Implementation of the Validated HIV Testing Eligibility Screening Tool and Expansion of Index Testing to Improve Identification of Children and Adolescents Living With HIV in Uganda in 2021

Session 5: Adolescents and Young Adults
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Affiliations: Catholic Relief Services (CRS)
13 Countries account for 75% of the global HIV treatment gap, or 780,000 CLHIV not on treatment globally

<table>
<thead>
<tr>
<th>Country</th>
<th>CLHIV Not on HIV Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>161,570</td>
</tr>
<tr>
<td>Nigeria</td>
<td>72,555</td>
</tr>
<tr>
<td>DRC</td>
<td>49,331</td>
</tr>
<tr>
<td>Tanzania</td>
<td>48,463</td>
</tr>
<tr>
<td>Mozambique</td>
<td>46,918</td>
</tr>
<tr>
<td>Uganda</td>
<td>36,250</td>
</tr>
<tr>
<td>Zambia</td>
<td>34,497</td>
</tr>
<tr>
<td>Angola</td>
<td>33,039</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>26,330</td>
</tr>
<tr>
<td>Cameroon</td>
<td>22,983</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>22,531</td>
</tr>
<tr>
<td>Ghana</td>
<td>19,456</td>
</tr>
<tr>
<td>Malawi</td>
<td>16,311</td>
</tr>
</tbody>
</table>

Source: UNAIDS 2021 estimates for 2020
Children and adolescents living with HIV are less likely to be aware of their HIV status in Uganda

Overview

- HIV care for children and adolescents living with HIV continues to lag behind that of adults in Uganda.

- Only 68% children living with HIV (CLHIV) <10 knew their HIV status.

- Only 57% of adolescents living with HIV (ALHIV) 10-19 years knew their HIV status.

- Low HIV prevalence (0.5%) among children <15 years in Uganda requires testing more children to identify one HIV-positive child.

Source: MoH quarterly HIV Care and Treatment Report (Oct-Dec 2020)
Validated pediatric HIV risk assessment tool (HRAT) for children (<15) in Uganda

- Sick in the last 3 months
- Recurring skin problems
- Not growing well
- Ever had TB
- Lost weight (last few months)
- HIV-positive maternal status

**Number of questions screening positive**  
**Sensitivity (95% CI)**  
**Specificity (95% CI)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mom HIV+ or any 2 items</td>
<td>87.8 (80.9 – 92.5)</td>
<td>62.6 (54.8–69.7)</td>
</tr>
</tbody>
</table>

Methods

• HIV testing data across all testing modalities for all 3,283 PEPFAR-supported sites in Uganda was analysed

• Pre-H RAT (2019) and post-H RAT (2021) to explore changes in overall, outpatient, index testing and case-finding among children 1-14 years.

• Data for 2020 excluded for the implementation of the national policy revision and HRAT pilot testing.

• HIV testing data from VMMC services were excluded due to a policy change raising the minimum age for this procedure during the investigation period.

• Number needed to test (NNT) to identify one new CLHIV was calculated as the number tested over the number positive overall and by testing modality.
Implementation Interventions – Sept 2020 to Dec 2021

• **89 FASTER supported facilities** were included in this intervention.

• The screening tool was **administered** by Clinical Officers, Nurses, Doctors, Counselors and triage staff linkage facilitators.

• **Staff trained** on the administration of the tool and data collection. Ongoing site mentorship.

• Health facilities had **assigned staff** to supervise and give regular updates on use of the tool.

• HIV testing was **decentralized** from the Laboratory to other entry points to reduce loss points and increasing screening coverage

• HIV screening integrated in client flow increased acceptability

• **Privacy** enhanced

• District and facility leadership involved in the roll-out of the screening, ensuring ownership.

• The **National task team led by MoH** reviewed progress and oversaw coordination meetings.
Uganda identified more CLHIV in 2021 (vs. 2019) and decreased HIV testing by 12.7%, targeting HIV testing services to children with the highest risk

Across all PEPFAR-supported sites in Uganda:

- Pediatric HIV testing declined 12.7% between pre- and post-HRAT periods (259,042 vs. 226,236)
- Pediatric HIV diagnoses increased 1.8% (4,682 vs. 4,764)
- NNT declined (55 vs. 47)

Source: kasmauski
Uganda targeting HIV testing services to children with the highest risk in OPD settings, increasing diagnoses by 46.9% in outpatient settings

Outpatient department (OPD) settings:
- Pediatric HIV testing increased 9.3% between pre- and post-HRAT periods (77,154 vs. 84,299)
- HIV diagnoses increased 46.9% (1,437 vs. 2,111)
- NNT declined (54 vs. 40)

Photo by Georgina Goodwin for CRS
Uganda scaled up pediatric index testing services to promote an optimized mix of pediatric HIV testing strategies

**Index testing:**
- Pediatric HIV testing increased **89.6%** between pre- and post-HRAT periods (38,943 vs. 73,817)
- HIV diagnoses increased **41.6%** (1,126 vs. 1,594)
- NNT increased (35 vs. 46)

**Pre and Post-HRAT, Index Modalities, Children (1-14 years), Uganda**

![Chart showing increased pediatric testing and positive diagnoses](https://via.placeholder.com/150)

Photo by Sam Phelps/CRS
Lessons Learned

- Regular **support supervision/mentorship** of health workers on use of the tools improved appropriate use and documentation in HMIS tools.

- **Assigning staff** trained on use of the tool to conduct screening/oversee screening at health facilities improved routine use and documentation.

- **Regular review** of HIV risk screening data along the cascade and addressing identified gaps using QI approaches resulted in more C/ALHIV identified.

- **Pediatric HIV testing effectiveness** (i.e. identified 46.9% more children in OPD) and **efficiency** (increasing testing yield and decreasing NNT to identify one new CLHIV) **improved in OPD settings** during the use of the validated HIV screening tool.
Conclusions

• Uganda increased pediatric OPD testing and case identification during the COVID-19 pandemic, rolling out a national validated pediatric HRAT

• Validated HRATs and index testing can increase pediatric HIV testing and case identification among children with the highest risk, especially in high-volume, low HIV prevalence settings.

• The validated risk-based screening tool resulted in a significant reduction of numbers needed to test (NNT), making OPD testing (NNT 40) slightly more efficient than pediatric index testing (46).

Recommendations

• Programs can increase the use of validated screening tools to improve pediatric testing efficacy and efficiency, provide ongoing mentorship to health care providers on screening tool use, and conduct data reviews to monitor progress and address identified gaps.
National roll out of a validated pediatric HIV risk screening tool with a high sensitivity and expanded pediatric index testing services, identified more CLHIV in Uganda – even during the COVID-19 pandemic – with fewer tests overall.
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Source: Elie Gardner

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