

Background: Though HIV prevalence in refugee settlements in sub-Saharan Africa is usually unknown, the majority of refugees come from neighboring countries where HIV prevalence is high. In Nakivale Refugee Settlement in southwestern Uganda, there are 64,000 refugees from 12 countries. The prevalence of HIV is unknown. We implemented a routine HIV testing program in Nakivale and examined factors associated with new HIV diagnosis.

Methods: From Mar-Sept 2013, research assistants routinely offered free HIV-testing to all clients in the Nakivale Clinic Outpatient Department while they waited for their clinic visit. Tested participants were surveyed to obtain demographic information, mode of transport and travel time to clinic. We compared variables for HIV-infected clients and clients not infected with HIV using the Wilcoxon rank sum and Fisher's exact test (continuous, categorical data). We used a logistic regression model to identify predictors of a new diagnosis of HIV-infection among those tested.

Findings: Over the 6-month intervention, 155 (4.4%) of 3,558 individuals tested were identified with HIV infection. Compared to those without HIV infection, HIV-infected clients had a similar median age (30 vs 29, $p=0.3$), were more likely female (68% vs 56%, $p=0.0047$), less often refugee (41% vs 71%, $p < 0.0001$), and had longer median travel time to clinic (90 min vs 60 min, $p < 0.0001$). Of those tested, males were 0.56 times as likely, those not traveling to clinic on foot were 1.65 times as likely, and those taking longer to reach clinic were 1.07 times (per 15 minutes of travel time) as likely to be found HIV-infected. Likelihood of testing as HIV-infected was significantly associated with country of origin. People from Uganda had the highest prevalence among the individual countries reported, with 93/1,069 (8.7%).

Interpretation: In a routine HIV screening program in a refugee settlement in Uganda, Ugandan nationals are at higher risk than most refugees tested. Decentralized testing throughout the refugee settlement may help to identify more individuals with HIV that live further from a health clinic. Given the close physical proximity of refugees and the surrounding Ugandan nationals, future studies should aim to discern if there is HIV transmission and HIV viral mixing among these populations.

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Abstract #: 02CD021

Exploring barriers and facilitators to HIV+ MSM and TG/ Hijra in anti-retroviral treatment (ART) adherence in Mumbai, India

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Program/Project Purpose: In Mumbai, India, HIV prevalence among men who have sex with men (MSM) is disproportionality higher compared to the general public at 9.91% in 2013 (vs < 1% in the general population). 1 While India's National Aids Control Organization (NACO) funds some HIV prevention and modest linkage-to-care interventions for MSM to partially address these high rates, there are very few, if any current national programs for HIV+ MSM and Transgender (TG) populations including interventions to support antiretroviral (ART) adherence. 2 Information to guide adherence interventions for HIV+ MSM/TG are almost nonexistent. Objective: To obtain formative data on ART adherence and explore potential factors influencing adherence in HIV+ MSM and TG/ Hijra in Mumbai.

Structure/Method/Design: We conducted a cross-sectional, interviewer administered survey Hindi among HIV+ MSM/TG currently accessing services/programs at the Humsafar Trust (HST) – India's largest LGBT organization in Mumbai between July 23, 2014 and August 23, 2014. An interdisciplinary team of researchers, peer outreach workers, and counselors adapted the survey instrument from existing scales. Adherence was measured by self-report using previously validated questions in India. Barriers assessed were ART side-effects, depression (CES-D10), self-efficacy (GSE), internalized homophobia, and medication beliefs. Eligibility included being HIV+ male or TG/Hijra 18 years and older, ever having sexual contact with other men or transgender females (male-to-female), on ART, and able to provide informed consent. We used descriptive statistics and chi-square tests to analyze the data.

Outcomes & Evaluation: Of the 50 participants completing the survey, 66% self-identified as 'gay,' 14% bisexual, and 20% TG/ Hijra, the mean age was 39.9, 38% were married to women, and 98% received free ART from government health centers. Only 44% reported being fully adherent in the past 1 month and similarly at 3 months. Over half (52%) the participants were clinically depressed, 56% reported that being attracted to men was a personal shortcoming, and 16% have tried to become attracted to women. While most participants had favorable views towards ART, over half reported that medications disrupted their lives (52%). In this exploratory study, we found that adherence correlated with older age ($p=.001$), believing that their health depended on the ART ($p < .01$), and feeling depressed ($p=.03$).

Going Forward: Adherence was very low among MSM/TG in this sample and there were high rates of comorbid mental health issues. Future interventions should explore addressing depression, stigma, and medication beliefs to improve ART adherence among HIV+ MSM/TG in Mumbai, India.

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Abstract #: 02CD022

Effects of a community-based HIV risk reduction intervention among HIV-positive individuals: Results of a quasi-experimental Positive Living with HIV (POLH) study in Nepal

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Background: Although there is evidence that risky sexual behaviors among HIV-positive individuals is common, no theory-based intervention has been tested to improve psychosocial factors associated with safer sex in resource-limited countries in Asia. Our study evaluated the effects of a theory-based intervention in changing HIV transmission knowledge, threat and coping appraisals, and condom use intentions among HIV-positive individuals in the Kathmandu Valley, Nepal.

Methods: For this quasi-experimental investigation, we recruited 152 male and 125 female HIV-positive individuals from clientele receiving services from five non-governmental organizations working with HIV-positive individuals in the Kathmandu Valley, Nepal. After matching, the NGOs were randomly assigned to the treatment and control arms of the study, thus resulting in 146 participants in the intervention group and 131 individuals in the control group. The intervention group received six sessions on sexual risk reduction

strategies and the control group six sessions on treatment literacy, smoking and mental health. Data were collected at baseline and immediately after the intervention. Intervention effects were assessed using the adjusted standardized linear regression coefficients.

Findings: Participants had a mean age of 34.3 years old, 54.9% were male, and 69.3% were currently married. The results indicated that the sexual risk reduction intervention significantly improved participants' safer sex intention with regular partner ($p=0.002$), HIV-positive partners ($p=0.001$), and HIV-negative partners ($p=0.031$). Similarly, the sexual risk reduction intervention significantly improved participants' HIV transmission knowledge (< 0.001), perceived severity [$p < 0.001$], and vulnerability [$p < 0.001$], and coping appraisal (self-efficacy [$p < 0.001$], response efficacy [$p < 0.001$], and response cost [$p < 0.001$]). The positive effects of intervention remained significant after adjusting for baseline scores and other potential confounders.

Interpretation: This is the first theory-based HIV prevention intervention to demonstrate an increase in safer sex intention and positive effects on HIV-preventive mediators among HIV-positive individuals in a resource-limited setting in Asia. Although further studies are needed to evaluate the long-term efficacy of the intervention in improving protection motivation and safer behaviors, scaling-up this intervention appears likely to improve the health of HIV-positive individuals and prevent HIV transmission in the general population.

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Abstract #: 02CD023

Continued explosive rise in HIV prevalence among Chinese men who have sex with men

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Background: HIV prevalence among men who have sex with men (MSM) in Beijing China increased from 1.2% in 2000 to 7.8% in 2010, to projected 21.4% in 2020. This study aimed to estimate the current HIV prevalence and identify factors associated with HIV infection in this population.

Methods: A cross-sectional study was conducted in Beijing from March 2013 to March 2014. MSM participants were recruited through phone message, web-based advertisement, outreach and peer referral. An interviewer-administrated questionnaire was used to collect the information on socio-demographics, drug and alcohol use, sexual behaviors, self-perception of HIV risk, and history of HIV testing. Blood was collected for HIV and syphilis testing. Logistic regression was used to estimate adjusted odds ratio (aOR) and 95% confidence interval (CI).

Findings: Of 3588 eligible participants, HIV prevalence was 13.2% and syphilis 7.4%. Beijing residency (aOR, 0.62; 95% CI, 0.47-0.83), having health insurance in Beijing (aOR, 0.76; 95% CI, 0.61-0.95), illicit drug use (aOR, 2.70; 95% CI, 1.51-4.81), unprotected receptive anal intercourses (aOR, 1.73; 95% CI, 1.39-2.16), duration since last HIV testing (tested within 12 months vs. none: aOR, 0.59; 95% CI, 0.47-0.75; tested before 12 months vs. none: aOR, 1.00; 95% CI, 0.75-1.32), and current syphilis infection (aOR, 2.72; 95% CI, 1.98-3.74) were independently associated with HIV infection.

Interpretation: The estimated HIV prevalence is on the projectory of the rapidly increasing HIV epidemic among Chinese MSM, suggesting

the past HIV interventions have failed to change the rising trend. Innovative interventions are needed, and these interventions should fully engage gay communities.

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Abstract #: 02CD024

Tailored family planning and reproductive health services for HIV infected adolescent women: Analysis of adolescent women's childbearing intentions in Masiphumelele and Gugulethu, South Africa

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Background: The South African National Antenatal Sentinel HIV and Syphilis Prevalence Survey in 2012 estimates that 28.8% of pregnant women between the ages of 15 and 49 years old are living with HIV. Combined reproductive health and HIV treatment services can lower maternal-fetal transmission rates. Gaining an understanding of HIV infected adolescent women's childbearing intentions will allow for more effective development of these services.

Methods: Sexually active adolescent women between the age of 16 and 21 years old completed the survey from October 2012 through February 2014 at the Desmond Tutu HIV Foundation Youth Centre in Masi-phumelele, South Africa and the Hannan-Crusaid Treatment Centre in Gugulethu, South Africa. The data were analyzed using SPSS 22.0.

Findings: 85 adolescent women with a mean age of 19 years participated in the survey. 35 women (41%) were HIV-infected and 50 were HIV-uninfected (59%). There is no statistical difference in intention to have children in the future between HIV-infected and uninfected women (74% v. 78%, $p=0.27$). 41% of HIV-infected and 26% of HIV-uninfected adolescent women have had one live birth. The majority of HIV-infected and uninfected adolescent women ask a nurse for information regarding family planning (65% v. 52%, $p=0.248$), followed by youth center/clinic (21% v. 24%, $p=0.714$), and family (15% v. 26%, $p=0.216$). Only 6% HIV-infected and 0% HIV-uninfected women reported asking a doctor for family planning advice. There is a statistical difference in condom use between HIV-infected (97%) and HIV-uninfected (82%) women ($p=0.036$). 50% HIV-infected and 64% HIV-uninfected women use injection contraception, and 3% HIV-infected and 8% HIV-uninfected women use pill contraception.

Interpretation: Regardless of HIV status, adolescent women have intentions to have children. Most adolescent women ask a nurse for family planning information, but a large percentage of women ask their family. It is essential to further develop family planning and sexual health services for this population and ensure their access to these services.

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History of sexual abuse, depression, and alcohol use as risk factors for HIV infection in high HIV prevalence fishing communities in rural Uganda

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