

Anal sex is common among women in drug-using populations in Chicago

Mary Ellen Mackesy-Amiti, Ph.D. & Lawrence Ouellet, Ph.D.
Community Outreach Intervention Projects
Division of Epidemiology & Biostatistics, School of Public Health
University of Illinois at Chicago, Chicago, Illinois

Presented at the 2006 annual meeting of the American Public Health Association, Boston
Abstract # 142480

Introduction

The objective of this study was to examine the prevalence, characteristics, and correlates of anal sex among women in populations with a high risk of HIV infection. While it has been known for some time that anal sex increases the risk of male-to-female transmission of HIV [1,2], many heterosexual men and women may remain ignorant of this risk [3]. Moreover, anal sex may be more prevalent among women at high risk of exposure than among the general population [4].

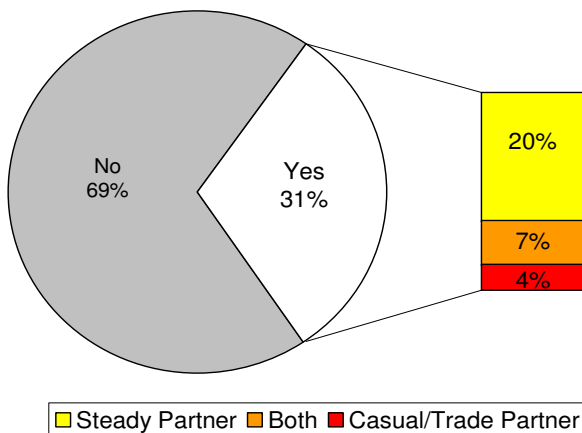
Methods

We examined baseline data from two sources in Chicago: a study (CIDUS-III) of young injection drug users (IDUs) 15-30 years old recruited in 2002-2004 (n=796), and an ongoing study (SATH-CAP) that recruits users of 'hard' drugs (injection & non-injection), men who have sex with men, and the sex partners of both groups (n=944). All participants completed computerized self-administered interviews.

Results

CIDUS-III. The CIDUS-III sample was mostly white (75%) and Hispanic (18%), 65% male, and the median age was 22. The present analyses are restricted to female respondents who were sexually active, i.e. reported at least one sex partner in the past three months (N=233, 90% of all females in the sample). Anal sex in the 3 months before baseline interview was reported by 31% of all sexually active women (Figure 1).

Figure 1. Anal sex among female IDU



Of these, 86% reported anal sex with their closest male sex partner and 35% with casual (including trade) male partners. Condoms were more likely to be used with casual partners. However, 60% of those with a casual partner and 85% of those with a main partner never used a condom. Women who reported anal sex were also more likely to have unprotected vaginal sex (OR=3.72, 95% CI 1.08-12.86).

The proportion of female respondents engaging in anal sex did not vary significantly by race/ethnicity, age, or educational level. Women who reported anal sex were more likely to have initiated sex before age 14 (OR=1.85, 95% CI 1.05 - 3.25). They were also more likely to test positive for HCV at the baseline interview (22.5% versus 11.5%: OR=2.23, 95% CI 1.06-4.69).

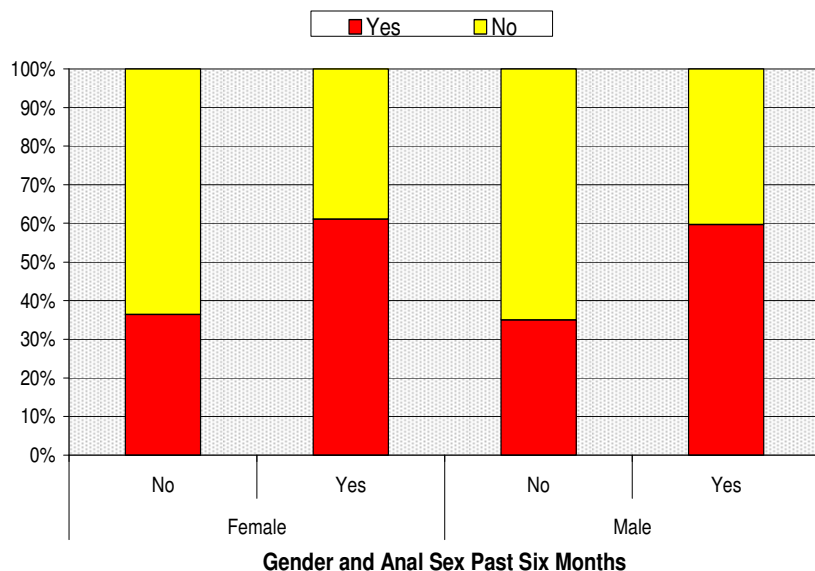
SATHCAP. SATH-CAP study participants were mostly African American (73%) and Hispanic (19%), 60% were male, and the median age was 44. The present analyses are restricted to respondents who were sexually active, i.e. reported at least one sex partner in the past six months (N=797, 84% of the sample). Anal sex in the six months before baseline was reported by 22% of sexually active women. Of the men, 29% reported anal sex with a woman in the past six months. In addition, 27% of the men who had anal sex with a woman, also had anal sex with a man in the same period.

Women reporting anal sex were more likely to identify as other than heterosexual or homosexual; 65% identified as bisexual/other compared to 44% of all sexually active women ($\chi^2=14.7$, $p<.001$). The proportion of female respondents engaging in anal sex did not vary by race/ethnicity. Older women (50 years and over) were somewhat less likely to report anal sex (OR=0.47, 95% CI 0.21-1.03), as were women with less than a high school education (OR=0.53, 95% CI 0.31-0.93). Women

who had anal sex were more likely to have personal networks that included 10 or more male drug users compared to women who did not report anal sex (OR=2.17, 95% CI 1.23-3.85).

Men who reported anal sex with women were more likely to identify as bisexual/other (49% vs. 33% overall; $\chi^2=22.2$, $p<.0001$). Anal sex with women was slightly more common among men under 30 years old (OR=1.89, 95% CI 0.97-3.67); differences by race/ethnicity were not significant. Men who

Figure 2. Sex trading among men and women reporting heterosexual anal sex (SATHCAP)



had anal sex with women were more likely to have personal networks that included men who have sex with men (MSM) than were men who did not report anal sex with women (OR=3.07, 95% CI 1.98-4.76).

For both women and men, heterosexual anal sex was strongly associated with trading sex in the past six months (Figure 2. women: OR=2.75, 95% CI 1.57-4.80; men: OR=2.74, 95% CI 1.83-4.11). In multivariate analyses, for women, identifying as bisexual and trading sex were independently associated with anal sex in the past six months. For men, identifying as bisexual, knowing at least one MSM, and trading sex were independently associated with anal sex with women in the past six months.

Conclusions

Anal sex is common among women who are at elevated risk for sexual contact with HIV+ men due to their own drug use, association with high-risk drug users, or residence in neighborhoods with high levels of HIV infection. Interventions to reduce the heterosexual transmission of HIV should place a major emphasis on anal sex.

Literature Cited

1. Padian N, Marquis L, Francis DP, Anderson RE, Rutherford GW, O'Malley PM, et al. Male-to-female transmission of human immunodeficiency virus. *JAMA* 1987;258(6):788-790.
2. Chirgwin KD, Feldman J, Dehovitz J, Minkoff H, Landesman S. Incidence and Risk Factors for Heterosexually Acquired HIV in an Inner-City Cohort of Women: Temporal Association With Pregnancy. *J Acquir Immune Defic Syndr Hum Retrovirol* 1999;20(3):295-299.
3. Halperin DT. Heterosexual Anal Intercourse: Prevalence, Cultural Factors, and HIV Infection and Other Health Risks, Part I. *AIDS Patient Care & STDs* 1999;13(12):717-730.
4. Gross M, Holte SE, Marmor M, Mwatha A, Koblin BA, Mayer KH. Anal Sex Among HIV-Seronegative Women at High Risk of HIV Exposure. *J Acquir Immune Defic Syndr Hum Retrovirol* 2000;24(4):393-398.

Acknowledgements

The Third Collaborative Injection Drug Users Study (CIDUS-III) was supported by grant U64/CCU517656 from the Centers for Disease Control and Prevention (CDC). The Sexual Acquisition and Transmission Cooperative Agreement Program (SATH-CAP) was supported by grant U01 DA017378 from the National Institute on Drug Abuse. We thank study participants for the time and effort they contributed to these studies and acknowledge the dedication of our study staff members who collected and managed these data.

Contact: Dr. Mary Ellen Mackesy-Amiti, University of Illinois at Chicago
 School of Public Health/COIP mc 923, 1603 W. Taylor St., Chicago, IL 60612
 email: mmamiti@uic.edu