

## **FINDING THE MISSING CHILDREN WITH HIV: INDEX-LINKED TESTING IN CLINICS & COMMUNITIES**

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### **Abstract Body**

HIV prevalence is much lower in children than in other age groups but the proportion undiagnosed is significantly higher. Therefore, innovative and targeted strategies are required to improve uptake and yield of HIV testing among children. We evaluated the effectiveness of index-linked HIV testing implemented in clinic and community-based settings in children aged 2-18 years living in the household of an HIV-infected individual in urban and rural settings in Zimbabwe.

Individuals attending for HIV care at 3 urban and 3 rural primary care clinics in western Zimbabwe who had children (2-18 years) of unknown HIV status living in their households were offered 3 options for their children to access HIV testing and counselling (HTC): 1), Clinic-based HTC 2), Home-based HTC by community health workers 3), Testing performed by caregivers using an oral mucosal test (assisted self-testing) Demographic data was collected from consenting caregivers who were followed up over 2 months to ascertain testing outcomes.

We recruited 2813 people living with HIV (median age 38, IQR 32-46 years) who had 3431 children eligible for testing (median age 9, IQR 6-13 years). HTC was accepted for 2757 (80.4%) eligible children. Overall, 74.7% selected clinic-based testing, 19.2% opted for community-based testing and 6.1% for assisted self-testing, with no difference in trend by rural or urban setting. Among the 2757 children for whom HTC was accepted, 1977 (71.7%) completed testing. Those who selected community-based testing were more likely to complete the test than those who selected clinic-

based testing (OR=1.69 95%CI:1.3-2.2,  $p<0.001$ ) or assisted self-testing (OR=2.38 95%CI:1.0-2.3,  $p=0.04$ ). Overall HIV prevalence was 1.4% but the prevalence among 12-18 year olds was 2.5% and 81% of those diagnosed were >7 years. HIV yield was 0.8% overall. Previously undiagnosed HIV was strongly associated with older age (OR=3.54, 95%CI:1.1-11.1,  $p=0.03$ ) comparing 13-18 years to 2-5 year olds and with single or double orphanhood (OR=3.10, 95%CI:1.4-6.9,  $p=0.005$ ). All 28 HIV positive children were linked to care within 2 weeks.

Index-linked testing is a feasible HTC strategy for children in Zimbabwe. However, while clinic-based testing has the highest uptake, children were more likely to be tested in community settings. Older children and orphans are at increased risk of undiagnosed HIV. Strengthening of HTC strategies to target this age group are required.