

HIV & PREGNANCY INTENTION

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Introduction

HIV prevalence in sub-Saharan Africa is highest of any global region and the majority of transmissions are characterized by significant HIV discordance rates among heterosexual partnerships. Comprehensive HIV prevention in high-burden, low resource settings must address that intentional childbearing may place heterosexual couples at increased risk of HIV infection, especially in areas where society places great value on having children. Understanding the interplay of reproductive health goals and HIV risk is critical, especially in settings such as Nyanza Province where there is high HIV prevalence (15.1% among ages 15-64 years; KAIS, 2014), high fertility rate (TFR, 4.3; KDHS, 2015) and low levels of protective method use such as condoms (2.9% for male condom use among 15-49 year old women; KDHS, 2015) and low contraceptive prevalence (53.9% women; KDHS, 2015).

Our study aims included: Determine and compare HIV incidence among HIV-discordant couples who intend pregnancy, versus those who do not intend to become pregnant. Describe and compare sexual behaviors, contraception, condom use, couple-level behaviors and factors, and sociocultural norms in the cohort. Develop a sociobehavioral model of how reproductive decision-making processes influence the risk of HIV transmission.

Methods

We enrolled a community-based prospective cohort of reproductive age heterosexual couples in Nyando District of Western Kenya. Participating couples were randomly sampled from residential units located at latitude/longitude points generated on a shape file map of the district.

At baseline, study participants were offered home-based HIV counseling and testing, pregnancy testing, and reproductive and sexual health behaviors were captured using audio computer assisted self-interview (ACASI). A subset of participants were followed up prospectively every six months for two years with repeat HIV testing, pregnancy testing, and ACASI data collection. Qualitative data were collected before cohort enrollment as part of formative work, and focus groups and dyad interviews were conducted twice among a subset of cohort enrollees.

Analyses were conducted using logistic regression, generalized estimating equations, and survival analysis. Qualitative data methods included free listing and pile sorting, and content analysis of the focus group discussions and dyad interview data.

Main findings

We enrolled 3,430 couples (3,430 women and 3,329 men). HIV prevalence was similar among men and women (17.9 and 17.7% respectively). In one in four households, one or both members of the dyad were HIV-positive. Twenty-six percent of participants at enrolment intended pregnancy within the next six months. 1,319 couples (1,319 women and 1,274 men) were selected for follow-up; these included 35% HIV discordant, 36% concordant-negative, and 29% concordant-positive couples. Retention was 85% over 24 months. There were 40 incident HIV infections (7 among concordant-negative couples, 31 among discordant couples, and 2 men in polygamous relationships with a negative and a positive wife), for 1.7 per 100 person-years (vs. 0.5 national incidence). Incidence did not vary significantly by gender (23 women and 17 men). Incident HIV was associated with being male, in a polygamous relationship, physical abuse by a sexual partner or family member, and having a HIV-positive partner. Seventy-nine participants died during follow-up; mortality was associated with being HIV-positive, having a HIV-positive partner, and polygamy. There were 360 incident pregnancies during follow-up; pregnancy was associated with younger age, lower parity, and pregnancy intention. After HIV testing, the frequency of condom use with a study partner increased; the proportion reporting more than one sexual partner in the last six months was unchanged, and reported transactional sex in the last six months declined, over time. Qualitative data revealed a gender disparity in reproductive goals, and participant support for home-based testing.

Conclusions

This study of a representative sample of couples found that HIV prevalence and pregnancy intention were high. Pregnancy intention, however, was not a predictor of HIV incidence. The main drivers of both HIV infection risk and mortality in this population largely overlapped. Programs to improve HIV prevention and care can consider a constellation of risk factors that include biological (HIV-positive or having a HIV-positive partner) and social factors (polygamy and physical abuse) beyond a narrow focus on reproductive goals and intention.

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