SCREENING TOOLS TO IDENTIFY CHILDREN
THE NEXT LEVEL OF CASE FINDING
2 NOVEMBER 2017

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RIGHT TO CARE PAEDIATRIC PROGRAMME
PAEDIATRIC AND ADOLESCENT SCALE-UP PROJECT
Why Case Finding in Healthcare Facilities should be a priority

• Treatment coverage for children living with HIV remains unacceptably low, with only three in ten eligible children receiving antiretroviral therapy by 2012\textsuperscript{1}

• Paediatric HIV prevalence is highest in
  • inpatient settings,
  • nutrition centres,
  • expanded programme on immunisation centres and
  • paediatric outpatient settings\textsuperscript{2}

• Although HIV testing in children at health facilities is recommended by WHO, it is not well implemented.\textsuperscript{2}

### Use of screening tools in other countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Paediatric HIV prevalence</th>
<th>Screening Tool Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zimbabwe</td>
<td>4.8%</td>
<td>• A simple clinical algorithm proposed – 4 questions</td>
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<tr>
<td></td>
<td></td>
<td>• Older children (6 – 16yrs)</td>
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<td></td>
<td></td>
<td>• Primary Health Facilities</td>
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<tr>
<td></td>
<td></td>
<td>• 1 or more “Yes” correctly identified <strong>80%</strong> of children with HIV infection^\text{1}</td>
</tr>
<tr>
<td>Malawi</td>
<td>2%</td>
<td>• Implemented a 6 question screening tool</td>
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<tr>
<td></td>
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<td>• Children (1 -15 years)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hospital Wards</td>
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<tr>
<td></td>
<td></td>
<td>• If a child screens <strong>negative</strong> (score=0) then there is a good chance they <strong>aren’t HIV-infected</strong>\textsuperscript{2}</td>
</tr>
<tr>
<td>South Africa</td>
<td>2.7% (5-14y)^\textsuperscript{3}</td>
<td>• This screening tool brings together the <strong>existing guidelines</strong> in a concise list of questions and formalises the screening process</td>
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<td>• To focus <strong>limited resources</strong> at <strong>targeted testing in children</strong> who are most at risk (&lt;15 years)</td>
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<tr>
<td></td>
<td></td>
<td>• Does not include factors involved in horizontal transmission e.g. sexually transmitted infections</td>
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<td>• It aims to have a <strong>high sensitivity</strong> but not specificity</td>
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<tr>
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<td>• The goal is to ensure that no HIV-infected child leaves the facility untested</td>
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</tbody>
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1. Ferrand RA et al, 2011, TMIH  
Screening Tool

- Designed by the Right to Care Paediatric Programme
- Rolled out by the Johannesburg Health District management in April 2017
- Focus on children of 5 – 14 years old (beyond IMCI)
- Only administered by healthcare providers qualified to provide HTS to children
- Sensitive nature around of questions
- Completed form to remain in child’s file
- TB screening on the back
Screening Tool for identifying children and families at risk of living with HIV

**SCREENING QUESTIONS**

If there is a single "yes" the child needs HIV testing
(When the need for testing is identified it is not necessary to continue with the screening process)

1. Is the parent(s) or sibling(s) of the child HIV positive?*
2. Has parent(s) or sibling(s) of the child died?
3. Has the child been abandoned?
4. Has the child been diagnosed with TB?
5. Has the child had poor health in the last 3 months?
6. Has the child been admitted to hospital?
7. Is there low weight/poor weight gain?
8. Is the child stunted or short for age?
9. Has the child ever had an ear discharge?
10. Does the child have recurring skin problems?

*NRefer parent for testing if status unknown/negative

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Screening questions based on:
Procedure for Screening Package

Child presents to a facility

**Screening Tool** used to identify high risk of HIV infection

Identified high risk children are offered PICT

Should child test HIV positive

Complete **index patient tracing tool**

Index tracing

Data captured on **Monitoring Tool**

**EPI, IMCI, Acute**

**Lay counsellor / Nurse**

**Exclusion criteria:**
- Children who are known to be HIV positive
- Children presenting without a caregiver
- Children who had a documented HIV test in the last 6 months
- Those who are very ill and need immediate care or transfer

Lists other children in the home at risk of being HIV-infected
Results: 1 April – 28 September 2017

- Known HIV Positive, 22 (4%)
- HIV negative in the last 6 months, 79 (13%)
- Unknown status, 503 (83%)

Reasons for not testing:
1) Caregiver does not want to know the child’s status – 35
2) Primary caregiver not present - 21
3) Other - 69

- Positive screening question, 388 (77%)
- No positive screening question, 87 (17%)
- Screening could not be completed, 28 (6%)

- Number tested, 263 (61%)
- Number not tested, 165 (39%)
Testing per age group

Screening tool yield 5-14y = 5%
Expected HIV prevalence 5-14y in SA = 2.7%
Specificity

• Limited data

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive screening question</td>
<td>388</td>
</tr>
<tr>
<td>No positive screening question</td>
<td>87</td>
</tr>
<tr>
<td>Screening could not be completed</td>
<td>28</td>
</tr>
<tr>
<td>ALL tested negative</td>
<td></td>
</tr>
<tr>
<td>18 were tested</td>
<td></td>
</tr>
<tr>
<td>20 were tested</td>
<td></td>
</tr>
<tr>
<td>HIV Negative in the last 6 months</td>
<td>79</td>
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<tr>
<td>Known HIV Positive</td>
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<td>Unknown status</td>
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</tbody>
</table>
Conclusions

• The Screening Tool improves case finding in children with a yield of 5% (compared to childhood HIV prevalence of 2.7%)

<table>
<thead>
<tr>
<th>Country of implementation</th>
<th>Number of questions</th>
<th>Number screened</th>
<th>Number needed to screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>10</td>
<td>604</td>
<td>36</td>
</tr>
<tr>
<td>Malawi¹</td>
<td>6</td>
<td>1815</td>
<td>67</td>
</tr>
<tr>
<td>Zimbabwe²</td>
<td>4</td>
<td>3488</td>
<td>42</td>
</tr>
</tbody>
</table>

• It is effective in identifying HIV-infected children in the targeted age group (5-14y) – but can be used wider

• This screening tool needs further validation to ensure no children are missed – performed in a setting with universal testing

2. Ferrand RA et al, 2011, TMIH
Important points

1. Though there are existing guidelines, it is beneficial to bring them together a concise list of questions to assist the HCW and formalise the process in a documented framework.

2. Screening tools assist HCW to conserve time and resources by directing testing at the high risk children.

3. Screening Tools must be evidence-based and preferably be validated in a setting with universal testing.
Acknowledgements

• Our funders USAID and PEPFAR
• Dr Sanlie Untiedt - Tool design, data collection and collation
• PASP team – For implementing and monitoring the use of the tool
• Right to Care Paediatric Programme under Dr Leon Levin
• Dr Alan Schooley - Malawi
• Dr Rashida Ferrand - Zimbabwe

THANK YOU