STD risk behaviors of African American women, but behavioral changes could be sustained for a relatively long period. Limitations: The primary outcome, sexual behavior, was measured with self-reports. They felt this might have been unintentionally or intentionally inaccurate.</p> |

Effective Interventions for Heterosexuals

Group-level Intervention (continued)

Dilorio, C, PhD, McCarty, F., PhD, et. al. REAL Men: A Group-Randomized Trial of an HIV Prevention Intervention for Adolescent Boys. *American Journal of Public Health*, June 2007, Volume 97, Number 6. Pages 1084 - 1089

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| Adolescent boys ages 11-14 (and their fathers) | <p>The primary focus of this study was to test the efficacy of an intervention to promote the delay of sexual intercourse. Fathers and son were recruited from seven Boys and Girls Clubs in Atlanta to participate in the intervention called REAL (Responsible, Empowered, Aware, Living) Men; REAL Men is based on the social cognitive theory. Of those eligible, 277 fathers (or father figure) and their sons (554 total participants) completed the baseline interview and were enrolled in the study. Participants were randomly assigned to one of the 4 intervention sites or one of the 3 control sites. Intervention group - Fathers attended the first 6 2-hour sessions without their sons. During the sessions, they received information on communication with adolescents, general topics such as parental monitoring and relationships with peers, general sexual topics important in adolescents, and specific information about transmission and prevention of HIV and AIDS. The sons attended the 7th and final session with their father. Control group – Like the intervention group, the fathers attended the first 6 sessions without their son. However, they focused on and discussed basic facts about nutrition (e.g. benefits of maintaining a healthy lifestyle and eating fruits and vegetables, how to read food labels, etc.) and exercise (benefits and barriers). The sons attended the 7th and final session with the father.</p> | <p>Strengths: Creating public health messages directed to fathers can be a first step in encouraging them to educate their sons about HIV. Based on the self reporting at the 3, 6, and 12 month interview, the findings showed that involving fathers can be effective in promoting HIV prevention practices among adolescent males. The intervention demonstrated some success in reducing the initiation of sexual intercourse at the 6 month follow up. There was a more striking difference between the intervention and control group in the proportion of sexual active adolescents who failed to use a condom each time they had sexual intercourse. These findings were noteworthy because condom use was introduced and discussed in only 1 session. There was no more emphasis placed on this form of protection than delaying the initiation of sexual intercourse.</p> <p>Limitations: The sample size, self-reporting measures, length of the intervention, and the use of site as opposed to individual randomization were noted in the article.</p> |

Effective Interventions for Heterosexuals

Group-level Intervention (continued)

Jemmott, J.B III, PhD, Jemmott, L.S., PhD, Braverman, P.K., MD, and Fong, G.T., PhD. HIV/STD Risk Reduction Interventions for African American and Latino Adolescent Girls at a Adolescent Medicine Clinic. *Archives of Pediatrics & Adolescent Medicine*. May 2005, Vol. 159 No 5, pages 440-449.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|---|--|
| <p>African American and Latino Adolescent Girls</p> <p>Listed in the 2007 Updated Compendium – Best Evidence (Sisters Saving Sisters)</p> | <p>The objective was to determine the efficacy of a skilled-based risk-reduction intervention in reducing self-reported unprotected sexual intercourse. The basis for the interventions was the cognitive behavioral theory and formative research conducted with the desired population. This randomized control trial was conducted at a hospital adolescent medicine clinic serving African American and Latino adolescent females. A total of 682 sexual experienced 12-19 year old adolescent girls were recruited. Based on a computer generated randomly number sequence, the girls were stratified by age and assigned to one of three <i>single</i> session intervention conditions. Each intervention involved 250 minutes of group discussion, videotapes, games, and exercises. Interventions were: 1) <u>Information based HIV/STD risk-reduction</u> - Among other topics, this intervention addressed elevated rates of HIV/STD, HIV transmission, personal vulnerability, and myths about condom use; 2) <u>skill-based HIV/STD risk-reduction</u> – Among other topics, this intervention addressed beliefs relevant to HIV/STD risk reduction, illustrated correct condom use, depicted effective condom negotiation, practiced correct condom use and engaged in role play; or 3) <u>health-promotion control</u> – Among other topics, this was designed to be as valuable and enjoyable as the others, it covered beliefs and skills relevant to behaviors associated with risk for heart disease, cancer, and stroke. Other health related topics (e.g. physical activity, breast self-examination, alcohol use, etc) were discussed.</p> | <p>Strengths: All participants gave high ratings of how much they liked their intervention, how much they learned, and the extent to which they would recommend it to others. The interventions did not differ significantly at the 3 or 6 month follow-up concerning unprotected sexual intercourse (USI). At 12 months, the skill-based intervention group reported less frequent USI than those in the other two interventions. The skill-based group reported fewer sexual partners, less likely to have multiple partners, lower frequency of sexual intercourse while intoxicated, less likely to have an STD, and scored higher in the post intervention conceptual mediator variables. Findings were consistent with growing evidence that interventions based on theoretical framework, formative research, and that provide risk reduction skills are effective.</p> <p>Limitations: Self-reporting measures; participants were African American and Latino adolescent girls, not sure if familiar findings with adolescent boys or adolescents from other Latino backgrounds.</p> |

Effective Interventions for Heterosexuals

Group-level Intervention (continued)

Villarruel, A.M., PhD, Jemmott, J.B III, PhD, Jemmott, L.S., PhD, RN. A Randomized Control Trial Testing and HIV Prevention Intervention for Latino Youth. *Archives of Pediatrics & Adolescent Medicine*. Aug, 2006, Vol. 160 Number 8, pages 772-777.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|---|
| Latino Youth Listed in the 2007 Updated Compendium – Best Evidence (!CUIDATE! (Take Care of Yourself)) | The objective of this intervention was to reduce sexual risk behavior among Latino adolescents. Of the 684 adolescents eligible to participate, data analysis is for 553 self-identified Latino adolescents in this intervention that was called “ <i>Cuidate!</i> (Take Care of Yourself) The Latino Youth Health Promotion Program”. Participants were randomly assigned to one of the two conditions. Both the HIV risk-reduction and health-promotion interventions were similar in organization, format, length (six 50 minute modules) and mode of delivery (mixed gender in English and Spanish). Each intervention involved small group discussion, videos, interactive exercises, and skill building activities. The HIV risk-reduction curriculum was an adaptation of <i>Be Proud! Be Responsible!</i> and was similarly based on social cognitive theory and theory of reasoned action and planned behavior. The intervention also incorporated salient aspects of Latino culture. Abstinence and condom use were presented as culturally accepted and effective ways to prevent STDs, including HIV. The health-promotion intervention focused on behaviors related to significant health issues affecting Latinos. Those included: diet, exercise, and cigarette, alcohol, and drug use. | Strengths: Data was collected pre-intervention, immediately after completion of the two-day intervention, and 3, 6, and 12 month after completion of the intervention. The HIV risk-reduction intervention participants were less likely to report having had sexual intercourse and less likely to have had multiple partners in the past 3 months. The data analysis also indicated that adolescents that participated in the HIV risk-reduction intervention were less likely to report having sexual intercourse in the past three months during follow-up. They were also more likely to report consistent use of condoms and less likely to report days of unprotected sex. Limitations: The outcome measures were based on self-reporting. Most participants were of Puerto Rican descent, attending school, and living in Philadelphia and were self-selected; further research is needed to determine if the outcomes are generalizable to other Latino youth. |

Effective Interventions for Heterosexuals

Group-level Intervention (continued)

| Peragsllo, N., DeForge, B., O'Champo, P., Lee, S.M., Kim, J., Cianelli, R., et. al. (2005) A randomized clinical trial of and HIV-risk-reduction intervention among low-income Latina women. <i>Nursing Research</i> , 54 108-118. | | |
|--|---|---|
| Subpopulation | Researched Intervention Design | Evaluated Outcome |
| <p>Low-income Latina women</p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (Salud, Educacion, Prevention, y Autocuidado (SEPA))</p> | <p>The purpose of this study was evaluating a culturally tailored intervention to prevent high HIV-risk sexual behavior. The theoretical base of this intervention was the social cognitive theory. Additionally, feedback from focus groups and previously evaluated interventions (Kelly et. al, 1994 (page 62 full document) and the National Commission on AIDS 1993) was used as a basis for the intervention content. Between February 1999 and October 2000, 657 females were recruited and met the criteria to participate in this study; Mexican and Puerto Rican Latina living in Chicago were the primary populations recruited. Flyers (English and Spanish) placed in various locations, public service announcements, advertisements in free Latina newspapers, and referrals from participants were the methods used to recruit members of the desired population. The women were randomly assigned to the intervention or the control group. Regardless of the assignment, all women received counseling concerning HIV testing and received a pamphlet that provided all of the free HIV testing locations in Chicago. Those Latinas assigned to the intervention conditions were scheduled to participate in: session 1: Importance of HIV/AIDS awareness in your community & knowing your body; session 2: Understanding and preventing HIV/AIDS and sexually transmitted diseases; session 3: Myths and misconceptions about condoms and how to use condoms correctly; session 4: Negotiating safer sex practices; session 5: Prevention of violence; and session 6: Partner communication, review of previous sessions, and benefits of behavior change.</p> | <p>Strengths: The Latinas that attended three or more sessions were followed for the 3 or 6 month interview. The attendance of session three, which exposed the participations to condom use, was felt to be important. At the baseline, three months, and six months the control and intervention groups were compared for the following: 1) communication with partner; 2) HIV behavioral knowledge; 3) safer sex peer norms; 4) perceived barriers for condom use; 5) risk-reduction behavioral intention; and 6) condom use. At baseline, there was no substantial difference between the intervention and control groups on the six items. However, at three months the intervention group participants: increased HIV knowledge, partner communication, risk reduction behavior intentions, and condom use. There was a decrease in perceived barriers to condom use. The intervention did not alter peer safer sex norms. Limitations: Inability to obtain all data on all individuals who were recruited.</p> |

Effective Interventions for Heterosexuals

Group-level Intervention (continued)

Bryan, A.D., Aiken, L.S., & West, S.G. (1996). Increasing condom use: Evaluation of a theory-based intervention to prevent sexually transmitted diseases in young women. *Health Psychology, 15*, 371-382.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|--|
| <p>Female College Students</p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (Condom Promotion)</p> | <p>The objective of this intervention was to increase condom use. The health belief model was the foundation for the segment concerning beliefs about STDs. As partial fulfillment of an introductory Psychology class at a Texas University, 198 unmarried female undergraduate students participated in the study. They were solicited to take part in an experiment dealing with health related topics that were related to young women. Participants were randomly assigned to one of the two arms of the study. The control program (stress management) was one 45 minute intervention unrelated to STDs. The used an interactive format between the presenter & the participants and group participation in stress-reducing behavior exercises. The experimental program (condom promotion) was one 45 minute safer sex intervention. The program used videotape, lecture, and audience participation in discussion and skill-building exercises. The components of the intervention targeted construct in the psychosocial model of condom use (perception about sexuality, beliefs about sexually transmitted diseases, and self-efficacy for condom use). Both conditions were measured before the intervention, immediately after the intervention, six weeks after the intervention, and six months after the intervention. The six week and six month interviews were accomplished telephonically.</p> | <p>Strengths: <i>Six Week Follow-up Interview</i> – Seventy-nine percent of the experimental and seventy-seven percent of the control condition participants completed the interview. Results of the measured behavioral outcomes were reported. More participants in the experimental condition: carried condoms, practiced how to bring up the topic of condom use with a potential partner, intention to use condoms was higher, practiced ways to request condom use with a potential partner, and reported using a condom during their most recent sexual encounter.</p> <p><i>Six Month Follow-up Interview</i> - Seventy-three percent of the experimental and seventy-three percent of the control condition participants completed the interview. Of the participants who had intercourse since the 6 week follow-up, more participants from the experimental group had used a condom during their most recent sexual encounter. Limitations: Some of the limitations mentioned were: the assessment relied on self-reporting measures, did not measure final outcome measures at pretest, and the sample size for assessing behavioral outcomes was small.</p> |

Effective Interventions for Heterosexuals

Community -level Interventions

The CDC AIDS Community Demonstration Projects Research Group (1999) Community-level HIV intervention in 5 Cities: Final outcome data from the CDC AIDS Community Demonstration Projects. *American Journal of Public Health* 89: 336-45.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|-------------------|--|--|
| Multiple sub-pops | Role model stories distributed with condoms and bleach by community members who encouraged behavior change. Quasi-experimental design. Over 3 years, 15,205 interviews conducted with 10 intervention and comparison community pairs. Outcomes measured on stage-of-change scale. <u>Sub-populations</u> : IDUs, their female sex partners, sex workers, NGI MSM, high-risk youth, residents of areas with high STD rates. | By end of intervention, 54% of persons interviewed in intervention communities had been exposed to materials in past 3 months. Consistent condom use with main and non-main partners, esp. for VI, and increased condom carrying, greater in intervention communities. At individual level, respondents recently exposed to intervention more likely to carry condoms and to have higher stage-of-change scores for condom and bleach use. |

Lauby, J.L., Smith, P.J., Stark, M., et al. (2000) A community-level HIV prevention intervention for inner-city women: Results of the Women and Infants Demonstration Projects. *American Journal of Public Health* 90 (2): 216-222.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|--|
| Women (mostly African-American) “Real AIDS Prevention Project (RAPP)” | Low-income, primarily AA women in 4 urban communities. Pre-post surveys in matched intervention and comparison communities. Targeted sexually active. Activities: development and distribution of prevention materials, mobilization of peer network of community volunteers, delivery of prevention messages by trained outreach specialists through individual contacts and small-group activities. Role model stories. A total of 225-240 women interviewed in each intervention and comparison community in each wave of survey. This intervention was outlined in CDC’s Procedural Guidance for selected strategies and interventions for CBOs under Program Announcement 04064. | After 2 years, significant increase (11 pct pts) in rates of talking with main partner about condoms, also significant increase (13 pct pts) in proportion who had tried to get main partners to use condoms. Almost significant (p=054) decrease (9 pct pts) in never using condoms. Effects stronger for women who reported exposure to intervention. No intervention effects for condom use during most recent sex or for consistent condom use, but both groups increased over time. Trends for condom use for other partners similar but not significant. |

Effective Interventions for Heterosexuals

Community-level Interventions (continued)

Sellers, D., McGraw, S., et al. (1994) Does the promotion and distribution of condoms increase teen sexual activity? Evidence from an HIV prevention program from Latino youth. *American Journal of Public Health* 84(12): 1952-1959.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|----------------------|---|--|
| POC/ Youth (Latinos) | 18-month community based program promotes and distributes condoms, workshops, group discussion, presentations, conversing, poster, and newsletters. | Purpose of study to see if condom distribution increases sexual activity. 18-month follow-up. Males in intervention city less likely to become sexually active, girls less likely to report multiple partners. Concern: Applicability. |

Sikkema, K.J., Kelly, J.A., Winett, R.A., et al. (2000) Outcomes of a randomized community-level HIV prevention intervention for women living in 18 low-income housing developments. *American Journal of Public Health* 90: 57-63.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|------------------|--|--|
| Low-income women | 690 low-income women living in 18 housing developments. Community-level intervention in 5 US cities. HIV risk reduction workshops and community prevention events implemented by women who were popular opinion leaders. | At 12-month follow-up, proportion of women who had any UI decreased and percentage of protected sex acts increased in intervention group. Little behavior change in control group. |

Tross, S., Abdul-Quader, A.S., Simons, P.S., Sanchez, M., Silvert, H.M. (1993). Evaluation of a peer outreach HIV prevention program for female partners of injecting drug users (IDUs) in New York City. *IX International Conference on AIDS*. Berlin, June 1993 [abstract PO-D13-3737].

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|-----------------------------------|---|---|
| Female sex partners (FSPs) of IDU | 658 FSPs in high drug-use housing project in NYC randomly assigned to intervention or control. Intervention was peer outreach and media distribution program. | Significant increase in percentage of intervention group always using condoms and decrease in percentage never using condoms. No change in control group. Comment: Information from abstract only so few details available. |

Effective Interventions for Heterosexuals

Community-level Interventions (continued)

Vincent, L., Clearie, A., et al (1987) Reducing adolescent Pregnancy through school and community-based education. *Journal of American Medical Association* 254(4): 3382-3386

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| POC/ Youth | Intervention to reduce adolescent pregnancies. Three-hour courses for teachers. Sex education in all grades. Training for clergy, church leaders and parents. Mass media speakers. | 2-year follow-up. Pregnancy rates decreased by half in target county only. Concern: Applicability. |

Street and Community Outreach Intervention

Fritz, R., Schaffer, T. (1992) How effective are AIDS education program for high-risk populations? An evaluation of 4 AIDS prevention program in Chicago. *VIII International Conference on AIDS* 8, C335.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------|---|---|
| Women/ Sex workers | Street outreach targeted by community outreach programs in Chicago (92 female sex workers). | At 2-month follow-up, women sex workers “increased their condom use” and “reduced number of sex partners”. (From compendium, no statistical analysis) |

HIV Antibody Counseling & Testing [CDC Revised Guidance for HIV Counseling, Testing, and Referral. MMWR 2001, 50 \(RR-19\): 1-58](#)

Bevier, P., Ewing, W., et al. Effects of counseling on HIV risk behaviors in patient at a New York City sexually transmitted disease clinic. *VII International Conference on AIDS* 7, 458.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------------|---|--|
| Women (STD clients) | 1016 total STD clinic patients received one-session of HIV risk behavior counseling. Total percentage of women unknown. | At 6-month follow-up, women significantly reduced their total number of partners from 5.9 to 4.3 in a 6-month period. Condom use ‘increased slightly’, but sex partners of IDs reported condom use only 10% of the time. |

Effective Interventions for Heterosexuals

HIV Antibody Counseling and Testing (continued)

Corby, N., Barchi, P., et al. (1990) Effects of condom skills training and HIV testing on AIDS prevention behaviors among sex workers. *VI International Conference on AIDS*. 6, 267.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| Sex workers | 64 sex workers were randomly selected into four groups. Group 1: HIV counseling/testing. Group 2: 15-min. AIDS prevention program with rehearsal of condom use. Group 3: both 1 & 2. Group 4: No intervention | At 1-month follow-up, women in group 3 showed increase in condom use during vaginal intercourse with customers. Women in group 1 reported a decrease in proportion of condom use during oral sex with customers. |

Higgins, D.L., Galavotti, C., et al. (1991) Evidence for the Effects of HIV Antibody Counseling and Testing on Risk Behaviors. *Journal of American Medical Association* 266(17): 2419-2429.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| General | A review of 10 studies on the effects of C/T on behavior change (condom use, reduction of sexual partners) of heterosexuals (actual study reviews several populations). | Of the studies: 80% showed increase in condom use; 30% showed increase in safer sex (undefined) and 1% showed decrease in sexual partners (Note: most were measuring for condom usage – 1% may not be reflective of real change). |

Kamb, M.L., Fishbein, M., et al. (1998) Does HIV/STD Prevention Counseling Work? Results From a Multicenter, Randomized Controlled Trial Evaluating Counseling Among STD Clinic Patients ([Project RESPECT](#)). *Journal of American Medical Association* 280: 1161-1167.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|---|---|
| General Listed in the 2007 Updated Compendium – Best Evidence (RESPECT) | Project Respect. Five publicly funded STD clinics located in US inner cities (Baltimore, Denver, Long Beach, Newark and San Francisco). 5758 heterosexual HIV-negative men and women who initially came to the clinics for STD diagnosis and treatment. Three face-to-face interventions: enhanced counseling (3-hours interactive sessions), brief counseling (2 40-minutes interactive session) and didactic message (personalized 10-minutes informational messages about HIV/STD prevention). | 3 and 6-month follow-up visits, any condom use and consistent condom use were significantly higher among participants in both enhanced and brief counseling compared with control. Through the 6-month interval, 30% fewer participants had new STDs compared with control. Through 12 months, 20% fewer participants in each counseling intervention had new STDs compared with didactic group. <u>Comment:</u> Supported by Branson et al. (1998) <i>Sex Transm Dis</i> 25: 553-559. |

Effective Interventions for Heterosexuals

Counseling and Testing (continued)

Wegner, N. S., MD, MPH, Linn, L.S., PhD, Epstein, M., MD, and Shapiro, MD, PHD (1991). Reduction of high-risk sexual behavior among heterosexuals undergoing HIV antibody testing: *A randomized clinical trial. American Journal of Public Health, 81, 1580-1585.*

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---|--|---|
| <p>Heterosexuals Who attended an STD Clinic</p> <p>Listed in the 2007 Updated Compendium – Promising Evidence (HIV Education and Testing)</p> | <p>The purpose of this study was to evaluate the impact HIV testing had on sexually active heterosexual adults. The study was conducted in an STD clinic in Los Angeles, CA. Between January and March 1988, individuals attending the urban STD clinic were approached to participate. Consecutively, 724 patients were reproached, 500 were deemed eligible, 259 were interesting in receiving free testing, but only 256 were willing to participate in the trial. All willing participants completed a self-administered questionnaire that included: demographic information, AIDS knowledge, mental health, worry about general health, information about last sexual partner, communication with sexual partners; subjects' sexual behavior was also measured. After completing the questionnaire, they participated in an educational module. This included: watching a 15 minute video, receiving a pamphlet that explicitly discussed safer & unsafe sexual acts, explained condom use, and participated in a 10 minute one-on-one counseling session with a physician. After the module, clients were called to have their blood drawn; the envelope they were given was opened at that time. If they were assigned to the study, they were informed that an extra tube of blood would be drawn to test for HIV. Those not chosen were offered a list of locations to receive a free HIV test.</p> | <p>Strengths: Approximately two weeks after they were tested, negative results were given via telephone or in person; they also received the same risk reduction message given during the educational module. Positive persons received an intense face to face counseling. There was an analysis of risk factors and long term care was arranged. Eight weeks after completing the educational module, a follow-up questionnaire was mailed to all subjects. The questionnaire revealed there was not a difference between the groups concerning AIDS knowledge, mental health, or health/worry. However, intervention subjects expressed greater concern about AIDS; more likely to have asked their last sexual partner about their risk of carrying HIV; inquired about HIV status; asked the partner about the number of persons sexual partners; and asked about IV drug use. Limitations: The researcher listed several cautions: results need to be interpreted with caution; sexual behavior was self-reported (subjects may have been untruthful); the study was conducted with predominately blacks, findings may not be generalized to other heterosexuals at lower HIV risk; and follow-up period was short.</p> |

Effective Interventions for Heterosexuals

Counseling and Testing (continued)

Metcalf, C. A., Douglas Jr., J. M., Malotte, C. K., Cross, H., Dillon, B. A., Paul, S. M., et al. (2005). Relative efficacy of prevention counseling with rapid and standard HIV testing: A randomized, controlled trial (RESPECT-2). *Sexually Transmitted Diseases*, 32, 130-138.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--|--|--|
| <p>HIV- STD Clinic Clients</p> <p>Listed in the 2007 Updated Compendium – Best Evidence (RESPECT - Brief Counseling) and Compendium – Promising Evidence (RESPECT – Enhanced Counseling)</p> | <p>This study compared rapid HIV testing (completed in one visit) counseling and testing to the standard HIV testing (completed in two visits). The intervention integrated principles from several behavior change models. Between 1999 and December 2000 clients were recruited from 3 public STD clinics in Denver, Long Beach, and Newark. Once eligibility was determined, 3342 eligible clients were enrolled, randomly assigned to receive the rapid or standard test, and randomly assigned to receive the booster (outcome of the booster counseling is reported elsewhere (page 19 this document)). All participants received their first counseling session and were tested for HIV. Those assigned to the rapid test group received a clinical examination for STD, the second counseling, and their results (all in a single visit). Those assigned to the standard test group received a clinical examination for STD, their initial counseling, and given an appointment to return for the results in 1 week (including the second counseling session). The main difference between the two groups was the number of visits required, the waiting time for HIV test results, and the opportunity the participant had to try an initial risk reduction strategy and be able to talk about the efforts during the second visit.</p> | <p>Strengths: Of those assigned to the rapid testing group, 99% (1632) received their HIV test results. Of those assigned to the standard test group, 69.4% (1144) returned for the second visit to receive their results. The incidence of an STD, between the groups, was more evident in the 6th and 9th month visits. By the 12th month visit, the cumulative STD incidence was higher in the rapid test group; but the research did not see the difference as statically significant. The researchers felt the results of the study suggested that the rapid test intervention was less effective prevention STDs in men but not in women. Among MSM, the incidence of STDs at 12 months was almost twice as high for those who were assigned to the rapid test group. However, since there were relatively few MSM, the researches felt this was statically insignificant. Other strengths were: large randomized control trial, included men and women, 70% of the participants were black or Hispanic, long follow-up period, and behavioral outcomes were controlled using ACASI. Limitations: There were 20% less participants enrolled than originally planned; the research process may have altered the effectiveness; STD incidence may not accurately reflect the HIV risk; and some incidence may have been false-positive results.</p> |

Effective Interventions for Heterosexuals

Health Communications/Public Information

Warner, L., Klausner, J. D., Rietmeijer, C. A., Malotte, C. K., O'Donnell, L., Margolis, A., et al. (2008). Effect of a brief video intervention on incident infection among patients attending sexually transmitted disease clinics. *PLoS Medicine*, 5(6), 919-927.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------------|--|---|
| STD clinic patients | <p>From December 2003 through August 2005, this controlled trial was conducted in three STD clinics (Denver, Long Beach and San Francisco). Clients were assigned to the condition based on the date of the clinic visit. During the 20-month period, 40,282 clients were assigned to the intervention condition (<i>Safe in the City</i> video) or the standard waiting experience. Conditions were administered in alternating 4-week blocks; the study started with the standard waiting experience (no video). All clients who presented at the clinic were included in the trial condition. The 23-minute <i>Safe in the City</i> video integrated the social cognitive theory, theory of planned behavior, and information-motivation- behavioral skills to achieve behavior change. The video contained three discrete related vignettes that modeled diverse couples (race, ethnicity, sexual orientation) negotiating safer sex behavior. There were also animated segments demonstrating proper condom use. In addition to the video, during the intervention month, there were posters in the waiting room and examination room that reinforced key messages and directed clients' attention to the video. During the control conditions week, clients experienced the standard waiting room environment (minus video and posters). The waiting room environment was different for each site and included television programming, music, or both. Condoms and educational material was available to all clients, regardless of condition.</p> | <p>Strengths – Compared to other studies of interventions in STD clinics, this evaluation was conducted under actual clinic conditions. Because the evaluation included all clinic patients, the results are likely generalizable to other STD clinics with similar patients profiles. Compared with the standard conditions, the incidence of laboratory confirmed infections among video patients was significantly reduced. Males appeared to have benefited from exposure to the video. Limitations – Clinicians were not blinded to condition assignment; this could have introduced bias. Using passive follow-up to ascertain incident STD outcomes, rather than active laboratory screening. NOTE: Among females, the researches found no evidence of a significant benefit or harmful effect.</p> |

Effective Interventions for Heterosexuals

Drug Treatment

Shoptaw, S., Frosch, D., Rawson, R.A., Ling, W. (1997). Cocaine Abuse Counseling as HIV Prevention. *AIDS Education and Prevention* 9(6): 511-520.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------|--|--|
| Non-IDU drug users | Evaluated the efficacy of cocaine abuse counseling alone as a strategy to reduce HIV-related sexual risk behaviors. Participants were 232 cocaine-abusing or dependent individuals who received up to 26 weeks of Matrix counseling but no formal HIV-prevention interventions. 157 (67.6%) participants completed assessments at admission, during treatment, and at 6 months following admission. Participants located for follow-up were significantly more likely to be Caucasian, to be better educated, and to complete longer treatment episodes than those not located. Demographics: mostly heterosexual (89.9%), Caucasian (69.0%), crack cocaine users (65.6%). | Main study findings indicated a significant association between safer sex behavior and completion of a cocaine abuse counseling episode. Participants who completed counseling were more likely to change to safer sex or maintain safer sex over the 6-month period than participants who terminated counseling prematurely. The primary method for reducing sexual risk involved overall decreases in reported numbers of partners (avg. at baseline = 5.32, avg. at 6-month follow up = 2.47) |

Shoptaw, S., Reback, C.J., Frosch, D.L., Rawson, R.A. (1998). Stimulant Abuse Treatment as HIV Prevention. *Journal of Addictive Diseases* 17(4): 19-32.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|--------------------|--|---|
| Non-IDU drug users | Individuals who use illicit stimulants, primarily cocaine and methamphetamine, engage in substantial amounts of HIV-related sexual risk behaviors when under the influence. This paper presents the idea those reductions in stimulant use consequent to drug treatment makes stimulant drug treatment an important HIV prevention tool for this high-risk population. | Presents data to describe HIV-related sexual risks reported by out-of-treatment methamphetamine users and by cocaine and methamphetamine abusers at treatment entry and six months post treatment entry. Overall, findings demonstrate that following initiation of a treatment episode, stimulant abusers demonstrate significant reductions in HIV-related sexual behaviors, primarily by reducing the number of sexual partners. |

Effective Interventions for Heterosexuals

Partner Notification (Procedural Guidance)

Jordan, W.C., Tolbert, L. (1998) Partner Notification and Focused Intervention as a Means of Identifying HIV-positive Patients. *Journal National Medical Association* 90:542-6.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| General | Los Angeles. 22 of 22 women, 5 of 8 heterosexual men and 6 of the 44 MSM interviewed were able to provide locating information on all of their enumerated/reported partners. Intervention divided MSM into two focus groups. Group 1 was asked: Who do you know that's HIV positive and still practicing unsafe sex? Group 2 was asked: Who do you know that's HIV positive but not in treatment? | 13 of the 14 MSM in group 1 were able to identify 30 person they felt were still practicing unsafe sex; 17 of the 30 tested HIV positive and 9 were unaware of their status. Group 2 identified 15 people they felt were HIV positive. 11 were found to be HIV-positive and 8 were unaware of their status. |

Landis, S.E., Schoenback, V.J., et al. (1992) Results of a Randomized Trail of Partner Notification in Cases of HIV infected in North Carolina. *New England Journal of Medicine* 326:101-6.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|---|
| General | North Carolina. Three local health departments. 162 participated, 54% declined and 46% agreed. 39 assigned to provider referral, 35 to patient referral. | In provider referral, 70 of 157 successfully notified; patient referral, 10 of 153 notified. 23% of partners notified and tested were positive. |

Pavia, A.T., Benyo, M., et al. (1993) Partner Notification for control of HIV: Results after 2 years of a Statewide Program in Utah. *American Journal of Public Health* 83:1418-24.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|--|
| General | Utah. All persons reported in state over 2 years (308) 79% cooperated with 890 named partners with 70% located. | Of those located 34% were previously positive. Of the remaining 2763 tested, 14% newly identified as infected. IDU, women and confidential (vs. anonymous) testers were more likely to cooperate and reported more partners. Cost: about \$3,000 per new infection identified. |

Effective Interventions for Heterosexuals

Partner Notification (Procedural Guidance) (continued)

Rutherford, G.W., Woo, J.M., et al. (1991) Partner Notification and the Control of Human Immunodeficiency Virus Infection. Two year of experience in San Francisco. *Sexually Transmitted Disease* 18:107-110.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|--|--|
| General | San Francisco. 51 interviewed AIDS patients named 135 opposite-sex partners. | 44% of partners located and interviewed, 25% tested, 5% HIV infected. Cost: \$454 per partner notified. \$2,203 per positive identified. |

Toomey, K.E., Peterman, T.A., et al. (1998) Human Immunodeficiency Virus Partner Notification Cost and Effectiveness Data From an Attempted Randomized Controlled Trial. *Sexually Transmitted Disease* 25:310-6.

| Subpopulation | Researched Intervention Design | Evaluated Outcome |
|---------------|---|---|
| General | New Jersey and Florida. 8 partners reported per case, one located per case. | 25% previously positive. 75% of the remainder were tested. 22% positive. New positive partners per original case: 0.1. Cost: \$250/index patient; \$427 partner notified; \$2,200 new infection identified. |

No reviews on Mass & Other Media, Social Marketing, Hotlines, and Clearinghouse.

ATTACHMENTS

Attachment: 1 Definition of Theories and Models, including core elements

Theories tell us why people do what they do. Models tell us how they do it. Today, HIV Prevention Programs can draw from many different social and behavioral theories. It is important to remember that it may be necessary to select an intervention based on more than one theory or model. Selecting an intervention with multiple theories or models may be the key to address successfully the behavioral determinates that place your population at risk of acquiring or transmitting HIV. You need to refer to the theory(s) that were the foundation of the original intervention that was proven effective. Although a specific theory is the foundation of your intervention, it is very likely that other theories may influence your intervention. If you formulate your own intervention based on theories alone, it is necessary for you to select singular or multiple theories as the foundation for intervening.

The following are short summaries of common social and behavioral theories, along with the core elements, that effective HIV prevention programs have been based upon.

AIDS Risk Reduction Model

The AIDS Risk Reduction Model believes change is a process individuals must go through with different factors affecting movement. This model proposes that the further an intervention helps clients to progress on the stage continuum, the more likely they are to exhibit change. This model includes elements of several other theories/models (health belief model, self-efficacy theory, and psychological theory) and is applicable to sexually active or injecting drug using individuals.

This was developed specifically for the context of HIV perception. Individuals must pass through three stages; **A) Labeling** – one must label their actions as risky for contracting HIV (i.e. problematic). Three elements are necessary 1) knowledge about how HIV is transmitted and prevented, 2) perceiving themselves as susceptible for HIV, and 3) believing HIV is undesirable. **B) Commitment** – this decision-making stage may result in one of several outcome 1) making a firm commitment to deal with the problem, 2) remaining undecided, 3) waiting for the problem to solve itself, or 4) resigning to the problem. Weigh cost and benefits - giving up pleasure (high risk) for less pleasure (low risk). **MAJOR FACTORS** – 1) response efficacy (effectiveness to change), 2) perceived enjoyment (acts being added or eliminated), 3) self-efficacy and 4) relevant information and social norms. **C) Enactment** – This includes three stages 1) seeking information, 2) obtaining remedies, and 3) enacting solutions.

Diffusion of Innovation Model

The Diffusion of Innovation Model looks at how new ideas are communicated to, and accepted by, members of a group or population. The three major components of this theory are **A) Communication Channels** – for dispensing an innovative or new message. **B) Opinion Leaders** – visible, respected people who can assist in dispensing the message. **C) Time and Process** – required to reach community or group. People receive/accept messages at different time intervals.

Health Belief Model

The Health Belief Model maintains that health related behaviors depend on four key beliefs that must be operating for a behavior change to occur. **A) Perceived susceptibility** – personally vulnerable to the condition. **B) Perceived severity** – belief that harm can be done by the condition. **C) Perceived benefits of performing a behavior** – what they are going to get out of the change. **D) Perceived barriers of performing the behavior** – what keeps them from changing.

Social Cognitive Theory

The Social Cognitive Theory maintains that behavior changes are dynamic and influenced by personal and environmental factors. People learn new behaviors through direct experience or modeling after others by observation. **A) Outcome expectations** - the extent the person values the expected outcome of a specific behavior. Will it lead to a positive or negative outcome? **B) Self efficacy** – a person's belief about his/her ability and confidence in performing behaviors.

Stages of Change Model (Transtheoretical Model)

The Stages of Change Model maintains that behavior change occurs in stages and that movement through the stages varies from person to person. The six stages are: **1) Pre-contemplation** – no intention to change behavior; not aware of risk. **2) Contemplation** - recognizes behavior puts them at risk and is thinking about changing their behavior, but not committed to the behavior change. **3) Preparation** – the person intends to change the behavior sometime soon and is actively preparing. **4) Action** - person has changed risky behavior recently (within the past six months). **5) Maintenance** – person has maintained behavior change for a period longer than six months. **6) Termination** – individuals are presumed to have no intention to relapse and possess a complete sense of self-efficacy concerning their ability to maintain healthy behavior. ***Special Note:** Relapse is another stage of change that is mentioned in a few references. It is felt relapse is another stage in behavior change. Clients should not be made to feel that they have failed if there was a slip-up.*

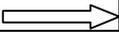
Theory of Reasoned Action

The Theory of Reasoned Action maintains a person must have an intention to change. Intentions are influenced by two major factors. **A) Attitudes towards the behavior.** 1) Belief in performing the behavior is based on positive or negative outcomes. 2) Evaluation of consequences to performing behavior. **B) Subjective norms about the behavior.** 1) What significant other thinks about performing the behavior. 2) Motivation to perform behavior based on subjective norms.

Empowerment Theory

The Empowerment Theory maintains people change through a process of coming together to share experiences, understand social influences, and develop solutions to problems. Three core elements of this theory are **1) Populations for change** – individual/group level. **2) Participatory education** – listening, participatory dialogue and action. **3) Focus group strategies** – gathering information and finding solutions with the community.

Attachment 2: Behavior Determinants Across Theoretical Perspectives

| Theory/Model  | Health Belief Model | Theory of Reasoned Action | Social Cognitive Theory | Stages of Change | AIDS Risk Reduction Model | Social Network Theory | Diffusion of Information | Theory of Gender and Power | Empowerment Model |
|---|----------------------------|----------------------------------|--------------------------------|-------------------------|----------------------------------|------------------------------|---------------------------------|-----------------------------------|--------------------------|
| Determinant  | | | | | | | | | |
| Perceived Susceptibility | X | | | | | | | | |
| Perceived Severity | X | | | | | | | | |
| Perceived Benefits | X | | | | | | | | |
| Perceived Barriers | X | | | | | | | | |
| Attitudes | | X | | | | | | | |
| Intentions | | X | | | | | | | |
| Normative Beliefs, Subjective Norms | | X | | | | | | | |
| Outcome Expectations | | X | X | | | | | | |
| Self-efficacy | | X | X | | | | | | |
| Pre-contemplation | | | | X | | | | | |
| Contemplation | | | | X | | | | | |
| Preparation | | | | X | | | | | |
| Action | | | | X | | | | | |
| Maintenance | | | | X | X | | | | |
| Labeling | | | | | X | | | | |
| Commitment | | | | | X | | | | |
| Enactment | | | | | X | | | | |
| Social Network | | | | | X | X | X | | |
| Social Support | | | | | | X | | | |
| Diffusion | | | | | | X | X | | |
| Communication Channels | | | | | | | X | | |
| Diffusion Context | | | | | | | X | | |
| Division of Labor | | | | | | | | X | |
| Division of Power | | | | | | | | X | |
| Community Organization | | | | | | | | | X |
| Community Building | | | | | | | | | X |
| Community Empowerment | | | | | | | | | X |

Attachment 3: CDC HIV Prevention Strategic Plan through 2005

The CDC has published a new initiative that talks about the strategies and ideas that will assist them in reaching the overall goals identified in their Strategic Plan. CDC's guiding principles for all HIV prevention programs are:

1. **Effectiveness** – CDC evaluates its programs for effectiveness and requires grantees to do the same, in order to ensure that HIV prevention programs do the most to prevent HIV, given the resources provided.
2. **Accountability** – CDC pledges to be accountable to the American people for conducting sound HIV/AIDS prevention activities.
3. **Transparency** – CDC intends for its activities and funding to be clear to those outside the agency.
4. **Science-Based Activities** – CDC bases prevention efforts on the best science currently available.
5. **Collaboration and Partnership** – CDC conducts HIV/AIDS prevention in conjunction with partners at all levels – federal, state and local – in the public sector, private section and not for profit sector to address multiple local epidemics in the most effective way possible.
6. **Comprehensiveness** – CDC employs a multifaceted approach to HIV prevention that includes strategies to address individual, community, societal and structural level intervention needs.
7. **Leadership** – CDC is the nation's prevention agency and provides leadership in prevention policy and practice.
8. **Respect of Human Rights** – CDC places pre-eminent values on human rights in the development of its HIV prevention programs and expects grantees to do the same.

Attachment 4: Core Elements of Health Education and Risk Reduction Activities.

- State realistic, specific, measurable, and attainable program objectives.
- Identify methods and activities to achieve specific goals and objectives.
- Define staff roles, duties and responsibilities.
- Define population to be served by geographic locale, risk behavior(s), gender, sexual orientation, and race/ethnicity.
- Assure the educational materials and messages are relevant, culturally competent, and language and age appropriate.
- Include professional development for all programs.
- Include written policies and personnel procedures that address stress and burnout.

- Include written procedures for the referral and tracking of clients to appropriate services outside the agency.
- Provide for collaboration with the other local service providers to assure access to services for clients.
- Assure confidentiality of persons served.

Attachment 5: CDC’s Intervention Checklist for all HIV Prevention Programs

Intervention

- Clearly defined audience
- Clearly defined goals and Objectives
- Behavioral/social science theory
- Accurate information about HIV risk behaviors
- Focus on reducing specific risk behaviors
- Opportunities to practice relevant skills

Implementation

- Realistic schedule
- Key elements
- Sensitivity to target population
- Trained staff
- Variety of teaching methods
- Information personalized
- Essential HIV messages repeated

Organization

- Administrative support
- Sufficient resources
- Program sustainability
- Decision markers are flexible
- Broader context relevant to target population

Consumer/Participant

- Intervention meets priorities and needs defined by community
- Audience included in ongoing tailoring
- Intervention as implemented is:
 - Culturally competent
 - Developmentally appropriate
 - Gender specific
- Intervention as implemented is acceptable to participants

Attachment 6: RESOURCES:

1. Evaluation Guidance Handbook: Strategies for Implementing the Evaluation Guidance for CDC funded HIV Prevention Program. March 2002
www.cdc.gov/hiv/aboutdhap/perb/guidance/chapter3.htm
2. CDC HIV Prevention Community Planning Guidance. July 2003
<http://www.cdc.gov/HIV/topics/cba/resources/guidelines/hiv-cp/index.htm>

Center for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention Division of HIV/AIDS Prevention “HIV Prevention Strategic Plan Through 2005. August 4, 2003 www.cdc.gov/hiv/resources/reports/psp
3. University of Texas Southwestern Medical Center in Dallas website “HIV Prevention Toolbox”
<http://www8.utsouthwestern.edu/utsw/cda/dept156726/files/181124.html>
4. Center for Disease Control and Prevention, Compendium of HIV Prevention Interventions with Evidence of Effectiveness “Intervention Checklist: Elements of successful Programs. A Tool for Assessment of Local HIV/AIDS Intervention” March 1999
www.cdc.gov/hiv/resources/reports/hiv_compendium/section3.htm
5. Guidelines for Health Education and Risk Reduction, Centers for Disease Control and Prevention. April 1995 www.cdc.gov/hiv/resources/guidelines/herrg
6. Procedural Guidance for Selected Strategies and Interventions for Community Based Organizations funded under Program Announcement 04064. April 2006
http://www.cdc.gov/hiv/topics/prev_prog/AHP/resources/guidelines/print/pro_guidance.htm