

ABSTRACT

Background: Health systems offer infant HIV testing as part of prevention of mother-to-child HIV transmission (PMTCT) programs, but are not built to systematically diagnose HIV infection in older children before symptomatic illness. Offering HIV-infected adults attending HIV treatment programs targeted testing in home or clinic may increase early diagnosis of pediatric HIV.

Methods: HIV-infected parents attending HIV care clinic at Kenyatta National Hospital (KNH) in Nairobi, Kenya were asked about their children's HIV status. Adults with untested children < 12 years old chose to test children either at home (HBT) or in a clinic (CBT). Multinomial relative risk regression was used to identify cofactors of testing acceptance.

Results: During the 9-month period when targeted testing was routinely offered, approximately 4 times as many children were tested per month as in the previous 10-month period (13.6 vs 3.5 per month, RR: 3.9, 95%CI: 2.8-5.5). Among 116 enrolled adults, 23 (20%) chose HBT and had 46 children tested, 48 (41%) chose CBT and had 58 children tested, and 45 (39%) did not complete testing. More adults chose CBT than HBT ($p=0.003$), but more children were tested per adult by HBT (2.0 vs 1.2, $p<0.001$). HIV prevalence among 104 tested children was 8% overall; 6 infected children were identified by CBT and 2 by HBT (median age: 8 years (IQR: 2-11)). Compared to adults who chose CBT, adults who chose HBT were more likely to have higher income, more education, be male, have a partner, have an unemployed partner, and have a partner known to be HIV negative ($p<0.05$), while adults who did not test their children were more likely to have higher income and have a partner who was known to be HIV negative or of unknown HIV status ($p<0.05$). In multivariate analyses, income and partner status remained significantly associated with testing choice. **Conclusions:** Targeting HIV-infected parents in care increased the rate of pediatric testing and found high prevalence of pediatric HIV. CBT was preferred over HBT at this urban referral hospital. Efforts to increase pediatric HIV testing and to understand parental characteristics are important to provide timely diagnosis and linkage to care.