#24 Index-Linked HIV Testing for Children and Adolescents in Health Facility and Community-Based Settings in Zimbabwe: Findings from the B-GAP Study

Chido Dziva Chikwari, Zimbabwe
Index-linked HIV testing for children and adolescents in health facility and community-based settings in Zimbabwe: Findings from the B-GAP study

Chido Dziva Chikwari
BSc, MSc, PhDc
Study Objectives

Index linked testing

HIV testing offered to children aged 2-18 years living in households with HIV positive individuals.

Objectives

1. To investigate the uptake and yield of index-linked testing for children
2. To investigate the uptake and factors associated with uptake of community-based vs facility-based HIV testing for children
Study Setting

Map of Zimbabwe showing HIV Prevalence by Province (Image source: ZIMPHIA Report 2016)
Study Procedures

- 9 clinics (6 urban, 3 rural)
- Index Patients Screened by Research Assistants
  - Offered HIV testing for Eligible Children
    - Facility Testing
    - Community testing by lay worker
    - Caregiver testing using OMT
No children in household: 5,164 (52.0%)

No consent: 820 (17.2%)

No children eligible for testing: 1,073 (27.2%)

No children tested in the household: 1,081 (37.7%)

Screened: 9,927

With children (2-18 years) in their households: 4,763 (48.0%)

With children in their household and consented to provide information about household (eligible individual): 3,943 (82.8%)

Consenting individual living with at least 1 eligible child (INDEX): 2,870 (72.8%)

Index with at least 1 eligible child tested: 1,789 (62.3%)

Index with at least 1 child test HIV positive: 39 (2.2%)

Median age: 39 (IQR 32-46) years
Female Sex: 78.7%
HIV status of children

- Positive registered in care: 490 (6.0%)
- Positive not registered in care: 11 (0.1%)
- Negative <6 months: 1,656 (20.2%)
- Negative > 6 months: 2,837 (34.5%)
- Not previously tested: 3,225 (39.2%)
- Testing refused by index: 736
  - Not my child: 304 (41.3%)
  - I just don’t want: 203 (27.6%)
  - I don’t have time for testing: 47 (6.4%)
  - Other: 182 (24.7%)
- Other: 1,688
  - Not found during tracing: 1,101 (65.2%)
  - No guardian consent: 161 (9.5%)
  - No child assent: 58 (3.4%)
  - Evidence of negative test < 6 months: 31 (1.8%)
  - Other reason: 318 (18.8%)
  - Unknown test outcomes: 19 (1.1%)

Number of Children living in household with eligible index (n=3,943): 8,218

Children eligible for HTC: 6,062 (73.8%)

Eligible Children whose index accepted testing: 5,326 (87.9%)

Children tested: 3,638 (68.3%)

Children tested HIV Positive: 39 (1.1%)

Median age: 8 (IQR 5-13) years
Female Sex: 51.4%

Median age: 11 (IQR 8-15) years
Female Sex: 71.8%
HIV Yield: 0.6%
### Factors Associated with Testing Uptake

<table>
<thead>
<tr>
<th>Index Characteristic</th>
<th>Patient with at least one eligible child</th>
<th>Patient with at least one eligible child tested</th>
<th>aOdds Ratio (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (ref: Male)</td>
<td>Female</td>
<td>2259 (78.8%)</td>
<td>1456 (64.5%)</td>
<td>1.56 (1.53-1.77)</td>
</tr>
<tr>
<td>Cost to travel to facility (ref: No cost)</td>
<td>Some cost (&gt;0 US$)</td>
<td>872 (30.4%)</td>
<td>485 (52.5%)</td>
<td>0.86 (0.83-0.88)</td>
</tr>
</tbody>
</table>

Figure: Index characteristics associated with HIV testing for at least 1 child in multivariable analysis
<table>
<thead>
<tr>
<th>Child Population</th>
<th>Eligible Children N=6062 (%)</th>
<th>Children tested n=3638 (%)</th>
<th>aOdds Ratio (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (ref: Male)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>3115 (51.4%)</td>
<td>1911 (61.3%)</td>
<td>1.10 (1.03-1.19)</td>
<td>0.0080</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age Category, Years (ref: 2-5 years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-9</td>
<td>1586 (26.2%)</td>
<td>956 (60.3%)</td>
<td>0.99 (0.89-1.09)</td>
<td>0.80</td>
</tr>
<tr>
<td>10-15</td>
<td>1981 (32.7%)</td>
<td>1174 (59.3%)</td>
<td>0.91 (0.83-1.00)</td>
<td>0.050</td>
</tr>
<tr>
<td>16-18</td>
<td>687 (11.3%)</td>
<td>342 (49.8%)</td>
<td>0.75 (0.66-0.85)</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Figure: Child characteristics associated with having an HIV testing in multivariable analysis adjusted for clustering by index
### Choice: HIV Testing Methods

<table>
<thead>
<tr>
<th>Location</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
<td>3539</td>
<td>66.5%</td>
</tr>
<tr>
<td>Community</td>
<td>1487</td>
<td>27.9%</td>
</tr>
<tr>
<td>Caregiver</td>
<td>300</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Selected test location at screening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested</td>
<td>1972 (57.4%)</td>
</tr>
<tr>
<td>Not Tested</td>
<td>1221 (34.5%)</td>
</tr>
<tr>
<td>Selected test location at screening</td>
<td>400 (26.9%)</td>
</tr>
</tbody>
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Choice: HIV Testing Methods

Selected test location at screening

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Selected test location at screening

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<td>2318 (63.7%)</td>
<td>1087 (29.9%)</td>
<td>233 (6.4%)</td>
</tr>
<tr>
<td>Not Tested</td>
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</tbody>
</table>
Conclusions

1. HIV yield of index-linked testing was low compared with findings in similar settings
2. Barriers to access testing such as transportation costs prevail and can be mitigated by community testing
3. Index-linked HIV testing can improve testing uptake among children, although strategies that improve uptake in older children are needed
4. Community based testing by lay workers or caregivers are feasible strategies that can be used to improve testing uptake for children
Acknowledgements

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B-GAP Study Participants

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