Adding to the HIV Testing Services Toolkit!
Caregiver-Assisted Oral HIV Screening of Children 18 Months – 14 Years in Uganda and Zambia

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Conflict of Interest Disclaimer
I have no relevant commercial or financial conflicts of interest to disclose.

Organizational Disclaimer
The findings and conclusions are those of the author(s) and do not necessarily represent the official position of the U.S. Centers for Disease Control and Prevention.

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Nearly 59,000 CLHIV in Uganda and Zambia were not yet on ART

<table>
<thead>
<tr>
<th>2018</th>
<th>Uganda</th>
<th>Zambia</th>
</tr>
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<tbody>
<tr>
<td>Estimated number of children living with HIV (CLHIV) and not on treatment</td>
<td>26,727&lt;sup&gt;1&lt;/sup&gt;</td>
<td>31,461&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Pediatric ART coverage (0 – 14 yrs)</td>
<td>68.7%&lt;sup&gt;1&lt;/sup&gt;</td>
<td>59.5%&lt;sup&gt;2&lt;/sup&gt;</td>
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</table>

Children are dependent on parents and caregivers to access HIV testing services.

Parents and caregivers face logistical, societal, financial and other barriers limiting uptake of testing services for children.

Photo by Philip Laubner/CRS

1 AIDSinfo, 2019.  
Purpose of the Study

• Evaluate the *acceptability, feasibility* and *effectiveness* of a caregiver-assisted oral fluid-based HIV test to screen children for HIV in Uganda and Zambia

• Support expanded HIV testing options for children and their caregivers, to increase access to testing and treatment services

• Improve the identification of undiagnosed CLHIV and ensure all newly diagnosed children are linked to clinical care.

• Gather data to inform WHO policy guidance to expand the administration of oral HIVST to caregivers to screen their children
Study Objectives

Primary objectives:
1. Estimate the **acceptability** of implementing caregiver-assisted oral fluid-based HIV screening for children as part of index testing services for HIV-positive adults.
2. Estimate the **feasibility** of implementing caregiver-assisted oral fluid-based HIV screening for children as part of index testing services for HIV-positive adults.
3. Estimate the **effectiveness** of caregiver-assisted oral fluid-based HIV screening on testing yield, return to clinic, and linkage to ART for newly identified CLHIV.

Secondary objectives:
1. Estimate the **cost** of caregiver-assisted oral fluid-based HIV screening compared to the existing standard costs of the existing referral to testing program.
2. Evaluate and decrease the risk of any **social harm** related to pediatric oral HIV screening for children and their caregivers through pre-test screening and post-test assessments.
Methods
Sampling Design and Study Sites

Cross-Sectional Cluster Sampling

Uganda
32 facilities across 16 districts in 6 of 8 PEPFAR-supported health regions

Zambia
15 facilities in 2 provinces
Inclusion criteria:

**Adult index parents/caregivers:**
- All HIV-positive adults including HIV-positive women and HIV-positive men
- At least 18 years old
- With eligible children

**Eligible children:**
- All biological children (of an adult index case) 18 months – 14 years of age with an unknown HIV status, where the biological mother’s status is positive, unknown or deceased.
- Non-biological children living in the same household

Exclusion criteria:

**Adult index parent/caregivers:**
- Adults answering “yes” to any of the four intimate partner violence risk assessment questions;
- Adults unable to provide informed consent due to mental disability or other limitations
- Adults currently in prison

**Eligible children:**
- Children <18 months of age;
- Eligible children with a known HIV status (negative or positive)
- Children still breastfeeding or with cessation of breastfeeding <3 months.
- Non-biological children of the index parent/caregiver
Option 1: “Take an oral fluid-based HIV screening kit to test your child at home.”

Option 2: "Bring your child to the facility for a blood-based HIV test."

Option 3: "Community health worker will come to your home and test your child with a blood-based HIV test."
Study Activities

• Children with reactive oral HIV self-testing (HIVST) results received confirmatory testing per respective national guidelines.

• Children confirmed HIV-positive were linked to ART.

• Acceptability, feasibility and effectiveness were evaluated through study registers documenting testing uptake/results returned, and a post-use survey administered to parents/caregivers.
Results
Pediatric HIVST had High Acceptability among Caregivers

- 4,059 eligible index parents/caregivers offered oral test kits
  - 96.8% (3,931 parent/caregivers) accepted oral test kits
- 7,593 oral test kits sent home with parent/caregivers
  - 97.6% (7,413 children) tested and returned results
High Feasibility

- 1.6% (119 children) had reactive oral test kit results
- 97.5% (116 children) completed blood-based confirmatory testing at facility
- Need for facility testing decreased by 98.4%

![CONFIRMATORY TESTS COMPLETED](chart.png)
Pediatric caregiver-assisted HIVST was effective with a high positivity and linkage to same-day ART

- 43 children (37.1%) confirmed HIV-positive
- 97.7% (42 children) same-day ART initiation
- 0.4% children had minor reactions with use of the oral test kit (e.g., pain, bleeding, itching)
Caregivers thought oral test kits were easy to use and would recommend oral HIV screening to other parents

<table>
<thead>
<tr>
<th></th>
<th>Caregivers Surveyed</th>
<th>OTK easy to use n(%)</th>
<th>Would recommend OTK to other parents n(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>2250</td>
<td>2200 (97.8)</td>
<td>2182 (97.0)</td>
</tr>
<tr>
<td>Zambia</td>
<td>469</td>
<td>436 (93.0)</td>
<td>430 (91.7)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2719</td>
<td>2636 (96.9)</td>
<td>2612 (96.1)</td>
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Conclusions

• Caregiver-assisted oral HIV screening is an acceptable, feasible and effective option to screen high-risk children who might not otherwise receive HIV testing.

• It could potentially help decongest health facilities.

• Policy makers may consider revised guidance to promote caregiver-assisted oral HIV screening for children 18 months-14 years, thus adding one more tool to the toolkit for identifying children living with HIV and expanding community-based pediatric testing options.
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Other Caregiver-assisted oral HIVST study results

• **Poster 113:** Cost of caregiver-assisted oral HIV screening of children in Uganda and Zambia

• **Poster 110:** Minimizing the risk of social harm related to caregiver-assisted oral HIV self-testing (HIVST) to screen children of people living with HIV

• **Poster 111:** Performance Evaluation of Home-Based Caregiver-Assisted Oral HIV Screening of Children Compared to Facility-Based Confirmatory Testing Using the National Algorithm in Uganda
Contact Information

Thank you!

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