

Evaluating the feasibility and effectiveness of HIV self-testing (HIVST) among children, adolescents, and young adults in Nigeria

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Oral HIVST was a highly effective strategy to identify children, adolescents, and young adults in a low prevalence country across all ages and in facility and community settings, including 1st time testers



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BACKGROUND

- Estimated 171,000 children (<14 years), 72,000 adolescents (15-19 years), and 325,000 young adults (20-29 years) living with HIV in Nigeria.
- 32% of children living with HIV (CLHIV) on antiretroviral therapy vs. 95% of adults.
- High acceptance of HIVST among adolescents and youth with emerging evidence showing high acceptability, feasibility, and effectiveness of caregiver-assisted HIVST in children.

METHODS

- **FASTER Initiative** - Faith-based Action for Scaling-up Testing and Treatment for Epidemic Response
- **Data Collection** - Oct. 2020-Sep. 2021
- **Location** - 8 states in Nigeria: Abuja, Benue, Delta, Enugu, Imo, Lagos, Nasarawa, Rivers
- **Services** - HIVST provided through routine program services at 280 sites
 - Settings – facility and community
 - Approaches – assisted and unassisted
 - Use of OraQuick Advance[®] HIVST kits, which are WHO pre-qualified for individuals ≥2 years
 - Clients with a reactive HIVST result referred for confirmatory testing with a blood-based HIV test
- **Population** - Children (2-14 years), adolescents (15-19 years), and young adults (20-29 years)
- **Clients** - Index contacts, social network, or screened-in with risk assessment tools
- **Outcome Measures**
 - Feasibility: uptake by population and setting, % results returned
 - Effectiveness: Reactive HIVST positive predictive value (PPV), % linked to ART
 - Associations with confirmed HIV infections

OBJECTIVES

1. Evaluate the **programmatic use of HIVST** among children, adolescents, and young adults in Nigeria
2. Describe the **feasibility and effectiveness of HIVST** in these populations
3. Investigate **factors associated with HIVST reactivity and confirmed HIV positivity**

RESULTS

- **92,489** children, adolescents, and youth received HIVST with high proportions returning results and receiving confirmatory testing (Figure 1)
- **Children (2-14 years):** 77% first time testers, 98% assisted, 60% in the community, 88% PPV and 1% confirmed positive.
- **Adolescents (15-19 years):** 73% first time testers, 63% unassisted, 82% in the community, 98% PPV and 5.3% confirmed positive.
- **Young Adults (20-29 years):** 59% first time testers, 50% unassisted, 77% in the community, 96% PPV and 9.9% confirmed positive
- **1st Time Testers:** first time testing was associated with being confirmed positive across all age groups; other associated factors varied by group (Figure 2).

CONCLUSION

- **Assisted HIVST was effective in identifying CLHIV**, especially in facility settings, and **adolescents and young adults** across community and facility settings
- High results return and PPV across all ages
- Assisted and unassisted models can be combined and targeted by age
- Social network referral was effective among adolescents and youth
- Effective identification of adolescent boys and young men (15-24 years)

Figure 1. HIVST Use, Results Return, Positivity, Confirmatory Testing, and Linkage to ART

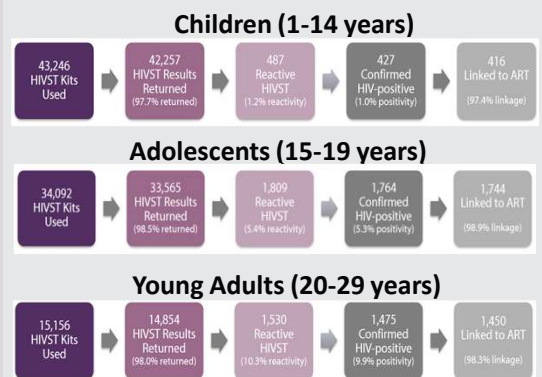


Figure 2. Odds of Being Confirmed HIV-Positive

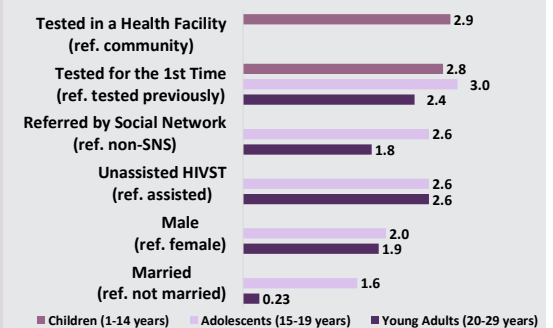


Figure 3. HIV Testing in Nigeria, Oct2020-Sep2021

	Children (1-14 years)	Adolescents (15-19 years)	Young Adults (20-29 years)
Outpatient	137,154 tests 1,371 positives (1.0% positivity)	68,460 tests 875 positives (1.3% positivity)	303,993 tests 8,075 positives (2.7% positivity)
Community	126,619 tests 1,436 positives (1.1% positivity)	218,503 tests 5,922 positives (2.7% positivity)	1,078,717 tests 70,165 positives (6.5% positivity)
Index	29,656 tests 1,457 positives (4.9% positivity)	11,693 tests 1,514 positives (12.9% positivity)	80,952 tests 18,240 positives (22.5% positivity)
HIVST Intervention	43,240 tests 427 positives (1.0% positivity)	34,088 tests 1,764 positives (5.3% positivity)	15,156 tests 1,475 positives (9.9% positivity)

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