

# Regional Differences in Prevalence of HIV-1 Discordance in Africa and Enrollment of HIV-1 Discordant Couples into an HIV-1 Prevention Trial

## Abstract:

Most HIV-1 transmission in Africa occurs among HIV-1-discordant couples (one partner HIV-1 infected and one uninfected) who are unaware of their discordant HIV-1 serostatus. Given the high HIV-1 incidence among HIV-1 discordant couples and to assess efficacy of interventions for reducing HIV-1 transmission, HIV-1 discordant couples represent a critical target population for HIV-1 prevention interventions and prevention trials. Substantial regional differences exist in HIV-1 prevalence in Africa, but regional differences in HIV-1 discordance among African couples, has not previously been reported. **Methodology/Principal Findings** The Partners in Prevention HSV-2/HIV-1 Transmission Trial (“Partners HSV-2 Study”), the first large HIV-1 prevention trial in Africa involving HIV-1 discordant couples, completed enrollment in May 2007. Partners HSV-2 Study recruitment data from 12 sites from East and Southern Africa were used to assess HIV-1 discordance among couples accessing couples HIV-1 counseling and testing, and to correlate with enrollment of HIV-1 discordant couples. HIV-1 discordance at Partners HSV-2 Study sites ranged from 8–31% of couples tested from the community. Across all study sites and, among all couples with one HIV-1 infected partner, almost half (49%) of couples were HIV-1 discordant. Site-specific monthly enrollment of HIV-1 discordant couples into the clinical trial was not directly associated with prevalence of HIV-1 discordance, but was modestly correlated with national HIV-1 counseling and testing rates and access to palliative care/basic health care ( $r = 0.74$ ,  $p = 0.09$ ). **Conclusions/Significance** HIV-1 discordant couples are a critical target for HIV-1 prevention in Africa. In addition to community prevalence of HIV-1 discordance, national infrastructure for HIV-1 testing and healthcare delivery and effective community outreach strategies impact recruitment of HIV-1 discordant couples into HIV-1 prevention trials.