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Assessment of Longitudinal Efficacy of Community Based Intervention for Schistosomiasis in Mara District, Lake Victoria Region of Tanzania

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the high HIV prevalence among children, we recommend routine HIV screening for all children hospitalized in pediatric units.

Abstract #: 02CD016

A systematic review and meta-analysis of HIV prevention interventions for socioeconomically disadvantaged ethnic minority women in OECD member countries

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Background: Recently there have been many encouraging developments in the global effort to combat HIV and AIDS. The latest data collected by UNAIDS on the status of the disease showed a 33% reduction in new HIV cases since 2001 and a decrease of 700,000 deaths annually since the peak in 2005. 1 Within the 34 countries that make up the Organization for Economic Cooperation and Development (OECD), public health efforts have been successful in reducing the incidence of AIDS and improving the survival of those infected with HIV. 2 However, the incidence of new HIV infections remain stubbornly high with socioeconomically deprived communities, and women in particular, making up a disproportionate number of new cases. 3 There is a need for a greater understanding of the prevention interventions which can successfully educate this population, change behaviors associated with transmission and ultimately reduce the spread of sexually transmitted diseases such as HIV. The aim of this work was to identify, characterize and evaluate health interventions aimed at preventing HIV infection in women from socioeconomically disadvantaged ethnic mintority groups in OECD countries.

Methods: A systematic review was undertaken of available publications related to HIV prevention interventions for socioeconomically deprived ethnic minority women in OECD member countries. Specific search strategies were designed for the databases Medline (Ovid), CINAHL, Embase, Scopus, and Web of Knowledge. Other searches were also done using relevant keywords in different databases such as Cochrane Library, CRD Databases, metaRegister of Controlled Trials, EURONHEED, CEA Registry, and European Action Program for Health Inequities, among others. When possible, a meta-analysis was performed using standardized mean differences to obtain aggregate estimates of effect size with 95% confidence intervals. Two reviewers independently extracted all the information and critically appraised the studies.

Findings: We identified 34 articles analyzing 43 different prevention interventions with a total number of 13,318 participants. All of the interventions were carried out in the United States. The majority of the interventions were based on cognitivebehavioral models directed principally at reducing risky behaviors and were culturally adapted to the target population. Most programs obtained some benefits over control groups in the outcome measures of HIV knowledge, risk related behaviors and STD transmission reduction. A meta-analysis of 5 randomized controlled trials showed a 41% reduction in STD transmission rates (RR - .59: 95% CI .46-.75; p < 0.05).

Interpretation: HIV prevention interventions for socioeconomically deprived ethnic minority women are efficacious at improving knowledge of HIV, reducing risky behaviors associated with transmission as well as reducing the transmission of STD's. Future prevention programming should incorporate the identified characteristics associated with successful behavior modification and disease prevention. Additional research is needed of this population outside of the United States.

Abstract #: 02CD017

Proximate context of HIV-related stigma and utilization of skilled childbirth services in Uganda

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Background: A recent mixed-methods study of pregnant women in Kenya by Turan et al. (2012) suggested that women may avoid facility births due to fears of HIV testing and involuntary HIV disclosure. In the context of Uganda, which recently adopted the B+ option and passed a bill that forces mandatory HIV testing for all pregnant women and allows HIV disclosure by providers, the stigma of HIV may undermine efforts to reduce maternal mortality and prevent mother-to-child HIV transmission. Motivated by this hypothesis, we analyzed data from the 2011 Uganda Demographic and Health Survey to estimate the association between the proximate context of HIV-related stigma and delivery in a health facility.

Methods: The study sample consisted of women aged 15-49 who had heard of HIV and who had given birth in 2007-11. We fitted logistic regression models to the data, with delivery in a health facility (for the most recent birth) as the outcome. The two exposures of interest were anticipated stigma (wanting HIV infection in one's family to remain secret) and an index of social distance (unwillingness to engage in interpersonal contact with HIV-positive persons in different scenarios). For each participant, we modeled her proximate context of stigma by aggregating these two measures across all other survey respondents in her village. Estimates were adjusted for sociodemographic factors, socioeconomic status, parity, antenatal care, and geographic distance.

Findings: Of 4898 women, 62% (n=3030) delivered in a health facility for their most recent birth. In multivariable regression models we observed a statistically significant, negative association between facility delivery and the individual social distance index (AOR = 0.86; 95% CI, 0.80-0.94). When community-level social distance was added to the model, it had a statistically significant negative association with facility delivery (AOR = 0.55; 95% CI, 0.40-0.74) and the effect of individual-level social distance was reduced (AOR = 0.91; 95% CI, 0.85-0.99). Neither the proximate context of anticipated stigma (AOR = 1.27; 95% CI, 0.62-2.59) nor individual-level anticipated stigma (AOR = 1.04; 95% CI, 0.90-1.19) had statistically significant associations with facility delivery.

Interpretation: We found that a greater intensity of expressions of social distance in the community was associated with a reduced odds of health facility delivery among women in Uganda, even after accounting for the social distance index measured at the individual level. Despite limitations of not having data on women's HIV status and statistically insignificant association between anticipated stigma and facility delivery, the correlation between social distance and facility delivery is robust to sensitivity analysis even after restricting sample to women who gave birth in 2010-11. Reducing the structural stigma of HIV will be needed to achieve the twin goals of reducing overall maternal mortality and preventing mother-to-child HIV transmission.

Abstract #: 02CD018

Assessment of longitudinal efficacy of community based intervention for schistosomiasis in Mara District, Lake Victoria region of Tanzania

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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.

Abstract #: 02CD019

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

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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.

Abstract #: 02CD020

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

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