

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

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### 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 minority 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.

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### 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 socio-demographic 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.

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