

L. Ogawa<sup>1</sup>, G. Benallack<sup>1</sup>, A. Heffner<sup>1</sup>, J. Duong<sup>1</sup>, R. Rosenblatt<sup>1</sup>, C. Buere<sup>2</sup>, Y. Nibbe<sup>1</sup>, E. Mahmoud<sup>1</sup>; <sup>1</sup>Touro University-CA, Vallejo, CA/US, <sup>2</sup>Shirati District Hospital, Shirati, Tanzania

**Program/Project Purpose:** An estimated 200 million people are infected with schistosomiasis, making the disease one of the top neglected tropical diseases and a major global health concern. In Tanzania, with a population just over 42 million, about 33 million are in need of treatment or preventative chemotherapy. The disease is of particular concern in the Lake Victoria region, due to daily use of lake water. In conjunction with the Shirati district hospital, Touro University-CA has led control programs carried out in mobile clinics at local villages by providing screening, treatment, and education. Recently there has been a push for use of static dispensary locations for diagnosis and treatment. The aim of this study is to assess the longitudinal efficacy of community based interventions for schistosomiasis carried out from 2009-2014 and compares the utilization of static health dispensary clinics to the community based mobile clinics in reaching out to the population.

**Structure/Method/Design:** Villagers were alerted to the screening, treatment, and education program through local leaders, announcements over the radio, and posters. Effectiveness will be measured by analyzing trends in the number of people visiting the clinics, prevalence of infection, the number treated, given positive infection status, and change in prevalence patterns with treatment. The number of people screened at dispensaries versus mobile clinics will be compared. We hypothesize that mobile clinics are effective in reducing prevalence of schistosomiasis in community based interventions and that health dispensaries provide no additional value towards increasing number of individuals screened.

**Outcomes & Evaluation:** Univariate analysis and 2-tailed t-tests will be performed to assess if the use of services has significantly increased or not at mobile clinics from 2009-2014, and to compare utilization of health dispensaries versus mobile clinics. Prevalence of those who test positive will also be determined and analyzed to assess for a downward trend. Preliminary analysis reveals that from 2012 to 2014, prevalence of infection has decreased and that utilization of health dispensaries provides no additional value over mobile clinics. Our study supports the use of mobile clinics to carry out community-based health education, screening, and treatment programs over the use of dispensaries in rural Tanzania.

**Going Forward:** During this study mobile clinics reported decreased prevalence and are able to capture a larger population of people interested in being screened for infection. Since use of dispensaries is favored by the Mara district, it will be important to point out the efficiency of mobile clinics or improve the efficacy of dispensaries by increasing the frequency of screenings or widening the area of promotion to other nearby villages.

**Funding:** Funds for this study was provided by the Global Physician Corps.

Abstract #: 02CD019

### How much of tubal infertility can we attribute to Chlamydia Trachomatis infection in Lagos, Nigeria?

O. Olalaye<sup>1</sup>, J.A. Olamijulo<sup>2</sup>, O.O. Makinde<sup>2</sup>, O.A. Makinde<sup>3</sup>; <sup>1</sup>Lagoon Hospitals Ikeja, Lagos, NG, <sup>2</sup>Lagos University Teaching Hospital, Lagos, NG, <sup>3</sup>MEASURE Evaluation/ John Snow Inc., Abuja, NG

**Background:** Worldwide, Chlamydia Trachomatis has been identified as an important etiological agent for tubal infertility. Active infection is often asymptomatic and progression to tubal infertility occurs over time without any suspicion or intervention. Tubal

infertility is a difficult medical and social menace to deal with in our environment. Addressing tubal infertility will require that more cases are detected early especially those asymptomatic with prompt interventions to treat them before they cause irreversible damage. This will require routine screenings and sensitization of women on the silent but harmful consequences of chlamydia trachomatis infection. To begin advocacy for routine screening as a means of tackling this problem, it is necessary to provide evidence on how much of tubal infertility can be attributed to chlamydia trachomatis infection in our environment. This study attempts to address this knowledge gap by providing the evidence for this decision.

**Methods:** We carried out a case-control study at the Lagos University Teaching Hospital (LUTH) Nigeria among women who presented with tubal infertility. One hundred and twenty women with infertility were sequentially recruited into the study in 2010: 60 with Hysterosalpingogram confirmed bilateral blocked tubes, 60 others with patent tubes. Detailed history, physical examination, serological and radiological investigations were conducted and documented for each woman according to a standard guideline. Sera prepared from blood samples were analyzed for chlamydia antibody with Dia.Pro chlamydial IgG antibody detection kit (manufactured by Dia.Pro Diagnostic Bioprobes, Italy). Active chlamydial infection through antigen detection on an endocervical specimen was also carried out using the Diaspot chlamydia kit (Bresta Perkasa, Indonesia). Univariate and bivariate analysis was done using Stata version 10.

**Findings:** The prevalence of chlamydia antibodies was 27% among the studied population. None of the women tested in this study had an active chlamydia infection. Of those with blocked tubes, 38% (23/60) were positive for chlamydia antibodies while 15% (9/60) of those with patent tubes had chlamydia antibodies. A higher proportion of those with tubal infertility had at least one abortion previously (68% vs 50%). Attributable risk for tubal infertility as a result of chlamydia infection was 25% while the attributable risk fraction was 71%. The odds of women with tubal infertility being positive for chlamydia antibody was 3.5 (95% CI = 1.5 – 8.5). Tubal infertility was more associated with secondary infertility than primary infertility among the studied population (OR 2.7, 95% CI = 1.1 – 6.4).

**Interpretation:** Chlamydia trachomatis infection has a strong association with tubal infertility among women presenting in LUTH. Should active infections be detected and treated early, a large proportion of tubal infertility burden in Lagos could be averted. Since many chlamydia infection cases are asymptomatic in our environment, women will benefit from routine screening for chlamydia trachomatis infection.

**Funding:** No funding listed.

Abstract #: 02CD020

### Predictors of HIV-infection during routine clinic-based HIV testing in Nakivale Refugee settlement in SW Uganda

K.N. O'Laughlin<sup>1</sup>, J. Kasozi<sup>2</sup>, I.V. Bassett<sup>3</sup>, Z.M. Faustin<sup>4</sup>, R.A. Parker<sup>5</sup>, K. Greenwald<sup>6</sup>, C. Omara Owino<sup>7</sup>, R. Walensky<sup>8</sup>; <sup>1</sup>Brigham & Women's Hospital, Harvard Medical School, Jamaica Plain, MA/US, <sup>2</sup>United Nations High Commissioner for Refugees, Kampala, UG, <sup>3</sup>Harvard Medical School, Massachusetts General Hospital, Boston, MA/US, <sup>4</sup>Bugema University, Kampala, UG, <sup>5</sup>Massachusetts General Hospital, Boston, MA/US, <sup>6</sup>Harvard Medical School, Boston, MA/US, <sup>7</sup>Medical Teams International, Mbarara, UG, <sup>8</sup>Harvard Medical School, Massachusetts General Hospital, Brigham & Women's Hospital, Boston, MA/US

**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.

**Funding:** Harvard University Center for AIDS Research (NIH/ NIAID 5P30AI060354-10), Harvard Global Health Institute.

**Abstract #:** 02CD021

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

C. Pina<sup>1</sup>, V. Patel<sup>2</sup>, S. Mengle Rawat<sup>3</sup>, A. Dange<sup>3</sup>, U. Jadhav<sup>3</sup>, R. Chhabra<sup>4</sup>, <sup>1</sup>Albert Einstein College of Medicine, Bronx, NY/US, <sup>2</sup>Montefiore Hospital, New York City, NY/US, <sup>3</sup>Humsafar Trust, Mumbai, IN, <sup>4</sup>Albert Einstein: Preventive Intervention Research Center, Bronx, NY/US

**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.

**Funding:** Global Health Program at the Albert Einstein College of Medicine.

**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

K.C. Poudel<sup>1</sup>, D.R. Buchanan<sup>2</sup>, K. Poudel-Tandukar<sup>1</sup>; <sup>1</sup>School of Public Health and Health Sciences, University of Massachusetts Amherst, Amherst, MA/US, <sup>2</sup>1) School of Public Health and Health Sciences, University of Massachusetts Amherst, MA, USA; 2)The Institute for Global Health, University of Massachusetts Amherst, MA, USA, Amherst, MA/US

**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