

# Barriers to Antiretroviral Initiation in HIV-1-Discordant Couples

## Abstract:

In Kenya and much of sub-Saharan Africa, nearly half of all couples affected by HIV are discordant. Antiretroviral therapy (ART) slows disease progression in HIV-1-infected individuals, and reduces transmission to uninfected partners. We examined time to ART initiation and factors associated with delayed initiation in HIV-1-discordant couples in Nairobi. METHODS HIV-1-discordant couples were enrolled and followed quarterly for up to 2 years. Clinical staff administered questionnaires and conducted viral loads and CD4 counts. Participants with a CD4 count meeting ART criteria were referred to a nearby PEPFAR-funded treatment center. Barriers to ART initiation among participants with a CD4 count eligible for ART were assessed by Cox regression. RESULTS Of 439 HIV-1-infected participants (63.6% females and 36.4% males) 146 met CD4 count criteria for ART during follow-up. Median time from meeting CD4 criteria until ART initiation was 8.9 months, with 42.0% of eligible participants on ART by 6 months and 63.4% on ART by 1 year. The CD4 count at the time of eligibility was inversely associated with time to ART initiation (HR=0.49,  $p < 0.001$ ). Compared to homeowners, those paying higher rents started ART 48% more slowly ( $p=0.062$ ) and those paying lower rents started 71% more slowly ( $p=0.002$ ). CONCLUSIONS Despite access to regular health care, referrals to treatment centers, and free access to ART, over a third of participants with an eligible CD4 count had not started ART within 1 year. Factors of lower socioeconomic status may slow ART initiation and targeted approaches are needed to avoid delays in treatment initiation.