WHAT WE HAVE LEARNED . . .

1990-1995

Behavioral Interventions and Research Branch
Mission

BIRB provides a behavioral and social science foundation to the intervention and prevention efforts of health departments and non-governmental agencies which seek to prevent sexually transmitted diseases (including HIV) and their complications.

INTRODUCTION

The Behavioral and Prevention Research Branch (BPRB) was formed in 1989 when the Division of STD/HIV Prevention was reorganized. Its principal goal was to create a foundation of behavioral and social science expertise within the National Center for Prevention Services and to foster interdisciplinary research approaches to all applied research in the Division and the Center as a whole. The multidisciplinary team of anthropologists, sociologists, psychologists, epidemiologists, statisticians, demographers, analysts, and post doctoral fellows in collaboration with partners within and external to CDC generated a research agenda that will carry on to the year 2000. While the Branch's work attempted to find ways to change behaviors associated with the acquisition and transmission of HIV and other sexually transmitted infections at the group, individual and community levels, the work also created a behavioral and social science environment of collegial and disciplined research that crossed numerous Centers and Divisions at the CDC as well as other Federal Agencies. Every year the Branch has published a compendium of research projects, publications, and work products. During this year of transition when the former Behavioral Prevention and Research Branch (BPRB) gives birth to a new Branch, the Behavioral Interventions and Research Branch (BIRB), this document will serve to once again share with our partners, within and external to CDC, those findings and opportunities resulting from the energy and enthusiasm of the Behavioral and Social Scientists in the National Center for Prevention Services.

This manuscript is the final collective work of BPRB and is intended for use by our partners in research and service, by our sister agencies, and by our customers: the State and local health agencies and community based organizations which seek the most effective interventions and measures to reflect success in reducing morbidity and mortality associated with STD and HIV. These project summaries provide some answers to the questions of what we have learned and what works by focusing on the results and implications generated by the projects conducted between 1990 and 1995. Readers who are interested in the scientific methods and theories which produced the results are referred to BPRB's annual research summaries and the publications listed at the end of the project summaries in this manuscript.

The results in this manuscript meet four criteria for inclusion. First, they are substantive, conceptual, or preliminary but not methodologic. Second, they are directly related to the purpose of the respective project. Third, they are statistically significant or described with caveats. Lastly, in the case of multi-site projects, they are common or similar in at least two sites. Occasionally, projects produced results that did not meet the above criteria but were of compelling interest. These results are placed under the heading of "other findings." The implications which are included are specific suggestions for the application of the results. Only those publications that are readily accessible to readers, such as journal articles and published meeting abstracts, are listed. Products are those materials produced, or planned to be produced, by or as a result of the project and which are, or will be, available to readers, such as videos, software, guidelines, curricula, and policy statements.

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BEHAVIORAL SURVEILLANCE AND RISK ASSESSMENT RESEARCH

Behavioral surveillance involves the collection of population-based information for the purpose of monitoring rates of specific high risk behaviors that are associated with the acquisition of disease. Risk assessment uses population-based information collected by periodic surveys or archival data to measure the likelihood of rates of diseases associated with specific behaviors or sub-populations.

Project: #1 Analysis of Self-Reported Data from Women Attending 39 Planned Parenthood Clinics throughout Pennsylvania in 1987

Purpose:

The overall study seeks to identify behaviors associated with risk for STD, including human immunodeficiency virus. This analysis examines whether women who become sexually active at an early age are more likely to engage in risky sexual behavior as adults and to have a history of STD.

Results:

Women who became sexually active between the ages of 10 and 14 years were almost 4 times more likely to report having 5 or more sexual partners in the past year (OR=3.8; 95% CI=2.6-5.6); 3 times more likely to report having sex with bisexual intravenous drug-using or HIV-infected men (OR=3.5; 95% CI=2.4-5.0); and twice as likely to report a history of STD within the last 5 years (OR=2.3; 95% CI=1.8-3.0) compared with women who became sexually active when they were 17 years of age or older. Also, controlling for education and duration of sexual activity, Black women were more likely to report a history of STD but less likely to report having 9 or more sexual partners during the past 5 years or a risky partner.

Implications:

Age at first intercourse can be a useful marker for risky sexual behavior and history of STD and can be a useful tool for allocating resources to clients most in need of intervention programs. Clinicians should provide STD evaluation for female clients who report early coitus. Interventions to delay the onset of sexual activity should be developed and evaluated.

Publications:

Greenberg JG, Magdar L, Aral S. Age at first coitus: a marker for risky sexual behavior in women. *Sexually Transmitted Diseases* 1992:331-334.

Key Words:

Women, adolescents, risk behavior, survey-targeted, Pennsylvania, Family Planning, female sex partners, IDUs.

Project: #2 Analysis of 1988-1991 General Social Survey: Factors Associated with Sexual Risk Behavior

Purpose:

To determine which factors are associated with sexual risk taking in a nationally representative sample of the United States population.

Results:

The General Social Survey results indicate that age, marital status, sex, alcohol consumption, and race are the strongest and most consistent predictors of sexual risk. Education, income, church attendance, and smoking have bivariate associations with risk, but are not significantly related in the multivariate models. In the year previous to the survey an estimated 3-6 million adults had 5 or more sex partners and 5-8 million had sex with a stranger.

Implications:

The results indicate the extent of sexual risk taking and the factors related to it in the general population. The use of nationally representative data is important because few representative studies of this kind have been conducted, and the characteristics of persons at risk for STDs and HIV are different from those attending public STD clinics, where much STD research takes place. This has implications for the design of interventions targeting the general public.

Publications:

Anderson JE and Dahlberg LL. High risk sexual behavior in the general population: results from a national survey 1988-1990. *Sexually Transmitted Diseases* 1992;19(6):320-325.

Key Words:

Nationwide, survey-national, risk behaviors

Project: #3 Analysis of Counseling and Testing Data, National Health Interview Survey, and CDC CT Database

Purpose:

To 1) measure the extent of HIV testing--both from public programs and from private physicians and hospitals--in the general population and in persons who may be at increased risk for HIV infection; and 2) identify differences in rates of receiving counseling and testing between population subgroups.

Results:

Data from the annual National Health Interview Survey indicate that between 1987 and 1993 the percent of the U.S. population over age 18 that reported an HIV antibody test increased from 15 to 38%. Almost two-thirds of recent diagnostic tests were obtained from private doctors and hospitals. Persons who obtained tests from public programs were more likely to report receiving HIV counseling than those receiving tests from private doctors and hospitals. Among those at increased risk of HIV infection, those living outside of metropolitan areas reported lower levels of testing.

Implications:

The nationally-representative National Health Interview Survey data provide information on tests obtained from public programs and private providers. Government programs only have information on public tests, but the majority of HIV tests have been obtained in the private sector.

Lower rates of counseling reported for private physicians and hospital (where the majority of tests were obtained) underscores the need for private practitioners to be able to provide appropriate HIV prevention messages, referrals, and other services. Services need to be enhanced for persons at risk of HIV living outside of metropolitan areas.

Publications:

Anderson JE, Hardy AM, Campbell CH. Counseling and testing services in the U.S.: public and private providers. Abstract . 1992, VIIIth International Conference on AIDS, Amsterdam.

CDC. HIV counseling and testing services from public and private providers-- United States, 1990. *MMWR* 1992;41(40):743, 749-752.

Anderson JE, Hardy AM, Cahill K, Aral S. HIV antibody testing and posttest counseling in the U.S.: data from the 1989 National Health Interview Survey. *American Journal of Public Health* 1992;82(11):1533-1535.

Anderson JE, Fichtner R, Campbell CH. How many HIV positive persons in the U.S. have been tested for HIV antibodies? Abstract PO-D25-4155 1993, IXth International Conference on AIDS, Berlin.

Anderson JE, Brackbill R, Wilson RW. Who gets tested for HIV?: National Health Interview Survey data 1987-1993. 1994, Annual Meeting of the American Public Health Association, Washington, DC.

Anderson JE. CDC data systems collecting behavioral data on HIV

counseling and testing. *Public Health Reports* accepted for publication, December 1994.

Anderson JE, Brackbill R, Wilson RW. Diagnostic HIV antibody testing in the U.S., 1987-1993: the role of private physicians and public programs. submitted to *AIDS*, June 1995.

Key Words:
Nationwide, survey-national, counseling and testing, health care providers

Project #4: Behavioral Risk Factor Surveillance System (BRFSS): Attitudes about HIV/STDs, HIV Testing and Counseling, Sexual Behavior, and Social Context

Purpose:
To examine state specific rates of HIV testing and counseling, self-perceived risk for HIV infection, attitudes about condoms, sexual behavior, self-reported STDs, and social context predictors of HIV/STD risk behaviors.

Results:

Findings from the 1993 BRFSS document a high degree of state-specific variability in self-reported HIV-antibody tests in the United States. However, in most states approximately three-fold more persons reported having obtained their HIV test from a private provider than from a public site; however, persons from a private provider were substantially less likely to have received counseling than those who obtained tests at a public site.

Collaborative efforts between CDC and state AIDS and STD programs have resulted in the official sanctioning of sexual behavior question modules and social context question modules for the 1996 BRFSS. The sexual behavior module includes questions on number of partners in past year, use a condom last time had sex and whether for contraception or disease prevention, and having an STD diagnosed in the past two years and where treated. The social context module includes a series of questions that measure economic and social stability. Preliminary results show that the social context may be a better predictor of sex behavior than standard demographic measures. For instance, a person who moves more frequently has more sex partners, which is not related to income or education.

Implications:

Over the period of the next several years (i.e. 1996 to 1998), state specific data on sexual behavior and social context will become available. These data will be very useful for the development of a behavioral surveillance network.

Publications:

CDC. HIV Counseling and Testing - United States, 1993. MMWR, March 10, 1995, 44(9):169-174.

Valdiserri RO, Holtgrave, DR, Brackbill RM. Knowledge of HIV testing availability among American adults. American Journal of Public Health 1993;83(4):525-28.

CDC. Sexual Behavior and Condom Use - District of Columbia, January - February, 1992. MMWR 1993;42(20):390-1,397-8.

CDC. HIV/AIDS Knowledge and Awareness of Testing and Treatment -- Behavioral Risk Factor Surveillance System, 1990, MMWR, 1991;40(No.46):794-804.

CDC. Community Awareness and Use of HIV/AIDS Prevention Services Among Blacks and Hispanics: Connecticut 1991, MMWR, 41(43), 1992, pp. 825-829 (with M. Adams and others).

Key Words:
Surveillance, attitudes, sexual behavior, counseling and testing.

Project: #5 Comparison of Written and Audio Methods for Assessing STD/HIV Risk in STD Clinic Patients

Purpose:

To determine how the method of assessment affects patient self-report of STD/HIV risks.

Results:

More risk factors were revealed in both the written and audio self-administered questionnaires (SAQ) than in face-to-face interviews (FTFI). There were no differences in the number of risk factors reported in the two SAQ groups, however, the difference in the mean number of reported risks between the audio SAQ and the FTFI was greater than that between the written SAQ and the FTFI. Women were more likely to acknowledge more risk factors in a SAQ than in the FTFI. The number of discordant responses in which risk was identified in the FTFI but not in the SAQ was weakly correlated with being in the written SAQ group, having less education, and being male.

Audio SAQ had fewer missing responses than written SAQ. More patients in the audio group reported unprotected vaginal sex with a non-steady partner and sex partners suspected or known to have HIV infection or AIDS than in the written SAQ group. More audio SAQ than FTFI respondents reported a history of STD, sex with someone who was known or suspected to be HIV-infected, alcohol use during sex, unprotected vaginal sex with a non-steady partner, and unprotected anal sex with a steady or non-steady partner.

The written SAQ group reported a history of STD and having had a one-night stand more often than did the audio SAQ group. More written SAQ than FTFI respondents reported alcohol use during sex, unprotected vaginal sex with a non-steady partner, and unprotected receptive anal sex with a non-steady or steady partner. Many patients who skipped a risk factor item in the written SAQ reported during the FTFI that they did not have that risk--except for responses about STD history and unprotected vaginal sex with a steady partner.

Implications:

Audio SAQ may obtain more complete data and identify more HIV risk than written SAQ, particularly among persons with less education. The study findings should be considered when reviewing current methods of STD clinic patient assessment. Replacing or supplementing traditional FTFI assessments with written or audio SAQ should result in more reliable risk assessments, more efficient use of clinician/staff time, improved pre- and post-test counseling, and improved referral and partner notification services. Research is warranted about whether audio questionnaires overcome barriers to the completion and accuracy of HIV risk surveys, particularly whether the audio SAQ is more effective in eliciting and identifying risk than the written SAQ when administered to a population with a lower level of education and in waiting rooms rather than in private rooms.

Publications:

Boekeloo BO, Schiavo L, Rabin DL, et al. Self-reports of HIV risk factors by patients at a sexually transmitted disease clinic: audio

vs written questionnaires. *American Journal of Public Health* 1994;84:754-760.

Products:

None.

Key Words:

STD Clinic clients, risk behaviors, service enhancement, audio assessment, self administered assessment

Project: #6 Condom Use and Rates of STDs: Data From Cycle IV National Survey of Family Growth (1988)

Purpose:

To analyze the consistency and continuation of condom use for contraception, use of condoms in conjunction with other contraceptive methods, and reported use of condoms to avoid infection.

Results:

Only a minority of sexually active, never-married women report condom use and few report using condoms consistently. Women with characteristics traditionally associated with increased risk of infection with STD/HIV appear to be less likely to report condom use and less likely to report using condoms consistently. Women who report use of condoms to prevent STDs are: more likely to report consistent condom use; less likely to cease using condoms; and more likely to initiate consistent condom use.

Implications:

Findings suggest the need for innovative programming targeted for specific sexually active populations to promote both initiation and consistent use of condoms. Questions are needed on national surveys that accurately measure condom use for disease prevention as well as contraception.

Publications:

Potter LB, Anderson JE. Patterns of condom use and sexual behavior among never-married women. *Sexually Transmitted Diseases* 1993;30(4):201-208.

Potter LB, Anderson JE. Double indemnity: combined use of condoms and effective contraception. Presented at the annual meetings, Population Association of America, 1992.

Key Words:

Nationwide, survey-national, women, condoms.

Project: #7 Condom Use: Data from the 1990 National Survey of Family Growth

Purpose:

To examine condom use specifically for disease prevention by a national sample of reproductive-age women: 1) to measure the extent of condom use for disease prevention, 2) to identify the characteristics associated with condom use for disease prevention, and 3) to discuss implications for STD and HIV prevention efforts.

Results:

Of the unmarried women surveyed, 40.5% recently had used condoms for disease prevention and 29.6% reported using them every time or most times. Reproductive-related factors were strongly related to condom use for disease prevention as were favorable attitudes toward the effectiveness of condoms.

Implications:

Prevention programs should develop messages for women who have adopted effective contraception but may be at risk. Prevention programs should promote knowledge of the effectiveness of condoms in disease prevention among high risk populations. Standard approaches for measuring condom use in survey research should be developed to provide accurate information that is useful to programs and can be compared across surveys.

Publications:

Anderson JE, Brackbill R, Mosher WD. Factors related to condom use for disease prevention among unmarried women. submitted to *Family Planning Perspectives*, June 1995.

Key Words:

Surveillance, attitudes, sexual behavior, counseling and testing.

Project: #8 Cycle V (1994) National Survey of Family Growth: Questionnaire Items STD- and HIV-Related Behavior and Prevention

Purpose:

To collaborate with the National Center for Health Statistics to develop questionnaire items for this national survey of reproductive age women to measure behavioral outcomes related to STD and HIV prevention, including measurement of condom use for contraception and disease prevention.

Results:

Suggested questions and comments were provided during the development phase. Interviewing took place during late 1994 and early 1995. Data are being cleaned and analyzed. Preliminary results are not yet available.

Implications:

The survey will provide national data that are not available elsewhere for designing and evaluating programs, and for comparison with local surveys.

Publications:

None

Key Words:

Nationwide, survey-national, women, condoms.

Project: #9 Evaluation of the DIS Interview Process

Purpose:

To evaluate the communication between CDC trained Public Health Associates working as Disease Intervention Specialists (DIS) and patients they have recently interviewed by identifying discrepancies in responses of clients and concerns identified by clients which relate directly to the competence of the DIS.

Results:

Data indicated that 62% of syphilis interviews lasted less than 1 hour and 62% elicited 2-4 sex partners, 73% of the patients felt that the information discussed would be kept confidential, 86% understood the STD information presented by the DIS, but 86% felt they did not have enough time to ask questions. Overall, patients reported feeling comfortable providing personal, sexual, and drug use information to the DIS. However, patients were significantly less comfortable discussing their drug use behaviors with the DIS than in providing personal identification information. In addition, patients reported that the DIS seemed to be capable and willing to help them, and felt that the DIS were comfortable discussing their personal, sexual, and drug use behaviors with them. The majority of patients reported providing the DIS with accurate information regarding their sexual behaviors (94%) and their drug use behaviors (88%). However, when asked if there were any sex partners that they did not tell the DIS about, three (9%) of the patients answered "yes"--not telling the DIS of one or two other partners.

Implications:

These results have implications for the recruitment, training, and development of federally employed DIS. CDC needs to place more emphasis during DIS training on methods for eliciting names and identifying information of the patient's sex partners. Cross-training DIS in the elicitation of drug abuse and illicit drug behavior information is highly recommended. The reasons patients give for poor responses to DIS questions about risk behaviors, sex partners, and so forth can be used by program planners to refine DIS training and improve partner notification outcomes.

Publications:

CDC. Technical guidance on HIV counseling. *MMWR* 1993;42(RR-2):11-17.

Richter DL, Lindley LL, Sanchez LC, et al. Evaluation of STD disease intervention specialist syphilis interview process. Abstract 056. 1994, DSTD/HIVP Grantee Meeting, Washington, DC.

Products:

CDC. *HIV Counseling, Testing and Referral: Standards and Guidelines*. Atlanta: US Department of Health and Human Services, Public Health Service, CDC, 1994.

Key Words:
DIS, STD Clinic clients, partner notification, staff training, Atlanta, Chicago, Los Angeles.

Project: #10 HIV/AIDS/STDs in Correctional Facilities: Issues and Options

Purpose:

To document HIV/AIDS/STD prevention and treatment practices and policies in U.S. correctional facilities.

Results:

Various jurisdictions have differing approaches to HIV prevention and control. Whether testing should be mandatory or voluntary, whether housing should be integrated or segregated by HIV serostatus, and whether condoms, bleach, or clean needles should be made available to prisoners. Education and risk-reduction counseling are the most widely employed modes of prevention, but their effectiveness is largely undetermined.

Implications:

The rates of HIV infection and risky behavior among incarcerated women and inmates younger than 25 suggest that prevention efforts should be conducted in facilities for these populations. Risk reduction strategies should be tailored to the inmate's risk factors. Public health, corrections, and substance abuse agencies should collaborate in prevention efforts. Prevention efforts' impact on behavior should be evaluated.

Publications:

Hammett, T. *1994 Update: HIV/AIDS and Sexually Transmitted Diseases in Correctional Facilities*. Abt Associates, Inc., Cambridge, MA, June 1995.

Hammett, T. *HIV/STDs in Juvenile Facilities: Research in Brief.* Abt Associates, Inc., Cambridge, MA, June 1995.

CDC. HIV/AIDS education and prevention programs in adult prisons and jails and juvenile confinement facilities--United States, 1994. MMWR,scheduled for publication April 5, 1996.

Key Words:

Adolescents, incarcerated populations, education, collaboration, nationwide, survey-targeted.

Project #11 HIV Prevention and Treatment Practices of Primary Care Physicians in the United States

Purpose:

To determine the HIV prevention and treatment practices of primary care physicians in the United States.

Results:

Less than half of the surveyed primary care physicians asked patients about STDs, condom use, sexual orientation, or number of sex partners. Physicians were more likely to ask these questions of adolescent than adult patients. The percentage of physicians who indicated they would encourage HIV testing varied by patient risk category. About two-thirds of the physicians would provide the test themselves and believed they had an obligation to take care of an HIV-infected patient. Almost all physicians would counsel HIV-infected patient to reduce the risk for transmission; somewhat fewer would counsel the patient to notify sex partners.

Implications:

To more effectively use patient encounters as a means of HIV prevention, physicians must be knowledgeable about the virus and its transmission, aware of the importance of HIV risk assessment, and prepared to counsel patients based on their risk. Medical schools and professional organizations should continue to emphasize HIV/AIDS prevention in training, programs, and policy.

Publications:

CDC. HIV prevention practices of primary-care physicians--United States 1992. *MMWR* 1994;42:988-992.

Kerr SH, Valdiserri RO, Loft J, et al. Primary care physicians: what are their prevention practices? submitted to *American Journal of Preventive Medicine*.

Ellen JM, Gans JE, Kerr SH, Valdiserri RO, Millstein SG. The role of continuing medical education and community resources in the intentions of physicians to encourage HIV antibody testing for adolescents. submitted to *Archives of Pediatrics and Adolescent Medicine*.

Key Words:

Health care providers, counseling and testing, attitudes, nationwide, survey-targeted.

Project: #12 Sexual Behavior and Condom Use Among Street Youth in Hollywood, California

Purpose:

To determine the prevalence and correlates of sexual risk behavior and condom use among street youth in Hollywood based on the 1991 Sex and Drug Use Survey of Young Adults, Los Angeles.

Results:

Nearly all (96%) of the respondents were sexually experienced. Half of the males and one-third of the females had engaged in "survival sex". One-fourth of males and 14.6% of females had injected drugs at some time in their lives. 45% of males and 30% of females reported using a condom the last time they had sex. Among males, condom use was associated with higher education and having had an HIV test. For females, younger age, never being pregnant and exchanging sex for money, food, or lodging were related to condom use.

Implications:

The street youth population is at high risk for HIV and STD infection. Programs especially need to promote condom use among females and males with lower education levels, who have lower rates of condom use. Intervention messages should have a different focus for male and female street youth. Messages directed toward females should promote condoms for pregnancy as well as disease prevention.

Publications:

Anderson JE, Freese TE, Pennbridge JN. Sexual risk behavior and condom use among street youth in Hollywood. *Family Planning Perspectives* 1994;26(1):22-25.

Key Words:

Hollywood, CA., Adolescents, condoms, risk behaviors, survey-targeted, sexual exchange.

Project: #13 Use, Acceptance, and Use-Effectiveness of Condoms in Preventing HIV and STD Transmission (The Kern County Special Study)

Purpose:

To assess the patterns of use, rates of acceptance, and use-effectiveness of condoms in prevention HIV and gonorrhea, particularly among Black and Hispanic youth and to evaluate the effectiveness of enhanced instructions, skills training, and behavioral rehearsal among STD clinic clients who fail to adopt effective prevention strategies at first follow-up.

Results:

The 1971 prospective study in Sacramento showed that 1) STD clinic clients infected with STDs are more likely to report a history of inconsistent condom use than were uninfected clients, 2) previously infected clients were more likely than uninfected clients to accept free condoms at study enrollment, and 3) clients who accepted condoms and reported use after enrollment were just as likely to have an STD at follow-up as clients who refused condoms. Black and Hispanic youth were more likely to report inconsistent condom use and to be diagnosed with an STD.

The repeat study in Kern County in 1992 documented that private physicians report disproportionately more white men with gonorrhea. Between 1971 and 1992, the proportion of STD clinic clients diagnosed with gonorrhea or syphilis declined 50%. However, Black men were more likely to be diagnosed with gonorrhea or trichomonas; White men were more likely to be diagnosed with herpes, chlamydia, or genital warts; and Hispanic men were slightly more likely to be diagnosed with syphilis, non-gonococcal urethritis, or other STDs. Black women were more likely to be infected with gonorrhea, and White women were more likely to be infected with gardnerella. Clients with gonorrhea reported having more sex partners than uninfected clients did. More Hispanic men than white men named just one sex partner. More Black men and Hispanic and White women reported three or more sex partners.

Reports of condom use were eight-times higher in 1992 than in 1971, but there was no difference in use-effectiveness of condoms at baseline (1992). Reported condom use more than doubled among STD clinic clients in California, Increases were particularly dramatic among young women and clients diagnosed with gonorrhea. In 1992 most of the female STD clinic patients reported some form of contraceptive use; although more White women reported ever using condoms and more Black and few White women relied on douching for contraception.

Study participants received a standard (condoms only) or enhanced (condoms and use demonstration, counseling, and communication/negotiation skills training) intervention. In 2 weeks to 2 months after the intervention, more enhanced than standard intervention participants increased condom use for vaginal sex (44% vs 25%) and reduced their number of sex partners from 2 or more to 0 or 1 (18% vs 7%). STD clinic clients who did not participate in an intervention did not show any change in these behaviors.

Implications:

The 1971 study indicated that merely providing STD clinic clients with condoms was insufficient in promoting and assuring proper condom use among high risk youth. Additional instruction about proper and consistent use, skills training, and behavioral rehearsal were needed. The 1992 study acted on these recommendations and refined them to include the need for culturally and ethnically appropriate STD/HIV risk reduction interventions for at risk youth. Identifying specific sexual risk behaviors may help characterize women at increased risk for STD/HIV infections and permit appropriate targeted programs for them. Enhanced intervention (averaging 20 minutes) can be incorporated into STD clinic settings.

Publications:

Darrow WW, Harris B, Schaffner A, et al. Condom use reported by STD clinic patients: 1971 & 1992. Abstract WS-D29-5. 1993, IXth International Conference on AIDS, Berlin.

Darrow WW. Condom use and use-effectiveness in high-risk populations. *Sexually Transmitted Diseases* 1989;16:157-160.

Darrow WW. Venereal infection in three ethnic groups in Sacramento. *American Journal of Public Health* 1976;66:4465-450.

Darrow WW, Approaches to the problem of venereal disease prevention. *Preventive Medicine* 1976;5:165-175.

Darrow WW. Attitudes toward condom use and the acceptance of venereal disease prophylactics. In: Redford MH, Duncan GW, Prayer DJ, eds. *The Condom--Increasing Utilization in the United States*. 1974. San Francisco Press: San Francisco, California.

Products:

A video instructing correct condom use and diskette version of guidelines for implementing the instruction, skills training, and behavioral rehearsal intervention are available from Benita Harris, CDC/NCPS, Mailstop E-58, 1600 Clifton Road, Atlanta, GA 30333.

Key Words:

Adolescents, African American, Hispanic, STD clinic clients, behavior change, counseling, condoms, gonorrhea, education, skill building, video, Sacramento, CA, Kern County, CA., Condom distribution.

COMMUNITY-BASED FORMATIVE AND INTERVENTION RESEARCH

The operating assumption of community-based research is that persons acquire information, form attitudes, develop beliefs, acquire skills, and practice behaviors within the normative context of the social networks or systems of which they are a part. The shared social networks or systems (communities) can be defined geographically, behaviorally, and/or culturally.

Community-based formative research identifies and describes structural, environmental, behavioral, social, and psychological factors influencing the STD/HIV infection risk of a target population. The norms of the community in which the target population participates are determined. Formative research also identifies social and communications networks and gatekeepers within the community.

Community-based intervention research develops and evaluates methods to promote healthy behaviors among persons in a community who share risk behaviors for STD/HIV infection by influencing social norms and using social networks to consistently deliver HIV risk reduction interventions to the subpopulations at risk. Community-based interventions involve members of the community as the agents as well as the audience for the intervention, employ explicit messages tailored to the specific community, and are provided primarily in the audience's own environment. The interventions can take several forms (i.e., persuasive behavior change messages, skills building training, behavioral risk assessment) and can be delivered within a community in several ways (i.e., role model stories, street outreach, peer education, counseling). Community-based intervention research is sometimes referred to as community-level research.

Project: #14 The AIDS Community Demonstration Projects (ACDP)
Purpose:

To determine the effectiveness of a theory-based, community-level intervention for promoting risk reduction behaviors among several populations at high risk for HIV infection: injecting drug users (IDU), female sex partners of IDU, men who have sex with men but do not self-identify as gay, sex traders (women who trade sex for money or drugs), street youth, and communities with high rates of sexually transmitted diseases.

Results:

Implementation

In each of five cities, pamphlets were produced which featured role model stories based on the experiences of actual community members who were trying to practice safer behaviors (consistent condom use with main or other partners or, among IDU, consistent use of bleach to clean injecting equipment). These media materials, condoms, and bleach kits were distributed within the communities and their message reinforced by persons recruited by the projects including peers, other community residents, and local businesses. Content of the stories was influenced by behavioral theory and data that was collected in the intervention communities. During the final year of intervention, across cities the average per month of materials distributed in the intervention communities ranged from 1300 to 8000. In some cities, peers were recruited to distribute all or the majority of materials, while in others most of the materials were distributed at local businesses. The length of time individuals participated in the peer networks ranged from 3 weeks to more than 2 years, with an average of 3-6 months. According to project staff, individuals said they participated in the project to help the community, to receive the incentives offered by the project, and to spend time with staff.

Outcome

To date, baseline data and outcome data from the first two years of the project (July 1991-August 1993) have been analyzed. During the first year, less than 20% of respondents in the intervention communities reported seeing something or talking to someone related to the projects. In the second year, the percentage of respondents reporting exposure to the intervention ranged from 21% of non-gay identifying men who have sex with men, to 54% of sex traders.

Preliminary results using the stage of change (SOC) model indicate that more progress was made in the intervention areas than in the comparison areas toward adopting consistent condom use with main and other partners as well as toward consistent bleach use among IDU. The proportion of respondents carrying condoms also increased faster in the intervention areas than in the comparison areas. The divergence was statistically significant for condom carrying, condom use for vaginal sex with other partners, and bleach use.

Furthermore, it appears reasonable to attribute this divergence to the intervention, since intervention area respondents who recall exposure to the ACDP intervention are further along the stages of change toward consistent condom use, and are more likely to be

carrying a condom at the time of interview, than those who do not recall exposure. The difference is statistically significant for carrying condoms, for condom use with main and other partners, and for bleach use.

Analysis of final outcome data (September 1993-June 1994) and site-specific outcomes are in progress.

Implications:

Community-level interventions using peers are feasible and appear to be effective at promoting HIV risk reduction behaviors. It is possible to recruit and retain persons in high risk populations to deliver HIV prevention messages within their community. Volunteers initially were recruited by outreach workers and later by current volunteers through word-of-mouth. Incentives (both monetary and non-monetary) and frequent positive reinforcement from program staff may be important in maintaining their participation. However, because the average duration of participation in these projects was 3-6 months, programs using this model may need to allow for continuous recruitment of new persons to deliver intervention messages.

A substantial proportion of at-risk individuals who are often considered hard-to-access can be successfully reached and motivated to change their behavior using this approach. However, it takes time to establish exposure to the intervention among community members, and saturation of the intervention communities with prevention messages about practicing specific protective behaviors (e.g., consistent condom use with non-main partners) appears to be important for success.

The development, implementation, and evaluation of HIV prevention interventions should be guided by behavioral and social science theory as well as formative research data collected prior to the intervention. Qualitative and quantitative data on the implementation of the intervention is useful for modifying the intervention to be responsive to changes in the community as well as for evaluating the effectiveness of the intervention.

Publications:

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Rhodes F, Corby NH, Wolitski RJ, Tashima N, et al. Risk behaviors and perceptions of AIDS among street injection drug users. *Journal of Drug Education* 1990;20:271-288.

Schnell D, Sheridan J, Magee E. A regression method for analyzing ordinal data from intervention trials. *Statistics in Medicine* 1995;14:1177-1189.

Seibt A, McAlister A, Freeman A, et al. Condom use and sexual identity among men who have sex with men--Dallas 1991. *MMWR* 1993;7:13-14.

Seibt A, Ross M, Freeman A, et al. Relationships between safe sex and acculturation into the gay subculture. *AIDS Care* 1995;7:87-90.

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CDC. Community level prevention of HIV infection among high-risk populations: Methodology and preliminary findings from the AIDS Community Demonstration Projects. *MMWR Supplement* (in press).

Corby NH, Enguidanos SM, Kay LS. Development and use of role-model stories in a community-level risk-reduction intervention. *Public Health Reports* (in press).

Corby NH, Wolitski RJ. Condom use with main and other partners among high-risk women: intervention outcome and correlates of behavior. *Drugs and Society* (in press).

Fishbein M, Guenther-Grey C, Johnson W D, et al. Using a theory-based community intervention to reduce AIDS risk behaviors: the CDC's AIDS Community Demonstration Projects. In S. Oskamp & S. Thompson (Eds.) *Safer Sex in the '90s: Understanding and Preventing HIV Risk Behavior* (in press).

Goldbaum GM, Perdue T, Higgins D. Non-gay-identifying men who have sex with men: formative research results from Seattle, Washington. *Public Health Reports* (in press).

Guenther-Grey CA, Schnell D, Fishbein M, the AIDS Community Demonstration Projects. Sources of HIV/AIDS information among female sex traders. *Health Education Research* (in press).

Guenther-Grey, Noroian D, Fonseka J, The AIDS Community Demonstration Projects. Developing community networks to deliver HIV prevention interventions: The AIDS Community Demonstration Projects. *Public Health Reports* (in press).

Higgins DL, O'Reilly K, Tashima N, et al. Using formative research to lay the foundation for community-level HIV prevention efforts: the AIDS Community Demonstration Projects. *Public Health Reports* (in press).

Pulley L, McAlister A, the AIDS Community Demonstration Projects. Prevention campaigns for hard-to-reach populations at risk for HIV infection: theory and implementation. *Health Education Quarterly* (in press).

Simons PZ, Rietmeijer CA, Kane MS, et al. Building a peer network for a community level HIV prevention program among injecting drug users in Denver. *Public Health Reports* (in press).

Products:

The projects are currently compiling a complete set of the role model stories produced across sites for this study. When completed, the set will be made available through the AIDS Clearinghouse. A reference document describing the common theoretical background and methodology of this and two other projects (the WIDP and HBIEB) is in progress.

Key Words:
Adolescents, commercial sex workers, female sex partners of IDUs, injection drug users, men who have sex with men, behavior change, bleach, condoms, risk behaviors, bleach distribution, condom distribution, peers, role model stories, Long Beach, Ca, Denver, CO, New York City, Dallas, Seattle, WA., sexual exchange, outreach-street and storefront, community level interventions.

Project: #15 Alexandra Youth Project (Republic of South Africa)

Purpose:

To provide training and technical assistance in conduct of formative research in Alexandra Township; to assist South African collaborators in the planning and evaluation of a community-based STD/HIV intervention targeting Township youth.

Results:

During March-December, 1993, 41 qualitative interviews with providers, 3 focus groups, and 39 interviews with Alexandran youth were conducted by researchers employed by the Alexandra Health Center. Interview data were analyzed and compiled in collaboration with CDC researchers; a detailed final report of findings and recommendations was prepared for Township providers and community groups. Formative data suggest that Township youth are at high risk for sexually transmitted infection because of early sexual debut, multiple partners, "survival prostitution," use of alcohol and non-injecting drugs, and inadequate information about STDs and HIV. Perceived risk for STDs is high, especially among young women, who can neither trust their partners to be faithful nor insist on condom use. STDs are perceived by some youth as the young woman's "shame" but as status-conferring evidence of the young man's sexual activity. Youth are either skeptical about the existence of AIDS or believe infection can be avoided through partner selection (e.g., not having sex with recent immigrants). Condoms are rarely used and viewed as "unnatural" and unpleasant, as difficult to obtain, and as socially disapproved.

Implications:

The formative research findings indicate the need for a community-level intervention which explicitly focuses on community norms influencing young people's sexual behavior. However, the resources to conduct such an intervention are not currently available. Two interim interventions have been proposed, focusing on young men and women attending Alexandra Health Center's STD clinic and antenatal clinic. The intervention approach being considered is group-based, peer- and professionally-facilitated education and skill training, with random assignment to intervention and ordinary care conditions.

Publications:

Shongwe T, Fernandes A, Beeker C, Valentine J, Schmid G. STD/HIV risk reduction in Township youth: formative research findings. Abstract published in Abstract Book, VIII International Conference on AIDS and STDs in Africa, 12-16 December 1993., Morocco.

A summary of formative research findings for professional journal submission is in progress.

Products:

Shongwe T, Fernandes A, Beeker C, Valentine J, Schmid G. *Alexandra Youth Project: Community Needs Assessment and STD/HIV Prevention, Final Report*. Institute of Urban Primary Health Care based in Alexandra Health Care Centre (South Africa) and Centers for Disease Control and Prevention, Behavioral Intervention Research Branch (USA), 1994.

Key Words:

Adolescents, formative research, Alexandra, South Africa, risk behaviors, sexual exchange, drugs, condoms, education, skill-training, peers.

Project: #16 Behaviors of Crack Cocaine Users and their Impact on Early Syphilis Intervention

Purpose:

To evaluate the impact of crack cocaine use on syphilis control efforts by analyzing data from records of persons diagnosed with early syphilis when voluntarily attending County Health Department clinics in Detroit, Michigan and Dallas, Texas between August 1989 and August 1990.

Results:

Crack cocaine use is associated with three interrelated mechanisms associated with the spread of syphilis: multiple partners, failure to provide enough information for contact tracing, and delay in seeking treatment. Compared with men who did not use crack, male crack users were more likely to report having four or more sex partners during their critical period for acquiring or transmitting infection (OR=4.33; 95% CI=2.08,8.99). Among men, having a large number of sex partners during this period was associated with a lower percentage of contacts being examined (OR=11.8; 95% CI=2.91,47.5). Among women, having four or more sex partners during their critical period and a lower partner examination rate were both associated with crack use; crack use was strongly associated with exchanging sex for money or drugs. We conclude that crack use has the largest impact on syphilis intervention through its association with having large numbers of sex partners.

Implications:

Expansion of traditional case-finding methods, as currently implemented, is unlikely to have significant benefit in curtailing the spread of syphilis in crack-using, inner-city populations. Partner notification must be supplemented with other strategies because of the high number of unlocatable partners associated with syphilis patients who use drugs. Such alternatives include rapid, on-site, syphilis screening in high risk settings such as crack motels and using substance abuse outreach workers to locate and refer persons at risk. The portion of the interview process aimed at obtaining information for location of casual sex partners should also be strengthened.

Publications:

Greenberg J, Schnell D, Conlon R. Behaviors of crack cocaine users and their impact on early syphilis intervention. *Sexually Transmitted Diseases* 1992;19:346-350.

Products:

None.

Key Words:

Syphilis, risk behavior, Detroit, MI., Dallas, TX., drugs, partner notification, sexual exchange, screening.

Project: #17 Development and Pretest of HIV/STD Intervention Strategies of Targeting Minority Heterosexual Males

Purpose:

To develop and pretest a culturally appropriate HIV/STD risk reduction intervention for minority heterosexual males attending an STD clinic.

Results:

Qualitative findings from focus groups showed that employment, housing, and relationships with significant others are of greater concern than contracting STD/AIDS. Misinformation and embarrassment regarding STD, AIDS, and condoms is prevalent within the population. Hispanic participants are more family-oriented than African Americans, and tend to be members of an extended family from which they derive support; African Americans tend to have more fluid family and sexual relationships. Many respondents have developed a method to discern who and what places them at high risk for infection. Many African American participants believe diseases are spread by "eating or drinking behind," i.e., picking up germs from a person by drinking out of his beer bottle. This belief is spreading to injection drug use and some injection drug users are not "fixing behind" others.

A three session, culturally appropriate, risk reduction interventions was developed and pilot tested on participants recruited from the local community and the STD clinic which serves it. The intervention used small group discussion with information sharing, skills building, and role plays. Participants rated the session highly and reported that they would use the skills and information they acquired in the groups. Attrition rates over the three sessions was low.

Implications:

The concept of not eating, drinking, or fixing "behind" someone else as a method to avoid diseases can be used and expanded upon in designing culturally relevant interventions for this population, i.e., don't "fix behind" someone--have your own, don't "fix behind" unless you've cleaned the works with bleach, and don't "f__k behind" someone either.

Publications:

Ramos R, Shain R, Johnson L. "Men I mess with don't have anything to do with AIDS:" using ethno-theory to understand sexual risk perception. *Sociological Quarterly* 1995;36(3): (in press).

Products:

The curriculum for the three session STD/HIV risk reduction intervention is available from Rochelle Shain Ph.D., University of Texas Health Sciences Center, Dept. OB/GYN, 7703 Floyd Curl Drive, San Antonio, TX 78284-7836.

Key Words:

African Americans, Hispanics, condoms, behavior change-barriers, focus groups, small group discussion, IDUs, attitudes, knowledge, STD clinic clients, skills building, role plays, education, San Antonio, TX., injecting drug equipment (paraphernalia).

Project: #18 Evaluation of HIV Prevention Street Outreach Program for IDUs and Youth at High Risk (AESOP)

Purpose:

To evaluate the coverage, cost, and impact of currently operating street and/or community HIV prevention outreach on injecting drug users. To develop and test the effectiveness of enhancements to these activities. To assist agencies serving injecting drug users and youth at high risk in improving the effectiveness of their outreach efforts.

Results:

Initial rounds of survey research indicate that the populations surveyed engaged in high levels of sexual risk behavior than found in general population surveys. For example, 21-28% of the IDU respondents and 20-46% of youth respondents reported 2 or more sex partners in the last month. The majority (62-97%) knew someone infected with HIV. From 41-59% of IDU respondents and 49-58% of youth respondents stated they were at least somewhat likely to get infected with HIV. Reported condom use rates approach national health promotion goals for non-steady partners, but not for steady or main partners. Having a condom at time of interview was the strongest and most consistent predictor of condom use at last intercourse. Obtaining condoms from outreach workers was indirectly associated with condom use since this factor was strongly related to carrying condoms.

Implications:

Many of the high risk respondents have been in contact with street outreach programs and many acknowledged some personal risk for HIV infection. However, most of the IDUs and high risk youth interviewed (and their sex partners) were still at risk through unprotected sex. Enhancements to street outreach interventions were associated with increases in receiving street outreach services among representative on-the-street risk populations in some settings. Specific enhancements, including use of peer outreach workers and mobile vans, can have a measurable impact on the amount of services delivered in high risk, out-of-treatment populations. Street outreach also has a consistent indirect association with lower levels of risk behavior in these populations. Having a condom at interview was the strongest, most consistent predictor of using condoms. Exposure to street outreach was strongly associated with having condoms at the time of interview.

Publications:

CDC. Assessment of street outreach for HIV prevention--selected sites, 1991-1993. *MMWR* 1993;42(45):873, 879-880.

Kipke MD, O'Connor S, Palmer R, MacKenzie RG. Street youth in Los Angeles, profile of a group at high risk for Human Immunodeficiency Virus Infection. *Archives of Pediatric and Adolescent Medicine* 1995;149:513-519.

Anderson JE, Cheney R, Clatts M, et al. HIV risk behavior, street

outreach and condom use in 8 high risk populations. *AIDS Education and Prevention*, accepted for publication July 1994.

Anderson JE, Cheney R, Faruque S, et al. Stages of change for HIV risk behavior: injecting drug users in five cities. *Drugs and Society*, accepted for publication January 1995.

Wright-deAguero LK, Gorsky RD, Seeman GM. Cost of outreach for HIV prevention among drug users and youth at risk. *Drugs and Society*, accepted for publication January 1995.

Kipke MD, Clatts MC, Garcia D, et al. Substance use and injection drug use among street youth in four U.S. cities. Submitted to the *American Journal of Public Health*, 1995.

Kipke MD, O'Connor S, Nelson B. Assessing the effectiveness of outreach targeted to street youth using probability sampling. Submitted to *Public Health Reports*, 1995.

Kipke MD, Palmer RF, LaFrance S, O'Connor S. Homeless youths' descriptions of their parents' childrearing patterns. Submitted to *Youth and Society*, 1995.

Kipke MD, Unger JB, Palmer RF, O'Connor S. Sex, drugs, and rock and roll: street youth's risk behaviors according to self-identified peer group affiliation. Submitted to *AIDS Education and Prevention*, 1995.

Anderson JE, et al. Condom use in 8 high risk populations. Session 1189. 1994, American Public Health Association Meeting.

Bresnahan MP, Clatts MC, Davis WR. Building community-based outreach services for homeless youth in NYC: a systems perspective in AIDS prevention planning. 1994, American Public Health Association Meeting.

Cheney R. Access and feasibility: aspects of needle risk behavior among street IDUs in Philadelphia. Session 1189. 1994, American Public Health Association Meeting.

Cheney R, Anderson JE, Faruque S, et al. A four city behavioral and demographic profile of street based IDUs: implications for HIV interventions. 1994, American Public Health Association Meeting.

Faruque S, Fernando D, et al. Needle risk behaviors among injecting drug users in the South Bronx, NYC: the role of bleach. Session 1189. 1994, American Public Health Association Meeting.

Faruque S, Fernando D, El-Bassel N, et al. AIDS outreach among injecting drug users in the South Bronx, New York City: what does it do? 1994, American Public Health Association Meeting.

Faruque S, Fernando D, El-Bassel N, et al. Predictors of condom use with main partners among injecting drug users in South Bronx, New York City. 1994, American Public Health Association Meeting.

Faruque S, Fernando D, El-Bassel N, et al. Predictors of needle risk behavior among male injecting drug users in the South Bronx, New York City. 1994, American Public Health Association Meeting.

Garcia D, Mills S, Symons A, et al. Deadhead youth--no hallucinations! the effects of social marketing and HIV prevention. (Poster) 1994, American Public Health Association Meeting.

Furst RT, Nettey R, Wiebel W. The social components of 'trust' and the efficacy of outreach intervention. 1994, American Public Health Association Meeting.

Kennedy M, Greenberg J, et al. High-risk behaviors in street youth: the tendency to run multiple risks. Session 1189. 1994, American Public Health Association Meeting.

Kipke MD, Nelson B, O'Connor S. Probability sampling of homeless street youth. 1994, American Public Health Association Meeting.

Kipke M, O'Connor S, Palmer R. Developing and HIV risk profile of street youth in Los Angeles." (Poster) 1994, American Public Health Association Meeting.

Long A, Bonilla G, Schunoff J. Street outreach programs: HIV risk reduction among active drug users in Los Angeles County. Session 1189. 1994, American Public Health Association Meeting.

Long AM, Bonilla G, Weathers R, et al. Crack cocaine use and HIV risk behaviors of injecting drug users in Los Angeles. (Poster) 1994, American Public Health Association Meeting.

Long A, Bonilla G, Weathers R, Rodriguez M. Ethnic diversity, perceived risk, and perceptions of control and HIV risk behavior among injecting drug users in Los Angeles County. 1994, American Public Health Association Meeting.

Williams WC, Burnett MN, Jenkins L. Patterns of sexual and drug risk behavior for injecting drug users in the Atlanta area. Session 1189. 1994, American Public Health Association Meeting.

Products:

Guidance for Street Outreach Evaluation, distributed by the Division of STD/HIV Prevention.

Key Words:

IDUs, street outreach, adolescents, survey-targeted, condoms, risk behaviors, peers, service enhancement, service delivery, storefront, street encounter, Los Angeles,CA., San Francisco, CA., Atlanta, GA., Chicago, IL., Philadelphia, PA., NYC.

Project: #19 Evaluation of the Experience of African American and Latina Women with Sexual Decision Making and the Female Condom: An Ethnographic Study

Purpose:

To describe individual and cultural differences in how young Latina and African American women choose methods for reducing their risk for sexually transmitted infections; negotiate method use with primary partners; and evaluate the female condom after trial adoption.

Results:

Since notification of award in September, 1994, Project staff have been hired and trained; interview protocols have been developed; and data collection is underway. Data is insufficient, at this time, for determining preliminary results.

Implications:

The findings from this qualitative study are expected to provide information pertinent to the design and delivery of sexual risk reduction interventions tailored to the cultural and economic realities of inner-city women of color.

Publications:

Several publications are planned, pending completion of data collection and analysis.

Products:

None

Key Words:

African American, women, condom-female, Hispanic, risk behaviors, formative research, Springfield, MA.

Project: #20 Men Who Have Sex With Men Minority Behavioral Assessment Project

Purpose:

To describe sociodemographic characteristics, sexual behavior, and HIV-related attitudes among Hispanic nongay-identified men who have sex with other men and to assess the need for and feasibility of targeted HIV interventions.

Results:

During 1991-1992, project staff at 2 community-based organizations (in Texas and California) conducted 85 qualitative interviews with providers and other community members, as well as 29 interviews with Hispanic men intercepted at "public sex environments" (parks and adult bookstores identified as venues for the solicitation of male-to-male sex). Although such venues were quickly identified and sexual activity easily verified through direct observation, target group members were very resistant to being interviewed. Those men who did agree to talk often denied high risk sexual behavior (which they defined as unprotected receptive anal sex), did not identify as homosexual, and attributed their HIV risk to sex with female rather than male partners. Alcohol and drug use were acknowledged by most men; heavy use, by those engaged in hustling or "survival sex". Several men admitted using penicillin or other home remedies, or avoiding gay-identified partners, as strategies for reducing their risk for HIV.

Implications:

Secrecy, denial, and suspicion of outsiders (including indigenous outreach workers) can be formidable barriers to outreach with Hispanic nongay-identified men who have sex with men. Especially in rural settings, outreach workers may require several months to establish a non-threatening, consistent presence at outreach sites, as well as a flexible array of strategies for engaging the target population. Intervention messages should address erroneous beliefs about HIV transmission, the importance of consistent condom use with both male and female partners, and locally-available resources for service and support.

Publications:

Beeker C. 1993. *Final report: Hispanic Nongay-Identified Men Who Have Sex With Other Men: A Formative Research Study.* Internal document: CDC/NCPS/DSTD-HIVP/BPRB

Products:

None

Key Words:

Risk behaviors, Hispanics, men who have sex with men, formative research, Texas, California, sexual exchange, behavior change-barriers, outreach-street, knowledge, referral.

Project: #21 Sociocultural Factors and HIV/AIDS Risk Reduction Programs in Young African American Homosexual and Bisexual Men

Purpose:

To describe the social context in which young (under 30 years old) African American men have sex with other men, identify the sociocultural factors associated with sexual risk behavior, and locate community partners and resources for future community-level interventions.

Results:

Research funding began in September, 1994. At each of the two research sites (Atlanta and Chicago), more than 30 semi-structured qualitative interviews have been conducted with service providers, agency representatives, and other community members who interact formally or informally with young African American men who have sex with men. Data are now being analyzed using Tally, a computer software program. Planning is underway for the next phase of formative research: qualitative interviews with young men who have sex with men recruited from multiple venues, which are currently being identified.

Implications:

The formative research findings are expected to provide information pertinent to the design and delivery of HIV prevention programs tailored to the social and cultural context of risky sex among young African American men who have sex with men.

Publications:

Several publications are planned, pending completion of data collection and analysis.

Products:

None.

Key Words:

Risk behaviors, African American, formative research, men who have sex with men, Atlanta, GA., Chicago, IL.

SMALL GROUP FORMATIVE AND INTERVENTION RESEARCH

Research targeting small groups operates on the assumption that some persons require interventions specifically tailored to their circumstances in order for them to adopt or sustain change to healthy behaviors. Small groups can be defined as collections of persons of similar backgrounds and/or risk factors gathered in the same place at the same time (i.e., STD clinic clients, persons in drug treatment, incarcerated populations, students). Formative research on small groups identifies the behavioral, social, and psychological factors influencing the STD/HIV infection risk of persons in the target group. Intervention research develops and evaluates methods to promote healthy behaviors among persons in the targeted small group by addressing their informational and social needs as identified by the formative research. The interventions can take several forms (i.e., persuasive behavior change messages, skills building training, behavioral risk assessment) and be delivered in several ways (i.e., role play, group counseling, interactive discussion).

Project: #22 A Clinic-Based Research and Demonstration Project to Prevent Sexually Transmitted Diseases Among High Risk Blacks and Latinos

Purpose:

To reduce the incidence of STDs among inner-city Blacks and Latinos by producing a culturally sensitive video-based intervention to increase condom use among Black and Latino STD clinic patients and by developing a model to use video-based interventions in STD clinic practice.

Results:

The formative research for the project revealed that people over the age of 25 to 30 are already set in their sexual practices, so the videos were targeted at a younger audience. Formative research of intervention placement within STD clinic flow determined that individual viewing stations in the intake waiting area were not desirable, continuous playing in the intake waiting room was typical, and a separate viewing room at the end of the clinic visit was optimal.

Compared to the control group, participants who only viewed the video demonstrated greater knowledge about condoms and STDs, more positive attitudes about condom use, increased HIV/STD risk perceptions, and greater self-efficacy. Participants in the video-plus interactive group showed still further increases in risk perceptions and self-efficacy, but not in knowledge or attitudes towards condoms. Rates of condom coupon redemption increased consistently by level of intervention across ethnic and gender-specific groups. Latino men and women, particularly Puerto Ricans, exposed to either intervention were the most likely to redeem the coupons. Dominicans were more likely to redeem coupons only after the video-plus interaction intervention. Among Black participants, African Americans showed increases in coupon redemption at both levels of intervention while Caribbean Islanders were more likely to redeem the coupons only after exposure to the more intensive intervention.

Among men, the rate of new STD infection was significantly lower for those in an intervention group compared to those in the control group, but there was no significant difference between the two interventions. Men with multiple sex partners had the highest new infection rate, but also showed the greatest impact of educational intervention. Latinos were somewhat less likely than African Americans to acquire a new infection. Given the overall lower rate of new infections among women, there was not a significant difference in new infection rates among women by treatment group or ethnic group.

Implications:

Interventions to promote condom use will be most effective if they take into account differences in acculturation within members of the same ethnic group and emphasize and individualize the personal risks of unprotected sex. Perhaps videos shown alone are more appropriate for persons who are more embedded in U.S. culture. The 20-minute, interactive, skill-building, small group discussions following video viewing allow participants to discuss personal risk, misperceptions, barriers to condom use, and different styles of condoms. Participants also can practice communicating about condoms through role play. Neither intervention interferes with clinic flow and both are flexible enough to be adopted by clinics with different service models. Public health advisors or health educators could be trained to conduct the small group intervention. The interventions involve minimal time and cost.

Publications:

Solomon MZ, DeJong W. The impact of a clinic-based educational videotape on knowledge and treatment behavior of men with gonorrhea. *Sexually Transmitted Diseases* 1988;15:127-132.

Solomon MZ, DeJong W. Preventing AIDS and other STDs through condom promotion: a patient education intervention. *American Journal of Public Health* 1989;79:453-458.

O'Donnell L, San Doval A, Vornfett R, DeJong W. Reducing AIDS and other STDs among inner-city Hispanics: the use of qualitative research in the development of video-based patient education. *AIDS Education and Prevention* 1994;6(2):140-153.

O'Donnell L, San Doval A, Duran R, O'Donnell CR. STD prevention and the challenge of gender and cultural diversity: knowledge, attitudes, and risk behaviors among Black and Hispanic inner-city STD clinic patients. *Sexually Transmitted Diseases* 1994;21(3):137-148.

O'Donnell LN, San Doval A, Duran R, O'Donnell C. Video-based sexually transmitted disease patient education: its impact on condom acquisition. *American Journal of Public Health* 1995;85(6):817-822.

O'Donnell L, San Doval A, Duran R, O'Donnell CR. The effectiveness of video-based interventions in promoting condom acquisition among STD

clinic patients. *Sexually Transmitted Diseases* 1995;22(2):97-103.

O'Donnell L, San Doval A, Duran R. O'Donnell CR. Predictors of condom acquisition following an STD clinic visit. accepted for publication by *Family Planning Perspectives*.

DeJong W, O'Donnell L, San Doval AD, Juhn G. The status of clinic-based STD patient education: the need for a commitment to innovation. Submitted to *AIDS Education and Prevention.*

San Doval A, Duran R, O'Donnell L, O'Donnell CR. Barriers to condom use in primary and non-primary relationships among Hispanic STD clinic patients. MS prepared for submission.

Products:
The videos, *Let's Do Something Different* for Black STD clinic clients and *Porque Sí* for Latino STD clinic clients, are available from the CDC National AIDS Clearinghouse. A sample protocol for integrating video-based education into STD clinics is available from Education Development Center, Inc., 55 Chapel Street, Newton, MA 02158.

Key Words: African Americans, Hispanics, condoms, behavior change-barriers, focus groups, small group discussion, IDUs, attitudes, knowledge, STD clinic clients, skills building, role plays, education, video, Bronx, NY., Boston, MA., Chicago, ILL., condom distribution.

Project: #23 A Formative Evaluation of HIV/AIDS Risk Reduction Programs in Prison Settings

Purpose:

To describe, through formative evaluation, the effectiveness of new and ongoing HIV/AIDS prevention and education projects in prison settings and to gain understanding of the special needs of inmates for the design of appropriate prevention programs.

Results:

The 2-year formative evaluation of the effectiveness of HIV/AIDS prevention and education programs was conducted with four different convenience samples: 1) adolescent males in a boot camp, 2) adolescent boys and girls in a juvenile detention center, 3) adult male felons in a maximum security prison, and 4) commercial sex workers in a city jail. Preliminary descriptive analyses of qualitative and quantitative data derived from 185 structured questionnaires (125 inmates and 60 guards, prison officials and staff) indicated that trained interviewers can obtain good response rates from inmates when data is collected under strictly confidential conditions. Inmates were aware of their personal STD/HIV risk, yet many held various misconceptions about HIV transmission and continued to engage in high risk sexual behaviors. Approximately one-third of the inmates indicated that the STD/HIV education programs offered to them did not relate to the high risk activities that occur in their communities. Many of the inmates surveyed suggested that informational and counseling sessions regarding safe sex should be offered repeatedly or on a continuous basis. Also, most preferred a combination of group and individual sessions led by health or medical personnel.

Preliminary interview data indicated that many of the adolescents were selective condom users. This finding is similar to published data on adults, showing that condoms tend to be used more frequently with non-main sex partners than with main sex partners. Condom availability and partner preference appeared to be the two most important factors which influenced the adoption of consistent condom use by adolescents. Early initiation of sexual activity, alcohol, and drug use did not differ significantly between male and female juvenile offenders. Adolescent girls were as likely as boys to have had sex while drunk and to have ever used drugs. However, significantly more girls than boys reported prior STD treatment and having experienced forced sex. Also, girls were twice as likely as boys to perceive their sex partners as a hindrance to consistent condom use.

Focus groups with additional inmates at each of the four sites are planned. More detailed information will be sought regarding how useful specific aspects of current STD/HIV prevention programs are to meet the needs of these incarcerated populations.

Implications:

HIV prevention programs for incarcerated populations must be optimally effective because significantly higher rates of STD and HIV infection are found among individuals who are detained in prisons

compared to the general population. Intervention design must take into account differences in the needs of inmates which are mediated by such factors as age, sex, and sexual experience. Such tailoring of prevention programming must also address the persistent discrepancy between personal awareness of risk status and continued risky behavior. Also, program success will be largely determined by how well interventions directly influence the power differentials between men and women so that women can protect their health by reducing their sexual risk. There will be a continual need to collaborate with inmates in the development of appropriate ideas and methods that may be incorporated into prospective program development. It is clear that no program can be without an effective drug treatment component, inclusive of aggressive follow-up for these vulnerable populations. Finally, additional research is indicated in order to develop a theoretical framework for prevention efforts within the incarceration culture.

Publications:

None

Products:

None

Key Words:

California, Michigan, South Carolina, adolescents, incarcerated populations, formative research, education, commercial sex workers, knowledge, group counseling, focus groups, behavior change-barriers, drug treatment.

Project: #24 The Atlanta Congenital Syphilis Research Project: Assessing and Improving Provider Compliance

Purpose:

To evaluate compliance by prenatal service providers with congenital syphilis (CS) guidelines by assessing CS outcomes among women who received prenatal care and were delivered of infants in Atlanta, GA, during 1990-1993, a period in which Atlanta had the highest reported incidence rates of infectious syphilis among women of any major U.S. city.

Results:

Data from three sources, including medical records, were consolidated and reconciled so as to maximize the likelihood of identifying the totality of 1990-1993 incident cases of CS among infants who delivered in an inner-city, publicly-funded hospital which reported approximately 95% of all Atlanta cases during the study period. Of the 173 hospital cases identified, 102 (59%) received prenatal care with a median of four prenatal visits. Adverse outcomes among all cases included perinatal mortality (13%), low birth weight (84%), and prematurity (36%). Characteristics among mothers of congenital cases included: prior syphilis history (30%) and cocaine abuse (60%). Among CS cases who were live births, those born to mothers with prenatal care were of greater gestational age and had higher birth weight.

Among the 59% of mothers of CS cases who received prenatal care, 26% had a positive test without subsequent treatment, 20% had late or failed treatment, 16% had late infection, and 13% had no third trimester screening. Forty-one percent of the pregnant women with untreated syphilis had no prenatal care.

Implications:

Improved compliance with congenital syphilis guidelines could potentially prevent 30%-40% of cases. Most women with untreated syphilis access health services at several points during their pregnancies, including prenatal care and emergency clinics, which provide opportunities for preventing congenital syphilis if providers comply with screening and treatment guidelines. Other possible prevention strategies for providers are appropriate follow-up, on-site testing and treatment, community outreach, earlier repeat testing, and partner notification.

Publications:

Warner DL, Rochat RW, Fichtner RR, Toomey KE, Nathan L, Stoll B, Brantley MB (1995). Untreated syphilis in pregnant women: identifying gaps in prenatal care. 123rd Annual meeting of the American Public Health Association, San Diego, CA, October 29-November 2.

Fichtner RR, Warner DL, Rochat RW, Berman SM (1995). Prevention gaps and other factors associated wit congenital syphilis outcomes among urban women in Atlanta, GA,1990-1993. Eleventh meeting of the International Society for STD Research, New Orleans, LA, August 27-30.

Warner DL, Rochat RW, Fichtner RR, Toomey KE, Nathan l (1994). Reasons for congenital syphilis outcome in urban Georgia among women receiving prenatal care, 1990-1993. 122nd Annual American Public Health Association meeting, Washington, DC, October 30-November 3 (#2207).

Division of STD/HIV strategic planning adverse outcomes of pregnancy chartered group research and program -- recent developments influencing the prevention of adverse outcomes of pregnancy: current trends in CS and prevention strategies (Atlanta site) (1994). Centers for Disease Control and Prevention Division of STD/HIV Prevention Grantee Meeting, Washington, DC, August 22-26 (#110).

Fichtner RR, Warner DL, Rochat RW, Conlon RT (1994). Compliance with prevention guidelines: congenital syphilis outcomes among urban women in Atlanta, GA, 1990-1993. Tenth International Conference on AIDS, Yokohama, August 7-12.

Products:

None

Key Words:

Syphilis, congenital syphilis, women, pregnant women, substance abuse, crack, cocaine, providers.

Project: #25 Risk Factors for HIV/STD and Intervention Opportunities Among Students Attending Alternative High Schools: The Cities in Schools Project.

Purpose:

To estimate risk factors for HIV/STD in a population of students attending an urban alternative (drop-out prevention) high school; and to develop and pilot test an in-school, risk-reduction intervention for the students that is theory-based and incorporates peer involvement.

Results:

Alternative high schools are increasing in popularity in the U.S. In some urban areas, nearly one in seven students attend these schools, many of which are public/private collaborations. Two such schools were identified in Miami, FL, both of which are affiliated with Cities in Schools, Inc., the largest nonprofit drop-out prevention organization in the U.S. In 1994, all students in these two schools were administered a questionnaire twice: to assess the prevalence of STD/HIV risk behaviors in this population before (baseline) and after a pilot intervention was conducted. Baseline data were compared with findings from the Youth Risk Behavior Survey (YRBS) conducted in public schools in Dade County in 1993.

Among students reporting ever having sex, respondents from the alternative schools (approx. 33%) were more likely than YRBS respondents to report two or more partners during the preceding 3 months, and were much more likely to have been pregnant or to "have gotten someone pregnant" than YRBS respondents. The prevalence of a report of previous STD or HIV/AIDS diagnosis was 29% in one of the two schools, but only 4% among YRBS respondents; and the prevalence of having injected illegal drugs was 15% in one of the schools compared to 2% in the YRBS. Fewer than one-half of the CIS students who had engaged in sexual intercourse reported use of condoms at last intercourse. Males were at greater risk in this CIS population than females; they initiated sex earlier, were more likely to use alcohol and drugs before having sex, and reported more sex partners. Importantly, this study's longitudinal data indicated that intentions to use condoms was a predictor of future condom-use behavior.

Implications:

Students enrolled in two Miami CIS schools were, in general, much more likely to engage in behaviors that could increase their risk for STD/HIV infections than were their peers in the community public high school system. In many urban centers, the alternative school population is huge and transitory, but opportunities for intervention should be seized. In the pilot intervention in Miami, the use of peers was promising in acquiring student confidence. STD/HIV prevention-service providers, including HIV community planners, should develop intensive, appropriate interventions for these students. This study underscores the relation between academic risks and health risks and the need to integrate academic and health promotion curricula for students at risk for dropping out of school.

Publications:

Centers for Disease Control and Prevention. Sexual behaviors and drug use among youth in dropout-prevention programs -- Miami, 1994. *MMWR* 1994;43:873-876.

Products:

None

Key Words:

Adolescents, out of school youth, Miami, FL., drop outs, structured groups, alternative high school.

Project: #26 Community Support Group Study

Purpose:

To describe what topics are discussed in a member-directed group for HIV-positive cocaine users and the percentage of time devoted to these topics. To examine whether support group attendance is associated with positive behavioral change.

Results:

Groups had mixed male and female membership. Group members spent the most time discussing drug abstinence issues such as identifying situations which trigger drug use and how to avoid these for a total of 2,230 (22%) of all speaking turns. Safer sex discussion focused almost exclusively on difficulties in informing a sex partner of one's serostatus and received less attention than all other topics with 768 (7%) of speaking turns. The group never discussed sexually transmitted diseases or risk behaviors such as anal sex, even through 36% of the group identified as gay/bisexual. Frequency of group attendance was associated with change in only those behaviors most frequently discussed by group members. Controlling for the level of drug treatment completed, group attendance of four or more meetings as opposed to three or fewer was significantly associated with reduced frequency of drug use, increased months drug free, reduced sex while high, and increased disclosure to all sex partners ($p=<.05$). Group attendance was not associated with condom use or number of sex partners.

Other Findings:

Recruitment of the drug-using population can be facilitated by introducing them to facilitators and the group process while they are still in drug treatment or in correctional settings (through passes to attend or in-house programs).

Implications:

When support group discussion targets specific behaviors associated with the spread of HIV, even an unstructured support group may assist in reducing those behaviors. The role of facilitator appears critical to the ability of support groups for HIV-infected persons to have a prevention focus. Facilitators need to find creative ways to direct discussion to prevention of risky sexual behavior for these groups whose primary purpose is socio-emotional support. This can be accomplished through training of facilitators either to deliver an intervention focus themselves or to locate guest speakers who can relate to the group members.

Publications:

Greenberg J, Clarke P. Support groups for HIV, HPV, and HSV infections. In Holmes KK, et al. (eds.) *Sexually Transmitted Diseases, Third Edition*. (in press) McGraw-Hill, New York.

Greenberg J, Johnson W, Fichtner R. Behavioral change among HIV-positive cocaine users attending a community support group in Atlanta, GA. submitted to *Journal of Drugs and Society.*

Products:

Brief Training for Group Facilitators

Key Words:

Persons in treatment, incarcerated populations, drug treatment, participant recruitment, staff training, risk behaviors, condoms, behavior change, peers, small group discussion, support groups, Atlanta, GA.

Project: #27 Evaluation of Group Counseling for HIV-Positive Drug Users--The Emory Study

Purpose:

To assess the relationship of psychological factors such as sensation seeking and sexual compulsivity to continued risk behavior in HIV-infected men.

Results:

Sexual compulsivity as measured on new scales developed by Kalichman et al. was associated with engaging in unprotected intercourse (anal, vaginal, and/or oral) with two or more partners in a 30-day period. Association was maintained after controlling for age and crack use. HIV-infected drug users can be recruited through drug treatment programs and among incarcerated populations. Recruitment from these sources was successful since participants could be introduced to the group and the facilitator while in an amenable state and were available for all meetings.

Implications:

Intensive therapeutic interventions are needed for a relatively small number of people who may contribute to the HIV epidemic. Community planning groups need to address interventions for sexual addiction.

Other Findings and Implications:

Recruitment of sufficient numbers for follow-up analysis for this study was not possible within the one-year time period of the award. Factors that affected recruitment included a extensive delay to obtain National Institutes of Health single project assurances for the subcontractors, reluctance of community-based organizations to refer clients for fear of losing them, and the fact that men in these geographic areas (identified as high need areas by the Request For Proposal) reported receiving extensive existing services at baseline.

Financial incentives were clearly related to recruitment. In San Juan, where incentives were provided for interviews and attendance, 64 men were recruited. In Atlanta where incentives were provided for interviews but not attendance, 38 men were recruited, and in Washington, DC where no incentives were provided, 18 men were recruited.

Community agencies involved in the project lacked the ability to recruit skilled interviewers and facilitators who could follow the structured design for the enhancement groups. They also lacked resources for conducting any quality assurance on the comparative designs. Future group studies should allow at least 2-3 years for development and implementation. While such studies can be facilitated through cooperation with community-based organizations, the staffing of such projects should be directly under the supervision of an independent research group.

Publications:

Kalichman S, Greenberg J, Abel G. Psychological characteristics of HIV positive men who engage in high-risk sexual behavior and suggested therapeutic models of intervention. in review by *Journal of Health Psychology*

CDC, Continued Sexual Risk Behavior Among HIV Seropositive, Drug-using Men- Atlanta, Washington, D.C., San Juan Puerto Rico, 1993; MMWR, Vol.45 No.7, Feb. 23, 1996

Products:

None.

Key Words:

Persons in treatment, incarcerated populations, drug treatment, participant recruitment, staff training, risk behaviors, condoms, behavior change, peers, small group discussion, support groups, Atlanta, GA., Washington, D.C., San Juan, Puerto Rico, staff recruitment.

Projects: #28 Evaluation of the Impact of HIV C&T on Methadone Clients in Drug Treatment Centers

Purpose:

To determine the effect of HIV counseling and testing (C&T) on sex behaviors, drug use behaviors, and treatment drop-out rates on methadone maintenance treatment clients.

Results:

Utilization of HIV C&T services was higher in methadone treatment clinics where HIV and drug treatment services were more integrated. Remaining in drug treatment was associated with a significant reduction in drug infections and sharing of potentially HIV-contaminated injection equipment. Drug users who reported a positive HIV test result reported a small increase in the number of injections; however, for those who attended HIV support groups there was a decrease in drug injection. Reporting an HIV positive test result by the client was associated with a decrease in the number of sex partners without using condoms and a decrease in the number of unprotected sexual contacts. As the amount of HIV counseling increased, the number of unprotected sex partners decreased. Clients who reported a positive HIV test result and those who received drug treatment from clinics which emphasized abstinence were less likely to report always using condoms during sexual intercourse.

Implications:

Methadone maintenance treatment significantly reduces high risk drug use behaviors by clients. HIV C&T should be offered to drug treatment clients and, those who test positive, should be encouraged to attend support groups for HIV-infected persons. All sexually active clients should be encouraged to use condoms, and condoms should be made available without request.

Publications:

Brackbill R, MacGowan R, Rugg D, et al. A prospective study of HIV infection risk behaviors and HIV serostatus among drug users. 1994, 27th Annual Meeting of the Society for Epidemiologic Research, Miami. *Journal of Epidemiology* (abstract) 1994;139:576.

Brackbill R, MacGowan R, Rugg D. Do methadone treatment clients change their HIV risk behaviors? Abstract PD-0509. 1994, Xth International Conference on AIDS, Yokohama.

Brackbill R, MacGowan R, Johnson W, et al. A prospective assessment of HIV counseling and testing on HIV infection behaviors among drug users. Session 1009. 1994, American Public Health Association Annual Conference, Washington, D.C.

Cole GE, Gorsky R, MacGowan R Collier C. Cost and cost effectiveness of HIV prevention activities in methadone treatment clinics. Abstract PO-C24-3191. 1993, IXth International Conference on AIDS, Berlin.

Collier C, MacGowan R, Fichtner R, et al. Behaviors and demographics associated with reported HIV infection among methadone treatment

clients in central Connecticut and Massachusetts. Session 2215. 1993, American Public Health Association Annual Conference. San Francisco.

Gorsky R, MacGowan R, Swanson N, DelGado B. Prevention of HIV infection in drug abusers: a cost analysis. *Preventive Medicine* 1995;24:3-8.

MacGowan RJ, Rugg DL, Stark KA, et al. HIV test history and voluntary testing among injection drug users in treatment: what influences testing? Abstract Po-C-4825. 1992, VIIIth International Conference on AIDS, Amsterdam.

MacGowan R, Cole G, Scibak J. Drug use and self-reported HIV serostatus of clients entering methadone treatment programs in New England. Session 1109. 1992, American Public Health Association, Washington, D.C.

MacGowan RJ, Cole GE, Rugg DL, Collier C. Changes in drug and sexual behaviors reported by methadone clients in Connecticut and Massachusetts, by knowledge of serostatus, June 1990 - January 1993. Abstract PO-D09-3633. 1993, IXth International Conference on AIDS, Berlin.

MacGowan R, Ransom R, Collier C, Stark K. Changes in injection behaviors of drug users in methadone treatment by duration of treatment, knowledge of serostatus and HIV CT, in New England. Session 2199. 1993, American Public Health Association Annual Conference, San Francisco.

Rugg DL, MacGowan RJ, Stark KA, Swanson NM. Evaluating the CDC program for counseling and testing. *Public Health Reports* 1991;106(6):708-713.

Rugg DL, MacGowan RJ, Stark KA. Self-reported changes in sexual and drug using behaviors in methadone clients following HIV counseling and testing. Abstract MD-4016. 1991, VIIth International Conference on AIDS, Florence.

Products:

None.

Key Words:

Persons in treatment, drug treatment, behavior change, methadone, Connecticut, Massachusetts.

Project: #29 Evaluation of Risk Among Injection Drug Users in Detoxification Treatment (Proyecto ERAT)

Purpose:

To describe the drug use and sexual behaviors of injection drug users who receive HIV counseling and testing after entering detoxification programs in Puerto Rico.

Results:

Of 390 injection drug users entering drug detoxification centers 29% are seropositive; 85% are male; 77% have been to the U.S.; 51% have been incarcerated; 66% have injected for more than 5 years; 14 of 29 bisexual/homosexual men (48%) versus 66 of 225 (29%) heterosexual men are seropositive; 65 or 174 (37%) who thought they were at risk for HIV infection were seropositive versus 16 of 80 (20%) who did not think they were at risk. Behaviors associated with seropositivity are: years of injecting drugs, injecting with used needles in jail, and having sex with an injection drug user in the last 6 months.

Implications:

HIV counseling and testing services should be made available to injection drug users entering detoxification programs in Puerto Rico. Drug users who are sexually active should be encouraged to engage in safer sex practices. HIV prevention programs should be provided to drug users while they are incarcerated.

Publications:

Martinez R, Colon H, Robles R, et al. Behavioral risk factors and HIV infection of injection drug users at detoxification clinics in Puerto Rico. Abstract POC-4249. 1992, VIIIth International Conference on AIDS, Amsterdam.

Ríos N, MacGowan R, Collier C, et al. A comparison of injection practices of drug users by HIV serostatus before and after detox in Puerto Rico. Session 2199. 1993, American Public Health Association Annual Conference, San Francisco.

Robles R, Colon H, Díaz N, et al. Behavioral risk factors and HIV infection of injection drug users at detoxification clinics in Puerto Rico. *International Journal of Epidemiology* 1994;23(3):595-601.

Products:

None

Key Words:

Hispanics, counseling and testing, IDUs, methadone, detox.

Project: #30 Hemophilia Behavioral Intervention Evaluation Projects (Adolescents)

Purpose:

To prevent sexual transmission of HIV from infected hemophilic adolescent and young adult males to their sex partners through peer-centered social activities and intensive stage-based individual sessions conducted through nine hemophilia treatment centers and one state hemophilia agencies.

Results:

The majority of sexually active adolescents/young adults report using condoms consistently. Safer sex (condom use, nonpenetrative sex, or abstinence) is more common than disclosure of serostatus to partners. Parental support for disclosure of serostatus is associated with an increased likelihood that adolescents/young adults will disclose their serostatus. Distress about everyday reminders of HIV infection appears to be associated with ineffective coping strategies. (Brown, et al.)

Adolescents and young adults with hemophilia and HIV endorse discussing safer sex and disclosing their HIV seropositivity, yet they report this to be exceedingly difficult and fraught with social and interpersonal risks. (Nuss, et al.).

Implications:

This stage-based intervention approach may have implications for the development of intervention strategies with other populations of HIV-infected young people.

Publications:

Nuss R, Smith PS, Cotton D, Kisker T. Communication about safer sex and serostatus disclosure in HIV-positive adolescents with hemophilia, *Hemophilia* (1995), 1, 126-130.

Brown LK, Schultz JR, Gragg RA. HIV-infected adolescents with hemophilia: adaptation and coping, *Pediatrics* (in press).

Products:

(none at this time)

Key Words:

Hemophilia, adolescents, safer sex.

Project: #31 Hemophilia Behavioral Intervention Evaluation Projects (Adults)

Purpose:

To prevent sexual transmission of HIV from infected hemophilic men to their sex partners by facilitating behavior change for talking to partners about safer sex and consistently practicing safer sex. The intervention is conducted through five hemophilia treatment centers and one state hemophilia foundation.

Results:

Preliminary findings show a disparity in perception and beliefs between partners with respect to condom use. Emotional barriers to relationship development impede many single men's ability to negotiate and use condoms with their partners.

Implications:

This stage-based intervention approach may have implications for the development of intervention strategies with other populations of HIV-infected adults. In addition, this project addresses many issues specific to HIV-discordant couples which may have relevance for HIV-discordant couples in other settings.

Publications:

None

Products:

(none at this time - plans are in place for the development within the next year of an intervention training manual and videotape for use in other populations)

Key Words:

Hemophilia, adults, safe sex.

Project: #32 Peace Corps STD/HIV Intervention Design Project

Purpose:

To describe HIV risk behaviors in Peace Corps Volunteers (PCV) and to examine correlates of sexual risk behaviors.

Results:

During 1991, cross-sectional data were collected by self-administered questionnaire from more than 1200 randomly selected PCV stationed in 28 countries. Sixty-one percent of the 1080 PCV answering questions about sexual behavior reported having at least one sex partner during their Peace Corps service, 39% had a host-country national partner, and 29% had an expatriate partner who was not a PCV. Overall, less than a third (32%) of unmarried PCVs used condoms during each episode of sexual intercourse. Condoms were used more frequently with non-steady partners and (for male PCV only) with host-country national partners. Among male PCV, condom use was associated with lower alcohol use and the belief that HIV was a problem in the host country. Female PCV reporting more condom use were younger and had fewer partners than those reporting less use. Number of partners was associated with greater time in-country, more frequent alcohol use, being under 40 years of age, and country of assignment.

Implications:

Less than a third of PCV are using condoms consistently, an alarming finding given the involvement of some PCV with sex partners from areas where HIV seroprevalence is very high. Peace Corps must insure that PCV are 1) educated about local seroprevalence and cultural differences in sexual negotiation and practice, 2) enabled to reduce their sexual risk through access to high quality condoms, including the female condom; and 3) supported in their sexual risk reduction, through counseling, outreach, and other strategies tailored to the special needs of young Americans living in developing countries.

Publications:

Moore J, Beeker C, Harrison J, Eng T, Doll L. HIV risk behavior among Peace Corps Volunteers. *AIDS* 1995;9:795-799.

Products:

Moore J and Beeker C. 1993. *Final Report: Prevention of STD and HIV infection among Peace Corps Volunteers--Research and recommendations*. National Centers for Disease Control and Prevention, Atlanta GA.

Key Words:

Risk behaviors, HIV prevalence, Peace Corps, condoms.

Project: #33 The Prevention of HIV in Women and Infants Demonstration Projects (WIDP)

Purpose:

To prevent the acquisition and transmission of HIV in women and to prevent the perinatal transmission of HIV to infants.

Results:

One component of the project is the production of role model stories in small media (pamphlets, brochures) to encourage women to use condoms all the time with their sex partners. The stories have cognitive and behavioral content messages specific to a stage on the Stages of Change continuum. Each story is ethnically specific, low-literacy, and uses the language of and actual quotes from women in the community. The Projects produce three role model stories a month and to date have produced 160 stories (including 4 about women using the female condom and a few about men and couples). The materials are distributed through outreach, peer volunteer networks, and drop sites. Preliminary results are currently being analyzed.

Implications:

For social norms to develop and have the opportunity to influence individual's behavior, it is critical to develop the participation of a broad range of community members with different roles, statuses, and involvement in the community so that the norm becomes integral to the community. Behavior changes, such as condom use, are adopted incrementally and cannot be intervened upon or measured by an "all or nothing" standard. Issues of motherhood and childbearing influence condom use for both disease prevention and pregnancy planning--particularly suitability of situation, responsibilities of motherhood, consequences of childbearing on other relationships, enhancement of self-esteem, and the psychological significance of the mother-child relationship.

Publications:

Cotton D, Person B. Using the community mobilization framework as a foundation for implementing community interventions in your community. Abstract 193. 1994, DSTD/HIVP Grantee Meeting, Washington, DC.

Bond L. A new approach to an old problem: applying the transtheoretical model of behavior change to HIV/STD prevention outreach. Abstract 024. 1994, DSTD/HIVP Grantee Meeting, Washington, DC.

Enguidanos S, Iarrobino P. Designing community-tailored intervention material. Abstract 022. 1994, DSTD/HIVP Grantee Meeting, Washington, DC.

Products:

A Model of Community Mobilization for the Prevention of HIV in Women and Infants

Key Words:

Women, infants, perinatal, role model stories, small media, community level intervention, prostitutes, commercial sex workers, IDUs, high

risk women, sex partners of IDUs, HIV positive.

Project: #34 STD Clinic Flow and Utilization

Purpose:
To determine the level of overburdening in STD clinics in metropolitan areas with high STD morbidity, the factors leading to overburdening, and the impact of overburdening on client care.

Results:

Overburdening was calculated by dividing the number of clients seen by the number of persons applying for service. Budget cuts did not seem to be a factor as demonstrated by the five clinics which were able to provide budget data. All had increases in funding during the study year. Across the seven clinics studied, there was little variation with regard to hours of registration and operation, cost of services, type of HIV services offered (confidential or anonymous), the gender and ethnicity of clients seen and range of STD services provided. However, two correlations were discovered; the length of client waiting time was directly correlated with the clinic's level of overburdening; and, low levels of overburdening were correlated with high levels of clinical staffing. Apparently, two phenomena are operating simultaneously to produce the latter result: *overburdening*, which results in clients being turned away, and *under utilization*, caused by clients being turned away. Interview and observation revealed common features among all clinics, as well as marked contrasts among clinics within the highly overburdened group. Analysis revealed that clinic processes combining both walk-in and appointment systems seem to maximize clinic efficiency, and that clinics where nursing staff conduct STD examinations experience less overburdening than those that do not.

Implications:

Public STD clinics require better operating strategies during a period of continued funding contractions and health care reform. Strategies that incorporate scheduling flexibility and extended use of human resources are likely to be most effective. Some possible strategies of alleviating overburdening include: 1) evening and weekend hours for clients who cannot be seen during the day; 2) sufficiently staffed satellite clinics placed in high morbidity locations; 3) computerized office systems; 4) staff development training for front desk personnel to encourage positive experiences for clients; 5) ongoing training for clinical and program staff in how to work with "difficult" populations; 6) maximize use of mid-level clinicians such as nurse examiners; 7) provide mechanisms at the leadership level for closer rapport between clinical and program staff; and 8) assist sites to develop their monitoring and evaluation capabilities.

Publications:

Hare ML, Conlon R, Butler MO. Evaluating patient utilization of public STD clinics. Abstract 1125-7. 1994, American Public Health Association Annual Meeting, Washington, D.C.

Products:

Hare ML, Butler MO, Hersey JC, et al. *Final Report: Contract #200-88-0642 for Task 11 on Evaluation of STD Clinic Flow and Utilization*. 1993. Battelle Memorial Institute, Arlington, VA.

Key Words:

STD clinics, turn aways, overburdened, nurse practitioner, providers, ethnography.

Project: #35 Women In Group Support (WINGS)

Purpose:

To determine 1) what strategies are successful for recruiting and retaining high risk women in support groups; 2) whether structured, support groups are effective in reducing risk behaviors in high risk women; 3) whether drop-in groups following a series of 6 structured sessions increase the effectiveness of the intervention; 4) if women will attend drop-in groups without monetary compensation.

Results:

Participant recruitment began in October, 1994 and continues at this time. No results are available at this time.

Implications:

This study is expected to generate information on personal concerns of high risk women and female group dynamics which lead to positive behavior change that can be applied by agencies serving women at high risk.

Publications:

None.

Products:

A sample *Quality Assurance Form for Group Interventions* is available from Judith Greenberg, Division of STD Prevention, NCHSTP, CDC, Mailstop E-44, 1600 Clifton Road, Atlanta, GA 30333.

Key Words:

STD clinics, STD clinic clients, health care providers, accessing services, staff training, nurse practitioners, service enhancements, service delivery, waiting times, clinic turn aways.

ONE-ON-ONE FORMATIVE AND INTERVENTION RESEARCH

One-on-one research recognizes that some persons at risk for STD/HIV infection require personalized interventions in order for them to acknowledge their risk, to be encouraged to adopt or maintain healthy behaviors, and to access prevention services. Persons targeted for one-on-one interventions are persons with well defined risk for acquiring or transmitting STD/HIV infection, people who live in a targeted geographic area, and people who belong to a group which is medically and socially underserved (i.e., commercial sex workers, pregnant women, or sexually active youth in high morbidity areas). Formative research on such persons- at-risk identifies barriers and facilitators to accessing medical and social services as well as common behavioral, social, and psychological factors influencing their STD/HIV infection risk. Intervention research develops and evaluates methods to promote healthy behaviors among targeted persons by addressing their informational and social service needs as identified by the formative research. The interventions can take several forms: persuasive behavior change messages, skills building, behavioral risk assessment. And they may be delivered by direct service delivery or referral to services, by individual counseling, and by case management.

Project: #36 Development and Integration of Computer Assisted Assessment and Education (CAAE) with Computer Assisted Counseling/Testing (CACT)

Purpose:

To develop and test computer software which assesses psychosocial and behavioral factors and generates prescriptive recommendations to clients (advice) or customized counseling scripts, which can be used by HIV counselors to maximize effectiveness and efficiency of and decrease random variability or bias in HIV counseling sessions; and to expand software to accommodate simultaneous assessment, and education or counseling of respondents concerning sexually transmitted diseases.

Results:

Client recommendations were the basis for developing the Computer Assisted Assessment and Counseling Education (CAACE). The CAACE software program has ITS capability and uses the Macintosh® system as the platform. A Microsoft Windows® version is possible for later development. Client characteristics pertinent to his/her educational and counseling needs are determined through various scales measuring depression, attitude or self-esteem, alcohol use, personal values, assertiveness, locus of control, and general feelings. Inquiries on risk behaviors and demographics are included. Appropriate, set client advice scripts are generated at the end of the session. The CAACE software was demonstrated at a University of Illinois sponsored conference for inclusion in a model for elaboration through publication in a 1996 volume of Health Education Quarterly.

Implications:

Disparity in the training, experience, supervision, and proficiency of HIV counselors causes variations in the content, duration, and delivery of messages in HIV counseling and testing. These variations could greatly compromise the cost-effectiveness and quality of HIV counseling services and could present a serious threat to the validity and reliability of research which employs counseling as an intervention. The application of this software may be appropriate for personal consumers with the adoption of home test kits for HIV. Of course some modifications will be required. In addition, the software can be adapted for off site use in kiosks, video game room settings and the like which are highly traveled areas by high risk populations of adolescents.

Publications:

M.Jackson, S. McKinnon, K.Hall Computer Assisted Counseling and Testing Initiative (CACTI). Abstract 1994 Division of STD Grantees Meeting, Washington, D.C.

Products:

Computer Assisted Assessment and Education with Computer Assisted Counseling and Testing: Final Documentation (1994) with four diskettes is available from Mark Jackson, M.D., Director of Student Health Services, University of Maine, Orono, Maine 04469. The hardware requirements for the CAACE program include: 80486-based computer, 33MHZ, 8MB RAM, 15" or larger Super VGA color monitor with Video accelerator card, Sound Blaster or Sound Blaster Pro sound card, and a standard printer.

Key Words:

STD clinics, STD clinic clients, STD and HIV counselors, scripts, risk assessment, behavioral change, messages, CD ROM, multimedia.

Project: #37 Behavioral Risks for HIV/STD and Birth Outcomes Among Pregnant Women Who Abuse Substances: Evidence From Intensive Outreach Through Project Prevent.

Purpose:
To characterize HIV/STD risk behaviors of substance-abusing, pregnant women upon entry into Project Prevent, an abandoned infants prevention program in Atlanta, GA; to relate these risks to birth outcomes; and to compare risks and outcomes for women who entered the program during pregnancy and women who did not.

Results:

Project Prevent is a metro-wide, hospital-based service delivery program designed to lessen the in-hospital abandonment of drug- and HIV-affected infants. This model program uses: intensive community outreach for identification and referral of pregnant substance abusers (PRE) and in-hospital identification and referral of mothers who have substance-abuse histories and an infant needing intensive care (POST). During 1994, all 137 enrolling women wee interviewed about HIV/STD risk behaviors, and birth outcome data were obtained from the 90 women who delivered infants during the study period. Previous data from prior enrollees were also analyzed.

Overall, approximately 85% of participants reported using crack cocaine during the current pregnancy; 16% reported using heroin; 53% had traded money or drugs for sex; 28% had injected drugs; 21% reported unprotected anal intercourse; 85% reported a history of STDs; and the mean number of sex partners in the past year was 7.6. Fewer than one-fourth thought they were at risk for HIV. Trading sex and having had an STD were strongly associated. PRE and POST women had similar HIV/STD behavioral risk profiles: PRE women had significantly better birth outcomes (higher birth weights, fewer STDs, less drug use) than POST women.

Implications:

Through the use of paid peer counsellors and intensive outreach, which included a metro wide network of churches, battered women's shelters, homeless shelters, emergency treatment facilities, storefront facilities, and service agency outlets, this project identified and enrolled prenatal women (PRE) at <u>unusually</u> high risk for HIV/STDs. This risk was from unprotected sexual behaviors, presumably associated with crack use, and from drug injection. Despite these admissions of elevated risk, more than three-fourths of women did not perceive their HIV/STD risks.

Because the risk profiles of PRE and POST women are so similar, this suggests that the community outreach of the project that identifies PRE women is effectively targeting women at high risk. Those women missed by outreach are, on average, at no higher risk, according to these findings. Prevention programs with priorities similar to those of Project Prevent should strongly consider using its methodology.

Publications:

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a peer-based outreach program that targets urban pregnant substance abusers. In: *Abstracts, International Conference on AIDS*, Berlin, Germany, June 6-11, 1993;1:115. Oral Presentation No. WS-D12-2.

Fichtner R. HIV/STD risks among substance-abusing pregnant women identified and not identified by outreach -- Atlanta, Georgia. In: *Abstracts, Third Science Symposium...HIV Prevention Research: Current Status and Future Directions*, Flagstaff, AZ, August 16-18, 1995; 1:18. Oral Presentation No. D-3.

Key Words:
Women, Substance abuse, STD, service delivery, infants, HIV infected, crack, cocaine.

Project: #38 Evaluation of Multi Media HIV Risk Assessment of Inner City African American Adolescent Women

Purpose:

To develop an interactive, multi-media risk assessment/risk reduction HIV/AIDS/STD software program targeting African American adolescent women and to evaluate its short-term impact when used with counseling and the impact of its repeated use when coupled with case management.

Results:

Research funds were awarded in September, 1994. Software with persuasive role model stories is being developed. Prototypes of the software and hardware are being tested. Secure locations for final placement of hardware are being identified. The study will be expanded in 1996 to include members of the target audience receiving services from a local department of health in a small Midwest town. This will be in addition to the test audience from an inner city Chicago neighborhood.

Implications:

Completion of a behavioral risk assessment and delivery of counseling messages using moving videos of narrators and actors of the same gender and race as the user (of the software) has promise for effective communication with the target audience. The youth participants involved in the creation of the messages and filming were very much interested in the process and are eager to see the final product. The target population is low income, sexually active, African American adolescent women (12-16 years old) living in an inner city Chicago housing project. These young women are at high risk for STD/HIV infections and unintended pregnancies. They have difficulty accessing telephone based sources of information since pay telephones were removed from the housing projects; the telephones were linked to drug sales and service. The current HIV interventions targeting this group are one-time, didactic, and classroom-based, which compete with other pressing demands on the young women's time. Computer-based risk assessments and risk reduction education offer a cost-effective approach to reach the very high risk audience at any time of the day, at the user's convenience. The project will evaluate changes in attitudes, beliefs, perceived norms, and behaviors. This approach will demonstrate the feasibility of using high tech, low cost, and low overhead equipment to serve an otherwise underserved group.

Publications:

A 1997 issue of *Health Education Quarterly* will be published describing the proceedings of the December 1994 Conference at the University of Illinois at Urbana-Champaign on interactive behavioral risk assessments and counseling for HIV and STD prevention.

Products:

Software is currently available through the New York State Department of Health, and other contributors to the project. Other software will be distributed to all interested parties with the appropriate hardware who show interest in participating in the ongoing evaluation

of product effectiveness. Several community health centers and schools have shown interest in viewing the materials and instituting them into their preventive educational programs.

Key Words:
African American, adolescents, inner city, public housing, multi media, CD Rom, video, risk assessments, adolescent, women, Chicago, ILL.

Project: #39 Perinatal HIV Reduction and Education Activities (PHREDA)

Purpose:

To study the HIV risk reduction practices, contraceptive choices, and pregnancy plans of women at high risk of HIV infection and to test the effectiveness of three strategies to prevent women's infections and perinatal HIV transmission (enhancement of services, education and support groups, and community-based information and outreach).

Results:

Data from multiple sites indicated that more than a quarter of women in drug treatment wanted to have a child in the next year. The majority of women had not planned their last pregnancy, did not wish to become pregnant in the next three years, but had not practiced contraception consistently in the last month. Surgically sterilized women were less likely always to use condoms than unsterilized women, but no less likely to have multiple partners. Condom use with main partners was rare, but was strongly predicted by perceptions that friends were using condoms. Condom use was also predicted by the combination of worry about the effect of AIDS on one's daily life, and a sense of self-efficacy in insisting on a sexual partner's condom use.

Other findings:

Single-site, quantitative analyses showed that HIV positive status did not, in itself, alter an individual's likelihood of bearing additional children. While women decreased their drug-related HIV risk over time, the IV drug use of main partners was not associated with increased condom use. Among women who had little or no prenatal care but who received postpartum, predischarge services designed for women with drug histories, rates for family planning and HIV counseling increased, correct contraceptive use increased, and unprotected sex decreased. Women who received any family planning service (including inexpensive referral services) in their drug treatment center were more likely to use contraception 9 months later than women who received no co-sited family planning service. Two important factors in helping drug-using women maintain contact with family planning services were 1) service provision by staff who had been trained to understand and be sensitive to the special circumstances of this group and 2) ongoing, repeated contact with street outreach workers or designated service providers. Social support from a service provider increased the likelihood of returning for HIV test results. Most minority women reported feeling comfortable asking a male partner to use a condom, and 83% said he would if asked. Small media distribution and outreach efforts brought about increases in condom use and pro-condom norms a full year before similar changes were observed in a comparison neighborhood. Outreach was most effective when more intensive, one-on-one, risk-reduction educational sessions were combined with access to community-specific educational materials. Contrary to the expectation that addressing the entire hierarchy of social service needs of women at high risk would result in behavior change, case management was associated with changes in HIV-risk behavior only when

referrals to HIV-specific services such as drug treatment and counseling and testing were made.

Multiple site, qualitative data indicated that low levels of condom use were supported by different combinations of 1) the perception that condoms were ineffective in preventing pregnancy or disease, 2) the conviction that partners do not like condoms, 3) the threat of embarrassment while buying condoms or discussing them with a new partner, 4) the feeling that condom use is incompatible with spontaneous or natural sex, 5) the notion that it would be an insult if a partner suggested condom use, and 6) mistaken beliefs about the HIV or pregnancy prevention properties of sterilization, birth control pills, methadone, or illicit drugs. Women at high risk were difficult to enroll and retain in multiple-session, group-based HIV education activities. Providing childcare and incentives for participation to these women were found to be useful and alternative community-based educational strategies were identified.

Confidentiality was very important to the women because of the stigma of drug use. Characteristics of relationships with male partners and partner attitudes were central to decisions around condom use and pregnancy.

Single-site qualitative observations indicated that women in the peer networks of drug-using women were willing to volunteer as outreach workers.

Implications:

Provision of sensitive clinical services and coordination of family planning, drug treatment, and HIV services appear to be important for high risk women. Providing at least minimal family planning services in drug treatment centers may increase women's likelihood of contraceptive use and of obtaining HIV antibody counseling and testing. The post-partum hospital stay appears to be a good time to reach women for HIV-related and family planning interventions. It may be advisable for case managers of high risk women to make referrals to services that deal specifically with HIV risk. Staff in family planning clinics should be trained to be sensitive to the medical and emotional needs of drug-using women, and drug-treatment staff should be knowledgeable about HIV-related issues. Dissemination of new HIV information through street outreach and non-stigmatized, community-based settings (e.g., churches, door-to-door) appears promising. HIV-infected women with a history of unplanned pregnancies and inconsistent contraception should be targeted for more intensive counseling and follow-up. Surgically sterilized women may also need additional counseling about condom use, and they should be included in public health messages. For women who use drugs, the HIV transmission risk from sex partners should be emphasized as strongly as drug-related transmission risk. Women appear to place more emphasis on the nature of their emotional relationships with their male partners than on the behavior of the partners; sexual risk from primary partners should be stressed, and male partners should be involved in programs to reduce heterosexual and perinatal transmission of HIV. Attempts to work with networks of women to support a group norm of condom use may be helpful.

Emphasizing the impact of HIV on everyday life, providing role models

who perceive substantial influence over condom use, and conducting risk-reduction educational groups may increase requests that partners use condoms.

Publications:

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Products:

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Key Words:

Women, infants, condoms, service enhancement, education, support groups, outreach-street, prenatal care, family planning, counseling and testing, case management, coordination of services, Newark, Jersey City, N.J., Philadelphia, PA., Baltimore, MD., Tallahassee, FL., Atlanta, GA.

Projects: #40 Prenatal Care Utilization Project

Purpose:

Within two ZIP Code areas of Philadelphia, reduce the incidence of congenital syphilis relative to reported early syphilis morbidity, increase the percentage of women with syphilis who receive prenatal care, and study the linkages between pregnancy testing and prenatal care among low income women.

Results:

Formative research showed that for pregnant women in the target community there were few structural or institutional barriers (e.g., cost, access, childcare, transportation) for enrolling in prenatal care (PNC). Even women who received late or no PNC reported that they knew where to go, had no difficulty getting appointments, and were satisfied with the treatment they received from providers. However, personal barriers, including negative feelings about pregnancy (e.g., unhappy, depressed, embarrassed, ambivalent about infant), fear of confirming pregnancy, homelessness, and drug or alcohol use often delayed enrollment in PNC and interfered with consistent attendance.

Follow-up serologic efforts aimed at women of child-bearing years and male and female adolescents who had syphilis in the previous year located and tested approximately half of the target persons; nearly a quarter of whom were then treated for new or untreated syphilis infections.

The case management intervention to facilitate PNC enrollment and participation determined the risk characteristics for enrolled women: no PNC, used crack cocaine in the past 6 months, history of syphilis, exchanged sex for drugs, homelessness, and previously given birth to an infant with congenital syphilis. Of the enrolled women, over one-third reported one risk characteristic and over one-third reported three or more risk characteristics. The obstacles to preventing congenital syphilis discovered by this intervention were enrollment in PNC too late in pregnancy for detection and treatment; unreliable self-reports of disease history, PNC visits, and risk characteristics; and lost linkages within the medical and social services attending to the women.

The survey of post-partum women from the target ZIP Code areas showed several significant differences among women who received early PNC, late PNC, and no PNC. Women with early enrollment had fewer pregnancies, fewer live births, and fewer children living at home than women in the other two groups. Although nearly half of the women had pregnancy tests in a medical setting, pregnancy testing was not linked to PNC or to syphilis screening. Women who entered PNC late more often received pregnancy testing, prenatal care, and delivery services from two or three different providers than did women who entered PNC early. Some of the women who accessed several different providers did so to avoid detection of their substance abuse and consequent loss of custody of the infant.

A health department telephone number for free at home pregnancy testing was established to make the tests more accessible to women in the target area, but it did not receive any calls. The impact of these collective efforts on syphilis morbidity awaits the compilation

of 1995 surveillance data.

Implications:

Obstacles to preventing congenital syphilis are late or non-enrollment in prenatal care and inconsistent visits once enrolled by at-risk or infected women, maternal risk characteristics, and lost linkages within the medical and social services caring for these women. In areas experiencing congenital syphilis outbreaks, screening women for syphilis at the same time they receive pregnancy tests will detect otherwise missed infections. State communicable disease regulations may need to be modified to redefine the first PNC visit to be the time of a positive pregnancy test. Collaboration among public health and private sector health agencies (e.g., STD control, maternal and child health, and family planning) can create linkages to increase screening, verify treatment, make referrals to other services, and extend outreach to women at highest risk.

Publications:

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Higgins CR, Hendershot EF, Armstrong K, et al. Analysis of a collaboration to reduce congenital syphilis. Abstract 1125-4. 1994, American Public Health Association Annual Meeting, Washington, D.C.

Higgins C, Tadlock M, Goldberg M, Santelli J. Community outreach to prevent congenital syphilis: case study of a collaboration. Submitted to *Journal of Public Health Management and Practice*.

Products:

None yet.

Key Words:

Women, infants, condoms, service enhancement, education, support groups, outreach-street, prenatal care, family planning, counseling and testing, case management, coordination of services, accessing services, adolescents, risk behaviors, collaboration, outreach-

clinic, syphilis, referral, formative research, Philadelphia, PA.

Project: #41 Prevention of HIV Risk Behaviors Among Young Women: Using Community Resources to Explore Alternatives to Prostitution

Purpose:

For young women (aged 16-25) engaged in or about to engage in prostitution, identify the timing and sequence of their critical life events; determine the availability and perceived availability of social services for young women; identify acceptable and accessed social services; examine receptivity for and factors associated with acceptance of social and health case management services; and ascertain the services needed by young women in social or economic crisis.

Results:

In Colorado Springs, street walkers were more likely than female STD clinic clients and HIV-test site clients to have used drugs (89% vs 62%), used drugs regularly (82% vs 25%), and injected drugs (46% vs 5%). Street walkers were more likely to be women of color, younger at enrollment, and currently practicing prostitution than women who formerly engaged in prostitution for one year or longer. Women who are commercial sex workers reported engaging in sexual activities at significantly younger ages than comparison women. On average, both street walkers and other commercial sex workers reported using drugs on a regular basis at age 17, about 3 years before they first accepted money or drugs in exchange for sex. Half of the commercial sex workers interviewed said they had injected drugs; 39% reported injecting drugs regularly. Younger commercial sex workers (<18 years old) tended to first inject after entering prostitution, but older commercial sex workers (>18 years old) tended to inject before entering prostitution. In fact, the likelihood of prior injection drug use increased with increasing age. Early initiation of sexual activities and regular drug use during adolescence often precedes entry into prostitution.

Half of the study participants named one or more agencies which could assist with basic services. Almost all (98%) had previously used at least one and most (88%) had used four or more. The high rate of depression measured among the participants may have contributed to the low rate of follow through on referrals to or from agencies.

Focus group respondents in San Juan, Puerto Rico did not consider prostitution to be "a job" because it was not socially acceptable. They considered the risk of violence to be more serious for them than AIDS. Drug dependency made quitting prostitution difficult. Most commercial sex workers were unemployed, heads of households, and lived with their children.

Adolescent women (13-17 years old) entered prostitution after family or academic problems led them to early sexual experience with a boyfriend which resulted in pregnancy, abortion, and economic and emotional despair. They then began exchanging sex for food, clothing, or a fun night out. Drug use tended to follow prostitution. Their strategies for dealing with the fear of HIV infection were knowing their clients and increased condom use.

Commercial sex workers' stated needs were jobs, birth control, education, housing, drug treatment, AIDS counseling, social assistance, and medical and mental health treatment. Participants were highly receptive to nutritional services, health care, family planning, temporary employment, vocational training, and legal aid. Major barriers to services were transportation, childcare, long waiting lists for housing, unavailability of drug treatment programs for women, negative perceptions of social services (i.e., taking away custody of children), and perceived discrimination and unethical treatment from service providers. Women who were younger, more educated, married, from rural areas, and with low depressive symptomatology were more likely to accept services than women with opposite characteristics. Case manager-assisted referrals may be more effective with the latter group.

Implications:

Regular injection drug use among commercial sex workers places them at risk for HIV infection. HIV prevention programs that offer risk-reduction information, HIV counseling and testing services, and condoms and bleach should recognize that these efforts may be insufficient to prevent infections. Women who begin prostitution as teenagers appear to have different patterns of drug use than women who begin prostitution later in their lives. Interventions need to attempt to reach and influence 1) regular drug using adolescents before they enter prostitution and start injecting drugs and 2) young adult women who inject drugs before they enter prostitution. Programs that are not responsive to women's multiplicity of needs and do not consider women's personal characteristics, psychological status, and past experience with such services will limit opportunities to influence behaviors and reduce risk for HIV infection. Given participants' perceived ineffectiveness of social programs, they are unlikely to pursue referrals or benefit from attendance if they do. Commercial sex workers have a better perception of health services than they have of social services. Psychological factors may inhibit the participation of women at risk for HIV in services designed to reduce risk. Psychotherapy delivered early and for a short period of time to such women may decrease anxiety and depression resulting in increased service use and, ultimately, lower risk for HIV. Interventions designed to reduce drug dependency should reduce commercial sex workers' risk for HIV infection. Condom use may prevent HIV transmission to their clients.

Publications:

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Products:

None.

Key Words:

San Juan, Puerto Rico, Colorado Springs, Co., commercial sex workers, adolescents, Hispanics, focus groups, identify persons at risk, women, infants, condoms, service enhancement, education, support groups, outreach-street, prenatal care, family planning, counseling and testing, case management, coordination of services.

Project # 42 Multi-center Study of Enhanced Counseling vs. Current Counseling for Prevention of HIV/STDs. (Project RESPECT)

Purpose:
These projects were developed to answer the question: "Does HIV counseling work?" Specifically, compared to an HIV/STD education message delivered by a clinician, do multi-session, interactive, face-to-face counseling models based on behavioral science theory and delivered by trained HIV counselors 1) prevent new STDs/HIV? 2) increase condom use with main and other sex partners? 3) reduce non-condom related high risk behaviors? 4) change behavioral determinants (e.g., intentions to use condoms, norms, attitudes, etc.) related to condom use? The study population is HIV-negative, heterosexual STD clinic patients.

Results:
The study has included two phases. During the first phase, completed in July 1993, the five participating sites completed the following tasks with technical help from CDC and NOVA, Inc: 1) Conducted six pilot studies using various enhanced activities in order to develop an enhanced intervention that was both successful at increasing condom use and operationally feasible for use in STD clinics. 2) Studied baseline characteristics of the study population, including HIV risk factors, prevalence of condom use, and intentions to use condoms in various situations, and from these developed a series of study questionnaires (behavioral and epidemiologic, clinical, and laboratory). 3) Developed strategies for increasing intervention participation, including studies comparing the effectiveness of various monetary and non-monetary incentives in boosting attendance. 4) Participated in developing, then piloted, standard study protocols for approaching intervention and follow-up, a standard procedure manual to use in the randomized trial, and a standard, computerized tracking system for keeping tabs on study progress (Tracking System software developed by NOVA). 5) Participated in developing, then piloted, standard protocols for each of the three interventions along with a corresponding manual of scripts. All study counselors and clinicians also participated in a series of standard training courses conducted by Nancy Rosenshine of NOVA, Inc., to assure that staff from all sites used intervention protocols in a correct and similar manner. 6) Participated in developing, then piloted, a set of observation forms detailing key components for each intervention. These forms are being used by supervisory staff at each site and CDC to assure that each intervention is conducted in a similar way among counselors and across sites. 7) Piloted a set of standard questionnaires to be used during the intervention. For the intervention, all study interviewers participated in a series of standard training courses conducted to assure that staff from all sites enrolled and interviewed participants in a correct and similar manner. During phase I the research team set up a common system for data collection

and retrieval.

Phase 2, the randomized trial, was started in July 1993. During the trial, participants were assigned to one of 4 study arms, including each of the three interventions (with interval follow-up) and a fourth arm that received the HIV Education intervention and no study-related follow-up. The plan is to use the 4th arm to measure a possible effect related to repeated follow-up, rather than to the intervention itself. To assess this, syphilis and gonorrhea incidence will be compared between those assigned to arm 4 and those who had symptomatic visits in arm 3. In March 1995, the five sites completed enrollment. In total, 5800 participants (approximate equal representation of men and women) were enrolled. Of these, 82% completed their entire assigned intervention. Among those assigned to arms 1,2, or 3, overall follow-up is approximately 70%. Three month follow-up and 6-month follow-up visits have been completed (68% and 73% follow-up, respectively), 9-month follow-up will be completed April 15 (currently 62%), and 12-month follow-up will be completed July 15th (currently 69%). Analyses of baseline data are currently underway.

Implications:

HIV prevention counseling is currently the cornerstone of CDC's HIV prevention strategies, and accounts for a substantial part of the prevention budget. Results from this study will answer questions about whether various clinic-based, HIV prevention counseling models are successful in changing condom use behaviors with main and other sex partners, and preventing new STDs/HIV, and how successful. Among the intervention models being evaluated is one that CDC currently recommends for use among STD clinic patients. Further, the study is designed to answer questions about the costs and cost-benefit of the various interventions. The data collected will also contribute to our understanding in a number of areas, for example, the relationships between various behavioral determinants, subsequent behaviors, and STDs; the effect of specific STDs to incident disease among patients enrolled at STD clinics (e.g., the role of asymptomatic chlamydia in men); and how gender differences may affect condom use and other behaviors (see abstracts for additional projects). Finally, Project RESPECT serves as an example of a successfully conducted evaluation of a one-on-one, clinic-based HIV prevention intervention.

Publications:

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Malotte CK, Hoyt L, Graziano S, Lentz A, Rogers J, Miller K, Kent C. Lessons learned by staff during an STD clinic-based randomized trial (Workshop). Conducted at the CDC Division of STD/HIV Prevention Grantees Meeting. Washington D.D., August 22-24, 1994. (Log #231)

Products:

Protocol Manual for conducting operations of the multi-site randomized trial.

Intervention Protocols for the three, clinic-based, one-on-one HIV prevention interventions; Enhanced HIV Counseling, HIV Prevention Counseling, and HIV Education. Each intervention includes several components (e.g., card came aimed at risk perception; condom skills building exercise, etc.).

Fact Sheets about correct condom use, common misperceptions about STDs and STD symptoms.

Observation and Feedback Instruments to provide a structured, objective approach to quality assurance for each of the three interventions.

Process Evaluation tools to assess counselors and participants perception of how well the interventions were conducted and achieved their objectives.

Data Collection Instruments (17 separate instruments) collecting behavioral data at baseline, after intervention, and at follow-up; clinical information at baseline and follow-up; laboratory information and tests at baseline and follow-up. Each instrument has an *Instruction Manual* to facilitate training and correct, consistent use across sites.

Software programs, comprised of double entry data programs for sites to input data from the 17 data collection instruments, and quality assurance programs to check missing data and data validity.

Tracking System, a computerized program to facilitate study sites' monitoring of enrollment and follow-up. For example, at appropriate dates before return appointments, the system prints letters reminding patients of their appointments. Programs to facilitate site data analysis are included.

Key Words:
Counseling and testing, multi-session, interactive, face-to-face counseling models, intentions to use condoms, STD clinic clients, condom use, stages of change.

Project #43 Evaluation of Factors, Including Perceived and Actual Risk, that Influence HIV-Testing Behaviors Among STD Clinic Clients.

Purpose:
To evaluate the relationships of self-perceived and assessed (actual) risk for HIV infection, and other potentially relevant factors with: (1) receiving HIV pretest counselling, (2) having blood drawn for HIV testing, (3) returning for HIV test results and post-test counselling, and (4) HIV serostatus.

Results:

Data from more than 51,000 client visits to Illinois STD clinics from 1991 to 1993 were examined. All clinics offered HIV counselling and testing (CT) services. Overall, 22.7% of clients perceived themselves to be at risk of having HIV infection, while 28.7% were assessed at-risk of having HIV infection on the basis of (1) responses to a face-to-face questionnaire (asking about sex and drug behaviors) administered before HIV testing was offered; or (2) being concurrently diagnosed with genital ulcer disease.

More than two-thirds of clients correctly perceived their assessed risk for HIV. Individuals who perceived they were at-risk of having HIV were more likely that those without perceived risk to complete each stage of CT. Assessed risk was not significantly associated with returning for test results. Those with either perceived risk or assessed risk were more likely to be seropositive than those with no perceived or assessed risk.

African Americans were much less likely to return for test results (25%) than either Hispanics (43%) or Whites (56%), yet perceived risk was most strongly associated with return rates for African Americans.

Implications:

Perceived risk of having HIV infection is a better indicator of whether STD clinic patients will fully utilize CT services than is assessed risk. While 40% of STD clinic clients with perceived risk complete all stages of CT, only 28% of clients with assessed risk do so. Unfortunately, assessed risk is a better predictor HIV serostatus that is perceived risk. Counsellors and other prevention workers should work with at-risk individuals (especially African American men who are at-risk) to increase their perceived risk of HIV infection. In addition, rapid HIV-testing methods should target those clients who, from this analysis, are least likely to return for test results and most likely to be HIV-infected.

Publications:

Fichtner R, Rabins C, Schnell D, Fishbein M, Anderson J, Holtgrave D. Perceived vs. actual risk: factors influencing STD clinic clients to obtain HIV pretest counselling. In: *Abstracts, Meeting of the International Society for STD Research, Helsinki, Finland*, August 29-September 1, 1993;1:134. Oral Presentation No. 134.

Fichtner R, Wolitski R, Johnson W, Rabins C, Fishbein M. Influence of perceived and assessed risk on STD clinic clients' acceptance of HIV testing, return for test results, and HIV serostatus. Psychology, Health, and Medicine (1996), 1, 83-98.

Key Words:

Counseling and testing, STD clinic clients, perceived risk.

DIRECTORY

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