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Bibliography #9

IV Drug Use and HIV/AIDS Among Homeless People

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2004

AIDS Action. **What works in HIV prevention for substance users.** Washington, DC: AIDS Action, 2004.

This guide focuses on the prevention of HIV/AIDS in substance users. The authors discuss three prevention models: community outreach; drug treatment; and sterile syringe access. The guide also gives examples of how each prevention model works at the community level. The author also provides tips for tailoring prevention programs to fit a community's specific needs (authors). Available From: AIDS Action, 1906 Sunderland Place Northwest, Washington, DC 20036, (202) 530-8030, www.aidsaction.org/legislation/pdf/ww4su.pdf.

Rich JD, McKenzie M, Macalino GE, Taylor LE, Sanford-Colby S, Wolf F, McNamara S, Mehrotra M, Stein MD. **A syringe prescription program to prevent infectious disease and improve health of injection drug users.** J Urban Health 81(1):122-34, 2004.

Injection drug users (IDUs) are at increased risk for many health problems, including acquisition of human immunodeficiency virus (HIV) and hepatitis B and C. These risks are compounded by barriers in obtaining legal, sterile syringes and in accessing necessary medical care. In 1999, we established the first-ever syringe prescription program in Providence, Rhode Island, to provide legal access to sterile syringes, reduce HIV risk behaviors, and encourage entry into medical care. Physicians provided free medical care, counseling, disease testing, vaccination, community referrals, and prescriptions for sterile syringes for patients who were not ready to stop injecting. We recruited 327 actively injecting people. Enrolled participants had limited stable contact with the health care system at baseline; 45% were homeless, 59% were uninsured, and 63% did not have a primary care physician. Many reported high-risk injection behaviors such as sharing syringes, reusing syringes, and obtaining syringes from unreliable sources. This program demonstrates the feasibility, acceptability, and unique features of syringe prescription for IDUs. The fact that drug use is acknowledged allows an open and frank discussion of risk behaviors and other issues often not disclosed to physicians. The syringe prescription program in Providence represents a promising and innovative approach to disease prevention and treatment for IDUs.

2003

Clarke S, Delamere S, McCullough L, Hopkins S, Bergin C, Mulcahy F. **Assessing limiting factors to the acceptance of antiretroviral therapy in a large cohort of injecting drug users.** HIV Medicine 4(1): 33-37, 2003.

In this article, the authors assess the knowledge and understanding of injecting drug users (IDUs) regarding their HIV disease, and determine any factors that may increase the acceptance of antiretroviral therapy (ART) by this group. This study highlights the chaotic lifestyle and complex social background of the IDU. The authors assert that such factors were not, however, associated with acceptance of highly active antiretroviral therapy (HAART). The article states that there was a statistically significant association between patients receiving HAART and both attendance at a primary care physician for methadone maintenance therapy, and weekly take-outs of methadone. There was also an association between adherence to HAART and attendance at a methadone maintenance clinic. The article concludes that the primary factor associated with both the acceptance of and adherence to HAART was regular and stable attendance for methadone therapy (authors).

Feist-Price S, Logan TK, Leukefeld C, Moore CL, Ebreo A. **Targeting HIV prevention on African American crack and injection drug users.** *Subst Use Misuse* 38(9):1259-84, 2003.

The use of drugs in the African American community, particularly crack cocaine, has been linked to sexual risk-taking behavior, which increases the likelihood that persons will become infected with Human Immuno Virus. In order to more fully understand risk-taking behavior and to target interventions among African American men and women, this study used data collected from 1277 individuals residing in Lexington and Louisville, Kentucky, who were recruited into National Institute on Drug Abuse (NIDA) Cooperative Agreement Project from 1993 to 1998. The study compared African Americans treated for Sexually transmitted diseases (STDs) with African Americans who reported never being treated for a STD with regard to HIV information, awareness, and the number of HIV tests between those with and without STD exposure. Additionally, we examine gender differences among African Americans who have and have not been exposed to STDs on risk behaviors and HIV knowledge, awareness, and testing. It was hypothesized that African American drug users in the STD group would engage in more risk behaviors than those who reported no STDs. Results indicated that individuals in both groups, the STD exposure group and the no STD group, engaged in similar HIV-risky behaviors. However, the STD group used a greater number of different drugs in their lifetime. The STD group reported they were more likely to get HIV and were more frequently tested for HIV. Females with an STD history were more likely to have been in drug user treatment and to perceive themselves as homeless. Both males and females in the STD group were more likely to report involvement in exchanging sex.

Samet J, Freedberg K, Savetsky J, Sullivan L, Padmanabhan L, Stein M. **Discontinuation from HIV medical care: Squandering treatment opportunities.** *Journal of Health Care for the Poor and Underserved* 14(2): 244-255, 2003.

This study assesses HIV-infected patients' discontinuation of their primary care. One hundred ninety-eight consecutive outpatients were interviewed on initial HIV primary care presentation, assessed after six months about their discontinuation from primary care, and had characteristics associated with discontinuation determined. Black, white, and Hispanic men and women were studied - forty-seven percent were injection drug users, and sixty-nine percent with a yearly income of less than sixteen thousand dollars a year. According to the authors, primary care was not continued in twenty percent of the cases, and one-fifth of HIV-infected patients did not remain engaged in primary care after establishing this essential link to treatment. The authors hypothesize that those patients with a history of homelessness would be more likely not to maintain an established primary care relationship (authors).

2002

Blankenship KM., Koester S. **Criminal law, policing policy, and HIV risk in female street sex workers and injection drug users.** *Journal of Law and Medical Ethics* 30(4): 548-559, 2002.

In this article, the authors examine how criminal law and policing affect the HIV risk of street-based sex workers and injection drug users (IDU's). Drawing from their ethnographic work among street sex workers in New Haven, Connecticut, and IDU's in Denver Colorado, the authors discuss three distinct but related ways that criminal law and policing exert an effect on HIV risk. First, they affect risk by influencing both the availability of protective equipment and the conditions in which their use is negotiated. Second, they increase the vulnerability of sex workers and IDU's to incarceration. Third, they help create and reinforce stigmatizing identities for sex workers and IDU's and thereby reproduce the social inequalities that comprise the more fundamental determinants of HIV risk. The authors suggest that laws and policies relating to drug use and sex work, and the police enforcement of these laws and policies, are an important part of the context in which risk-taking occurs (authors).

Estrada AL. **Epidemiology of HIV/AIDS, hepatitis B, hepatitis C, and tuberculosis among minority injection drug users.** Public Health Rep 117(1): 126-134, 2002.

OBJECTIVE: This article reviews the literature on the impact of HIV/AIDS, hepatitis B and C viruses (HBV, HCV), and tuberculosis on minority drug injectors in the United States. **OBSERVATIONS:** Injection drug use is a key factor in the transmission of blood-borne pathogens, and HIV disease is exacerbated by tuberculosis infection. Minority drug injectors are disproportionately represented in the national statistics on these infections. Behavioral epidemiologic studies show that both injection-related risk factors (years of injecting drugs, type of drug injected, direct and indirect sharing of injection paraphernalia) and sex-related risk factors (lack of condom use, multiple sexual partners, survival sex) are conducive to the spread of HIV, HBV, and HCV. **CONCLUSIONS:** Two issues must be addressed to halt the spread of HIV infection and hepatitis B and C. The capacity of syringe-exchange programs to refer participants to drug treatment programs and facilitate access to health and social services must be increased. Culturally appropriate behavioral interventions targeting risk behaviors among ethnic and racial minorities, especially women, must be developed and put in place.

Harris H, Young D. **Care of injection drug users with soft-tissue infections in San Francisco, California.** Archives of Surgery 137(11): 1217-1222, 2002.

This article discusses the serious soft tissue infections caused by illicit injection drug use, which are the number one nonpsychiatric reason for admission to San Francisco General Hospital, in San Francisco, California. The authors established The Integrated Soft Tissue Infection Services Clinic (ISIS), to provide coordinated surgical intervention, substance abuse counseling, and social services for patients with soft tissue infections treated in a public hospital. The authors analyzed demographic information, treatment outcome, and hospital utilization data. According to the authors, in the clinic's first year of operation, there were 3365 patient visits and 2255 surgical procedures. A large number of the patients reported recent injection of illicit drugs, were homeless, and either had hepatitis C, hepatitis B, or HIV. The authors conclude that this clinical intervention was notably cost-effective while preserving a high quality of medical services. The authors also suggest that The ISIS Clinic serve as a model intervention and thus have significant impact on the treatment of this prevalent but often overlooked challenge (authors).

Levounis, P, Galanter, M, Dermatis, H, Hamowy, A, De Leon, G. **Correlates of HIV transmission risk factors and considerations for interventions in homeless, chemically addicted and mentally ill patients.** Journal of Addictive Diseases 21 (3): 61-72, 2002.

A study was conducted to ascertain correlates of HIV high risk behaviors and attitudes toward HIV. A questionnaire was administered to 103 men living in modified therapeutic community (TC) for men who are homeless, chemically addicted and mentally ill. The psychiatric diagnoses of the sample population included psychotic disorders, depressive disorders, and bipolar disorders. Forty-two percent reported that their primary substance of abuse was cocaine and another 40% named alcohol as the substance to which they were most addicted. Two logistic regression analyses were conducted, one with needle sharing as the outcome measure and one with endorsement of the need for lifestyle changes to reduce risk of HIV transmission. Cocaine users were 3.4 times more likely to have shared needles than the rest of the sample. Patients who had a history of sexually transmitted diseases were 17 times more likely to endorse the need for lifestyle changes. The level of HIV transmission knowledge was unrelated to HIV risk behaviors or attitudes (authors).

Lieb S, Brooks RG, Hopkins RS, Thompson D, Crockett LK, Liberti T, Jani AA, Nadler JP, Virkud VM, West KC, McLaughlin G. **Predicting death from HIV/AIDS: A case-control study from Florida public HIV/AIDS clinics.**

BACKGROUND: After markedly decreasing for 3 years, HIV/AIDS mortality declined only slightly in 1999. **METHODS:** The authors conducted a case-control study in four Florida urban public health HIV clinics to evaluate modifiable factors associated with HIV/AIDS mortality in a non-research setting. Structured chart review was conducted for 120 case-patients who died in 1999 and for 240 randomly selected control-patients. Risk factors associated with death in univariate analysis were entered into three conceptually related, matched logistic regression models. **RESULTS:** In the final multivariate model, homelessness, Medicaid insurance, having a documented adherence problem, injection drug use, non-specific liver failure, interrupted highly active antiretroviral therapy (HAART) secondary to side effects, and not receiving HAART were independent predictors of mortality. **CONCLUSIONS:** In addition to medical and clinical indicators, several sociobehavioral-demographic factors remained important throughout the multivariate analysis. Improvement in care should include a focus on social circumstances of infected people. Special attention to the homeless, those with adherence problems, and those with liver disease is clearly indicated.

McClelland GM, Teplin LA, Abram KM, Jacobs N. **HIV and AIDS risk behaviors among female jail detainees: Implications for public health policy.** Am J Public Health 92(5): 815-825, 2002.

OBJECTIVES: We examined the sexual and injection drug use HIV and AIDS risk behaviors of female jail detainees. **METHODS:** The sample was stratified by charge type (felony vs misdemeanor) and race/ethnicity (African American, non-Hispanic White, Hispanic, other). **RESULTS:** Non-Hispanic White women, women arrested for less serious charges, women who had prior arrests, women arrested on drug charges, and women with severe mental disorders were at especially high risk for sexual and injection drug transmission of HIV and AIDS. **CONCLUSIONS:** Many women at risk for HIV and AIDS--women who use drugs, women who trade sex for money or drugs, homeless women, and women with mental disorders--eventually will cycle through jail. Because most jail detainees return to their communities within days, providing HIV and AIDS education in jail must become a public health priority.

2001

Hsu LC, Vittinghoff E, Katz MH, Schwarcz SK. **Predictors of use of highly active antiretroviral therapy (HAART) among persons with AIDS in San Francisco, 1996-1999.** J Acquir Immun Defic Syndr 28(4): 345-350, 2001.

Highly active antiretroviral therapy (HAART) has contributed to a decrease in AIDS-related morbidity and mortality. This study used population-based AIDS surveillance data to evaluate the prevalence and predictors of HAART use among persons with AIDS in San Francisco. Use of HAART among persons living with AIDS increased from 41% in 1996 to 72% in 1999. Fourteen percent of persons diagnosed with AIDS between 1996 and 1999 initiated HAART before their AIDS diagnosis. Use of HAART before an AIDS diagnosis increased from 5% in 1996 to 26% in 1999. In the multivariable analysis, African Americans, injection drug users, and those without insurance at the time of AIDS diagnosis were less likely to use HAART before AIDS diagnosis. Delayed initiation of HAART after AIDS was more likely to occur among African Americans, injection drug users, homeless persons, those with public insurance, and those with higher CD4 counts. Although the overall prevalence of HAART use was high, disparity in use of HAART existed by race and risk group, patient's insurance status, and facility of diagnosis.

Hughes RA. **The lives of drug injectors and English social policy.** *Jl of Health and Social Policy*, 13(2):75-91, 2001.

The lives of drug injectors are characterized by a number of personal, social and economic circumstances, which are linked to the tenets of social policy. Prior to the emergence of HIV and AIDS little research was directed towards understanding the lives and behavior of drug injectors. However, more was learned about the virus and the ways in which people behave, drug injectors became an important focus for research and policy making in relation to HIV and AIDS. However, there are wider life issues outside of those of HIV and AIDS that also affect drug injectors. This paper highlights some of these considerations and the value of a holistic approach to understanding drug injectors' lives in social policy; an approach that could usefully be applied to other groups of people.

Lopez-Zetina J, Kerndt P, Ford W, Woerhle T, Weber M. **Prevalence of HIV and hepatitis B and self-reported injection risk behavior during detention among street-recruited injection drug users in Los Angeles County, 1994-1996.** *Addiction*, 96(4):589-95, Apr 2001.

This study's aim is to describe injection risk behaviors while in detention in a sample of injection drug users (IDUs) in Los Angeles County. Cross-sectional, interviewer-administered, face-to-face risk survey, and serological screening for HIV and hepatitis B were conducted at four street locations in Los Angeles County between 1994 and 1996. All interviews were conducted in a non-institutionalized setting. Measurements included ascertainment of self-reported risk behavior during detention and screening for HIV and hepatitis B surface antigen (HbsAg) and antibody to the core (HbcAb) seromarkers. Six hundred and forty-two participants were street recruited during the study period. Seventy-one percent of the sample was male, the median age was 43 years, 61% were African-American, 27% were Latino, 8% were white and 36% considered themselves homeless. Overall HIV prevalence was 3.0%; 3.1% tested positive for the hepatitis B surface antigen marker (HbsAg), and 80.3% for antibody to hepatitis B core antigen (HbcAb). After adjustment for length of injection drug use and recency of release from detention, HIV seroreactivity was significantly associated with history of detention due to possession of IDU paraphernalia. The presence of the hepatitis B HbcAb seromarker was associated with injection drug use while in detention, and having been ever arrested for possession of IDU paraphernalia. IDU detainees constitute a high-risk group for blood-borne infections. Comprehensive prevention and health promotion efforts in the community need to include correctional facilities.

Sears C, Guydish JR, Weltzien EK, Lum PJ. **Investigation of a secondary syringe exchange program for homeless young adult injection drug users in San Francisco, California, U.S.A.** *J Acquir Immune Defic Syndr*, 27(2):193-201, June 2001.

This study investigated an HIV prevention program for homeless young adult injection drug users (IDUs) that combined a secondary syringe exchange program (SEP) with community-level activities. Homeless young IDUs were recruited from street-based settings in San Francisco, and a structured questionnaire was administered. The secondary SEP operated in a circumscribed geographic area, and for analytic purposes respondents were assigned to the intervention site group if they primarily spent time in this area (n = 67), or the comparison site group if they primarily spent time elsewhere (n = 55). Almost all (96%) intervention site youth had used the secondary SEP in the past 30 days and were significantly more likely to regularly use SEP. In bivariate analysis, comparison site IDUs were more likely to share syringes, reuse syringes, share the cotton used to filter drugs, and use condoms with casual sex partners only inconsistently. In multivariate analysis, comparison site remained positively associated with sharing syringes, reusing syringes, and inconsistent condom use with casual sex partners. This suggests that the intervention was effective in delivering SEP services to homeless young adult IDUs, and that IDUs who frequented the intervention site had a lower HIV risk than comparison group IDUs.

Sension MG, Farthing C, Shaffer AG, Graham E, Siemon-Hryczyk P, Pilson RS. **Challenges of antiretroviral treatment in transient and drug-using populations: The SUN study.** *AIDS Patient Care STDS*, 15(3):129-36, Mar 2001.

This is an open-label, single-arm, phase 3b study (part of phase 3 development) to evaluate the efficacy and safety of Fortovase-soft gelatin formulation (saquinavir-SGC), combined with zidovudine (ZDV) and lamivudine (3TC), human immune deficiency virus type 1 in (HIV-1)-positive, antiretroviral-naive individuals. Forty-two HIV-1-positive adults with plasma HIV RNA >10,000 copies per milliliter (Roche Amplicor HIV Monitor assay) and CD4 cell count >100 cells/mm³ were treated with SQV-SGC, 1200 mg three times per day; ZDV, 300 mg; and 3TC, 150 mg each twice per day for 48 weeks. High proportions were drug users (26%), demonstrated psychiatric disorders (alcohol abuse [14%]/depression [14%]), or were inadequately housed (5%). At 48 weeks, 50% of patients achieved viral suppression <400 copies per milliliter with 43% <20 copies per milliliter using an intent-to-treat analysis (missing values counted as virological failures). Corresponding proportions for patients remaining on therapy at 48 weeks were 91% <400 copies per milliliter and 78% <20 copies per milliliter. Most adverse events were mild. Saquinavir-SGC combined with ZDV and 3TC, achieved potent and durable HIV RNA suppression and was well tolerated over 48 weeks in an antiretroviral-naive population including high proportions of individuals considered difficult to treat, such as drug users, people with psychiatric problems and homeless individuals.

Warner BD, Leukefeld CG. **Assessing the differential impact of an hiv prevention intervention: Who's putting the message into practice?**

Recent data suggest that educational interventions aimed at reducing HIV risk behaviors have shown some success. Nonetheless, HIV risk behaviors are not always reduced by interventions and probably do not reduce risk behavior randomly. That is, the success of interventions may be related to participant characteristics. Identifying participant characteristics related to both intervention completion and reduction in risk behaviors may be useful for further developing explanatory models of health behavior and for targeting and customizing interventions. In this study differences between participants who completed an AIDS educational intervention (N = 741) and those who did not complete the intervention are first examined (N = 652) and then variables related to reducing drug and sexual risk behaviors among those who completed the intervention and follow-up interviews are examined. Results show that the majority of respondents report decreasing five out of six risk behaviors, with the smallest percentage (48.8%) decreasing rates of unprotected sex and the largest percentage (83.4%) decreasing frequency of drug injection. Different variables were found to be related to changes in the various risk behaviors. However, some relatively consistent results emerge. For all risk variables, the frequency of the specific behavior at baseline predicted the amount of change in that behavior, with those having higher levels of risk behaviors reducing their behavior the most. Positive HIV test results significantly decreased three of the four sexual risk behaviors examined, and living in a very rural area was found to be significantly related to three of the six risk behaviors. However, perceived chance of getting AIDS did not significantly reduce any of the risk behaviors. Gender and education level were also not related to changes in any of the risk behaviors. Implications include the importance of developing approaches to retain higher proportions of younger participants, males and homeless in interventions. It is particularly important to develop specific approaches to retain women in interventions. Because very rural participants were more likely to decrease crack use and alcohol or drug use with sex, rural interventions should target these behaviors at the outset of the intervention.

2000

Bamberger JD, Unick J, Klein P, Fraser M, Chesney M, Katz MH. **Helping the urban poor stay with antiretroviral HIV drug therapy.** *Am J Public Health* 90(5): 699-701, 2000.

Recent studies have documented dramatic decreases in opportunistic infections, hospitalizations, and mortality among HIV-infected persons, owing primarily to the advent of highly active antiretroviral medications. Unfortunately, not all segments of the population living with HIV benefit equally from treatment. In San Francisco, only about 30% of the HIV-infected urban poor take combination highly active antiretroviral medications, as compared with 88% of HIV-infected gay men. Practitioners who care for the urban poor are reluctant to prescribe these medications, fearing inadequate or inconsistent adherence to the complicated medical regimen. Persons typically must take 2 to 15 pills at a time, 2 to 3 times a day. Some of the medications require refrigeration, which may not be available to the homeless poor. Most homeless persons do not have food available to them on a consistent schedule. Therefore, they may have difficulty adhering to instructions to take medications only on an empty stomach or with food. Lack of a safe place to store medications may be an issue for some. In addition, many urban poor live with drug, alcohol, or mental health problems, which can interfere with taking medications as prescribed. Inconsistent adherence to medication regimens has serious consequences. Patients do not benefit fully from treatments, and they will become resistant to the medications in their regimen as well as to other medications in the same classes as those in their regimen. Development of resistance has implications for the broader public health, because inadvertent transmission of multidrug-resistant strains of HIV has been demonstrated. Concern that the urban poor will not adhere to highly active antiretroviral medication regimens has led to debate on the role of clinicians and public health officials in determining who can comply with these regimens. Rather than define the characteristics that would predict adherence to these regimens, the San Francisco Department of Public Health created a program to support adherence among those who may have the greatest difficulty complying with complicated highly active antiretroviral medication regimens. The program, dubbed the Action Point Adherence Project, was conceived through a community planning process in preparation for a city-wide summit on HIV/AIDS that took place in January 1998. Action Point is funded by the city and the county of San Francisco.

Lee D, Ross MW, Mizwa M, Scott DP. **HIV risks in a homeless population.** *Int J STD AIDS*, 11(8):509-15, Aug 2000.

Homeless people are one of the most vulnerable with regard to HIV transmission. However, most research on this population has been carried out on samples from health clinics. We surveyed 390 homeless people in Houston at a day shelter with regard to their HIV/AIDS knowledge and risk behaviours. The sample was 76% African-American, 11% Euro-American, with small numbers of Latin-Americans, Native-Americans and Asian-Americans: half were born in Texas, and 92% were male. Data indicated that HIV/AIDS knowledge was higher in those who were at higher behavioural risk, although the direction of causality in these cross-sectional data cannot be inferred. African-Americans were at slightly higher risk. Compared with previous clinic samples, this sample was older and a higher number slept the last night outside. Condom use was low with both males and females most commonly not reporting using condoms although more than half had had sexual contact in the past month. Multivariate analysis indicated that ethnicity and HIV/AIDS knowledge were independent predictors of risk behaviour. Lifetime risks included one-third who had injected drugs, and nearly 10% had had sex with someone they knew to be HIV seropositive. Lack of future time perspective rather than level of knowledge may be a barrier to reducing HIV risks, and the data are discussed in terms of policy implications and homelessness.

Logan TK, Leukefeld C. **HIV risk behavior among bisexual and heterosexual drug users.** *J Psychoactive Drugs*, 32(3):239-48, Jul-Sept 2000.

This study examined the sexual and drug use behaviors for bisexual and heterosexual drug users (n=11,435 males and n=5,636 females) who participated in the NIDA AIDS Cooperative Agreement study. Results of the study suggest that, for males, bisexuality was highly associated with being homeless, having ever been paid for sex, having five or more sex partners in the month preceding the interview, having an IV drug-using sexual partner in the month preceding the interview, using crack, and sharing injection equipment in the month preceding the interview. For females, bisexuality was associated with ever having been arrested, past substance abuse treatment, ever having been paid for sex, ever having paid for sex, having five or more sexual partners in the month preceding the interview, ever using cocaine, and sharing injection equipment in the month preceding the interview. Overall, results from this study indicate that both male and female bisexuals, when compared to heterosexuals, were at higher risk for HIV and were more likely to be HIV positive. One implication of these results is that a universal prevention message may not be as effective as targeting prevention messages specifically for bisexual males and females.

Shah NG, Celentano DD, Vlahov D, Stambolis V, Johnson L, Nelson KE, Strathdee SA. **Correlates of enrollment in methadone maintenance treatment programs differ by HIV-serostatus.** *AIDS*, 14(13):2035-42, Sep 2000.

OBJECTIVES: To identify correlates of enrollment in methadone maintenance treatment programs (MMTP) among a prospective cohort of injection drug users (IDUs) in Baltimore, Maryland. **METHODS:** A total of 1480 IDUs undergoing semi-annual HIV tests and interviews were studied between 1994 and 1998, during which time a needle exchange program was introduced. Longitudinal analysis using generalized estimating equations was used to identify correlates of MMTP participation over time. **RESULTS:** Although similar proportions of HIV-seropositive and -seronegative IDUs enrolled in MMTP during follow-up, correlates of enrollment differed by HIV-serostatus. Among HIV-seropositive participants, older age was associated with enrollment in MMTP. Among HIV-seronegative IDUs, factors associated with not enrolling in MMTP were being African American and having been recently incarcerated or homeless. In both groups, females were twice as likely to be enrolled in MMTP, and those with Medicaid were 1.5 times more likely to be enrolled. When behavioral factors were lagged one visit, needle exchange program attendance was positively associated with MMTP enrollment among HIV-negative IDUs; however, this association diminished significantly over time as dedicated treatment slots for needle exchange program participants became saturated. **CONCLUSIONS:** These findings underscore the need to improve access to MMTP, especially to certain subgroups such as African-Americans, the homeless, incarcerated and uninsured. Our data suggest that health care providers and needle exchange programs can facilitate enrollment into MMTP provided that adequate treatment slots are consistently available to this particularly vulnerable population.

Song JY, Safaeian M, Strathdee SA, Vlahov D, Celentano DD. **The prevalence of homelessness among injection drug users with and without HIV infection.** *J Urban Health*, 77(4):678-87, Dec 2000.

Cross-sectional investigations of homelessness have many potential biases. Data from 2,452 individuals enrolled in a longitudinal cohort study of Baltimore, Maryland, residents recruited in 1988-1989 with a history of injection drug use were analyzed to identify the extent and determinants of homelessness. Proportions having ever experienced homelessness were compared across subgroups of injection drug users (IDUs) who were human immunodeficiency virus (HIV) negative, HIV positive, and HIV seroconverting. Logistic regression identified independent predictors of homelessness. In the cohort, 1,144 (46.7%) participants experienced homelessness during the course of the study. There were

differences in prevalence of homelessness by serostatus: 42.4% of participants who remained HIV negative were ever homeless, while 50.6% of HIV-infected individuals and 58.9% of those who seroconverted during the study were ever homeless. Participants who consistently denied active injection drug use during follow-up were unlikely to experience homelessness (19%). Independent predictors of homelessness were male sex, HIV seroprevalence, and HIV seroconversion. Following participants over time captures more experiences of homelessness than cross-sectional studies and more accurately identifies risk characteristics. Our data suggest that homelessness is a significant problem among IDUs, especially those with HIV/AIDS.

1998

Diaz T, Chu SY, Weinstein B, Mokotoff E, Jones TS. **Injection and syringe sharing among HIV-infected injection drug users: Implications for prevention of HIV transmission. Supplement to HIV/AIDS Surveillance Group.** *J Acquir Immune Defic Syndr Hum Retrovirol*, 18 1:S76-81, 1998.

Because HIV-infected injection drug users (IDUs) can transmit HIV infection, we investigated factors associated with sharing of syringes among IDUs infected with HIV. We analyzed data from an interview survey of 11,757 persons \geq 18 years of age with HIV or AIDS between June 1990 and August 1995 who were reported to 12 state or city health departments in the United States. Of the 1527 persons who had ever shared syringes and reported injecting in the 5 years before the interview, 786 had injected in the year before interview, and of these, 391 had shared during that year. IDUs who were aware of their HIV infection for >1 year were less likely to share than those who were aware of their infection for 1 year or less. The only statistically significant time trend was that the proportion of IDUs from Connecticut who shared decreased from 71% in 1992 to 29% in 1995. This trend appears to be related to the 1992 changes in Connecticut laws that allowed purchase and possession of syringes without a prescription. Because many HIV-infected IDUs continue to inject and share, prevention efforts should be aimed at HIV-infected IDUs to prevent transmission of HIV. Early HIV diagnosis and access to sterile syringes may be important methods for reducing syringe sharing by HIV-infected IDUs

Fisk SN. **The Association of Nurses in AIDS Care. Position paper on harm reduction and HIV care for drug users: Integrating harm-reduction methods and HIV care.** *J Assoc Nurses AIDS Care*, 9(3):19-24, May-June 1998.

As the epidemic of HIV disease continues to grow among drug users and their sexual partners, new ways must be adopted to do prevention work, outreach, and service delivery to this population. The Harm Reduction Model offers methods of working with drug users, which are in contrast to traditional methods based on confrontation and that require abstinence before change can occur. This position paper examines the Harm Reduction Model and outlines areas in which the Association of Nurses in AIDS Care can play a role in the expansion of harm-reduction-based intervention and policies.

Latkin CA, Mandell W, Knowlton AR, Doherty MC, Vlahov D, Suh T, Celentano DD. **Gender differences in injection-related behaviors among injection drug users in Baltimore, Maryland.** *AIDS Educ Prev*, 10(3):257-63, June 1998.

Baseline data from 640 injection drug users in the Stop AIDS for Everyone study, an HIV preventive intervention were used to examine gender differences in self-reports of injection behaviors. In both the bivariate and multivariate analyses men reported injecting alone, in semipublic areas, and at their mother's residence more often than women. In the bivariate analyses, women reported denser personal networks,

and in the multivariate analyses, women reported significantly greater overlap between their drug and sex networks. These data suggest that this overlap of sex and drug networks may reduce women drug injectors' ability to adopt and maintain HIV protective behaviors. The data also suggest that interventions need to address gender differences in the social context of risk behaviors.

Rahav M, Nuttbrock L, Rivera JJ, Link BG. **HIV infection risks among homeless, mentally ill, chemical misusing men.** *Subst Use Misuse*, 33(6):1407-26, 1998.

This article attempts to identify the specific role that each of three conditions afflicting homeless, mentally ill, chemically misusing (HMICM) men plays in exposing these men to the risk of HIV infection. Three hundred and fifteen HMICM men were interviewed on IV drug use (IVDU) and sex practices. Two scales of risky IVDU and sex conducts were constructed and analyzed in relation to HIV status. Strong correlations were found between IVDU practices and HIV seropositivity, and between risky sex conduct and HIV seropositivity. Serious depression was the strongest predictor of risky IVDU practices. Prolonged homelessness was the condition most associated with risky sex conduct. The authors conclude that HMICM men are at high risk for HIV infection, stemming predominantly from two conditions: depression, leading to risky IVDU practices, and homelessness, leading to risky sexual conduct.

Robles RR, Marrero CA, Reyes JC, Colon HM, Matos TD, Finlinson HA, Munoz A, Melendez M, Sahai H. **Risk behaviors, HIV seropositivity, and tuberculosis infection in injecting drug users who operate shooting galleries in Puerto Rico.** *J Acquir Immune Defic Syndr Hum Retrovirol*, 17(5):477-83, April 15, 1998.

This study looks at HIV risk behaviors, HIV seroprevalence, and TB infection in shooting gallery managers in Puerto Rico. The subjects were 464 injection drug users (IDUs), of whom 12.5% reported managing shooting galleries. The median frequency of drug injection was higher in shooting gallery managers than in nonmanagers. A trend was observed for purified protein derivative (PPD) reactivity to increase according to the length of time spent as a gallery manager, but this trend was not statistically significant. However, anergy rates increased significantly with increase in the number of months spent as shooting gallery manager. IDUs reporting shooting gallery management experience of less than 25 months were more likely to be infected with HIV. Prevention programs need to emphasize strategies to protect the health of shooting gallery clients and, in particular, shooting gallery managers.

Tortu S, McCoy HV, Beardsley M, Deren S, McCoy CB. **Predictors of HIV infection among women drug users in New York and Miami.** *Women Health*, 27(1-2):191-204, 1998.

In the US, the number of women diagnosed with AIDS continues to increase. In this study, women in New York City (East Harlem) and Miami, two sites with high rates of drug use and HIV infection, were first compared on sociodemographic variables and risk behaviors. Logistic regression analyses were used to identify significant, independent predictors of HIV infection in each city. In comparing women from the two cities, several differences in sociodemographic characteristics and drug use were observed. In both cities, ever exchanging sex for drugs and/or money was predictive of HIV infection; and in East Harlem only, other lifetime risk variables independently predicted HIV infection: drug injection, having a sexually transmitted disease, and not having graduated from high school. Results suggest that intervention efforts with women who exchange sex should be intensified in both cities. Also, further comparisons of women drug users in AIDS epicenter cities are necessary to provide information on similarities and differences in sociodemographic characteristics and individual risk behaviors.

Weeks MR, Grier M, Romero-Daza N, Puglisi-Vasquez MJ, Singer M. **Streets, drugs, and the economy of sex in the age of AIDS.** *Women Health*, 27(1-2):205-29, 1998.

Drug addicted women whose economic and social base is urban streets face limited options for income generation and multiple dangers of predation, assault, arrest, and illness. Exchanging sex for money or drugs offers one important source of income in this context. Yet the legal, social, and safety risks associated with these exchanges reduce the likelihood of regular safer sex practices during these encounters, thereby increasing the risk of HIV infection. Such conditions lead women engaged in sexual exchanges for money to varied and complex responses influenced by multiple and often contradictory pressures, both personal and contextual. Street-recruited women drug users in an AIDS prevention program in Hartford, Connecticut reported a range of condom use when engaging in sex for money exchanges. This paper explores their differences by ethnicity, economic resources, and drug use, and analyzes these and other factors that impact on street risks through sexual income generation. Surveys and in-depth interviews with drug-addicted women sex workers describe their various approaches to addressing multiple risks on the streets and suggest significant effort by women in these contexts to avoid the many risks, including HIV infection.

1997

Gorman EM, Barr BD, Hansen A, Robertson B, Green C. **Speed, sex, gay men, and HIV: Ecological and community perspectives.** *Med Anthropol Q*, 11(4):505-15, Dec 1997.

Fifteen years into the HIV/AIDS epidemic, a great deal is now known about the different populations impacted by the disease, including those affected directly or indirectly by drug use. Anthropology has played a critical role in assisting with this task by identifying hidden populations, developing new methodological approaches, and targeting outreach efforts. In spite of this considerable body of ethnographic knowledge, men who have sex with other men (i.e., MSM, or gay and bisexual men) who use drugs have not received the same research attention as other drug users, despite the fact that they represent nearly one-fifth of AIDS cases in the U.S. with injection drug histories. In response to the alarming increase in HIV seroprevalence among this population, this ethnographic project provides preliminary data about those who are at dual risk for HIV through both homosexual behavior and injection drug use.

Page JB. **Needle exchange and reduction of harm: An anthropological view.** *Med Anthropol*, 18(1):13-33, Dec 1997.

Overwhelming evidence from all over the world confirms that needle exchange programs (NEPs) in widely varied forms have value in prevention of HIV infection among injecting drug users (IDUs). Unfortunately, the United States has relatively few active NEPs because of political opposition to adoption of any policy that would give the appearance of condoning use of illegal drugs. Some additional opposition comes from the affected communities themselves. NEPs that assiduously construct links with affected communities have highest probabilities of effectiveness. Studies of NEPs, with some notable exceptions, still lack anthropological evaluations of their impact, and this deficiency needs more attention in future efforts to frame, implement, and evaluate NEPs.

Perlman DC, Des Jarlais DC, Salomon N, Masson CL. **Preventing opportunistic infections in HIV-infected injection drug users.** *JAMA*, 278(21):1743-4, Dec 3, 1997.

Singer M. **Needle exchange and AIDS prevention: Controversies, policies and research.** Med Anthropol, 18(1):1-12, Dec 1997.

This paper reviews the key public health issues, social science research, and policy debates that surround the issue of needle exchange as an AIDS prevention strategy among injection drug users. As worldwide rates of drug use-related HIV infection and injection drug use have continued to rise, there is growing public health pressure to identify effective prevention strategies. Needle exchange, while consistently found to be effective in lowering AIDS risk and in preventing new HIV infection, remains a controversial issue in the U.S. because this "harm reduction" approach fails to condemn drug use, suggesting the underlying moral issues in an increasingly intense public policy conflict.

Susser E, Betne P, Valencia E, Goldfinger SM, and Lehman AF. **Injection drug use among homeless adults with severe mental illness.** Amer J Pub Health, 87(5):854-6, 1997.

This study examined injection drug use among men and women who are homeless and have serious mental illnesses. The data were drawn from related clinical trials conducted in Baltimore and Boston. The percentages of homeless men with a history of injection drug use were 26% in Baltimore and 16% in Boston; the corresponding rates among homeless women were 8% and 6%. Taken together, these and previous results suggest high lifetime prevalences of injection drug use and associated risks of HIV transmission- in this elusive population.

1996

Johnson TP , Aschkenasy JR, Herbers MR, Gillenwater SA. **Self-reported risk factors for AIDS among homeless youth.** AIDS Educ and Prev, 8(4):308-22, 1996.

The authors describe a study which assessed HIV risk behaviors in a sample of homeless youth in a large urban area and examined factors associated with these behaviors. Self-reported behaviors were assessed via interviews with 196 homeless youth in Chicago in all 10 urban shelters serving this group and in five street locations. Overall, 83.7% reported at least one of these risk factors: multiple sex partners; high risk sexual partners; inconsistent condom use; history of sexually transmitted disease; anal sex; prostitution; and/or intravenous drug use. An index of these behaviors was associated with being male, having unmet personal needs, being interviewed in street locations, and having a history of sexual abuse. Findings suggest that strategies that may decrease risk behaviors among homeless youth include the elimination of their need to rely on illicit activities for income, provision of basic needs, education regarding existing services, increased outreach efforts, and early identification of and protection from childhood sexual abuse.

Kipke MD, Unger JB, Palmer RF, Edgington R. **Drug use, needle sharing, and HIV risk among injection drug-using street youth.** Subst Use Misuse, 31(9):1167-87, July 1996.

Injection drug use is the second most common HIV risk behavior in the United States, but little is known about injection drug use and needle-sharing behavior among street youth, a group at high risk for HIV infection. This study investigates the drug use histories, injection drug use behaviors, and needle-sharing practices of 106 injection drug using youth in Los Angeles, California. Respondents report high rates of injection drug use and needle sharing, indicating that these youth are at particularly high risk for HIV infection. Results suggest a need for outreach services tailored to the unique needs of injection drug-using adolescents.

Susser E, Miller M, Valencia E, Colson P, Roche B, Conover S. **Injection drug use and risk of HIV transmission among homeless men with mental illness.** *Amer J Psych*, 153(6):794-8, 1996.

This study documents a high lifetime prevalence of injection drug use in a group of homeless men with mental illness. Men reported injection drug use and sexual behaviors with high risk of HIV transmission and gave scant evidence of risk-reduction behaviors. Results of interviews with 218 homeless men show: Fifty had injected drugs; among those 50, 66% shared needles while 64% used shooting galleries; only 22% cleaned needles with a sterilizing agent such as bleach, and 2% used a needle exchange program; in the past six months 48% had unprotected sex with women and 10% had unprotected sex with men. The authors conclude that although these individuals may fall between service systems and may be difficult to reach, they must be included in efforts to prevent transmission of HIV infection.

1995

Lebow JM, O'Connell JJ, Oddleifson S, Gallagher KM, Seage GR 3rd, Freedberg KA. **AIDS among the homeless of Boston: A cohort study.** *J Acquir Immune Defic Syndr Hum Retrovirol*, 8:292-6, 1995.

We wanted to compare demographics, risk behaviors, AIDS-defining diagnoses, and survival between homeless and housed persons with AIDS in Boston from 1983 to 1991. Our retrospective cohort study used chart review to identify homeless AIDS cases and data from the Massachusetts AIDS Surveillance Program for comparison of homeless and nonhomeless cases. Seventy-two homeless and 1,536 nonhomeless Boston residents were reported to have AIDS between Jan. 1, 1983, and July 1, 1991. Homeless persons with AIDS were more likely to be African American or Latino and have IV drug use as a risk behavior. The AIDS-defining diagnoses among the homeless were more commonly disseminated *Mycobacterium tuberculosis* and esophageal candidiasis. These differences were not seen when the populations were stratified by IV drug use. No significant difference in survival between the homeless and nonhomeless cohorts was found. Homeless individuals with human immunodeficiency virus are significantly different than housed persons, and at greater risk of invasive opportunistic infections. Appropriate clinical strategies can be developed to provide needed care to homeless persons with HIV.

Lawrence J, Brasfield T. **HIV risk behavior among homeless adults.** *AIDS Educ Prev*,7(1):22-31, 1995.

Very little information is available regarding HIV risk behavior among homeless adults despite increasing evidence that HIV infection disproportionately affects inner-city residents and disadvantaged populations. In this study, adults entering a storefront medical clinic for homeless persons completed an AIDS risk survey. The results suggest that homeless adults are engaging in sexual and substance use behaviors that place them at high risk for HIV infection. Sixty-nine percent of the sample was at risk for HIV infection from either: (1) unprotected intercourse with multiple partners; (2) intravenous drug use; (3) sex with an intravenous drug user; or (4) exchanging unprotected sex for money or drugs. The results suggest that there is an urgent need to develop and evaluate AIDS-prevention strategies for homeless adults.