Toward the first 90: Identifying and testing younger populations for HIV at community outreach events in Kenya

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Background

- Low HIV status awareness among children and adolescents
- 12,940 new HIV infections among children
- Rising adolescent AIDS-related deaths in Kenya
- Delayed HIV identification associated with poor health outcomes

Cause for Concern

- Fewer males than females tested overall (IRR: 0.85, 95% CI: 0.78, 0.93, p<0.01)
- Adolescents were less likely to be tested compared to children (IRR: 0.46, 95% CI: 0.34, 0.62, p<0.01)
- The decrease in males testing from the children age group to the adolescent age group was smaller than in females (IRR: 1.13, 95% CI: 1.02, 1.25, p=0.02)
- There was no significant difference in age and gender among those testing positive

Methods

Context

- Family AIDS Care and Education Services (FACES) is a collaborative KEMRI and UCSF comprehensive HIV prevention, care, and treatment program
- FACES partners with the Ministry of Health (MOH) for health service delivery and capacity building
- 12 year of experience supporting health facilities across the Nyanza region of western Kenya

Location and Approach

- Conducted in Homa Bay, Migori, and Kisumu counties in Kenya
- Catchment areas surrounding 148 health facilities
- 492 Targeted Community Outreach Events carried out
  - July – December 2015
  - HIV testing and identification
  - Counselling and education

Data and Analysis

- REDCap database
  - Aggregated HIV testing (number tested)
  - Yield (number identified HIV positive)
  - Gender among eligible children (age <15) and adolescents (age 15-19)
- Analysis
  - Negative binomial models used to assess age and gender differences in HIV testing and yield and generate estimated means

Results

Figure 1: TCOE frequencies and proportions by age and gender: testing and yield

- 14,603 individuals tested at TCOEs
- Children, age <15: 67% (n=9788)
- Adolescents, age 15-19: 33% (n=4815)

- Female
  - 54% (n=5291)
  - HIV positive 0.2% (N=10)
- Male
  - 46% (n=4497)
  - HIV positive 0.2% (N=8)

- Female
  - 51% (n=2457)
  - HIV positive 0.5% (N=13)
- Male
  - 49% (n=2358)
  - HIV positive 0.2% (N=4)

Figure 1 provides frequencies and proportions of testing and yield by age and gender

- Comparisons by age and gender showed that at TCOEs (Figure 2):
  - Adolescents were less likely to be tested compared to children (IRR: 0.46, 95% CI: 0.34, 0.62, p<0.01)
  - Fewer males than females tested overall (IRR: 0.85; 95% CI: 0.78, 0.93; p<0.01)
  - The decrease in males testing from the children age group to the adolescent age group was smaller than in females (IRR: 1.13, 95% CI: 1.02, 1.25, p=0.02)
  - There was no significant difference in age and gender among those testing positive

Conclusion

- Targeted Community Outreach Events reached twice as many children as adolescents for HIV testing and identification and female HIV testing declined in adolescence
- The Targeted Community Outreach Event approach appears useful in reaching children, however a better understanding of what type of community approaches would draw adolescents, particularly females, is needed

Acknowledgement

We would like to thank UCSF, KEMRI, FACES, the Kenyan MOH, our staff, and above all the clients and families served.

We greatly appreciate the Children’s Investment Fund Foundation’s (CIFF) commitment to reach and serve children and adolescents in need of HIV services and their support through the Accelerating Children’s HIV/AIDS Treatment (ACT) Initiative, a public-private partnership between CIFF and the United States President’s Emergency Plan for AIDS Relief (PEPFAR).

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Background

- Despite decreasing new HIV infections, pediatric HIV remains substantial
  - 150,000 annual new HIV infections globally (<15 years)
  - 1.8 million children living with HIV (<15 years)
  - < 30% of children tested in Nyanza region of Kenya
  - HIV testing - gateway to achieving 90-90-90

What was ACT?

Accelerating Children’s HIV/AIDS Treatment (ACT)

ACT is a public private partnership between PEPFAR and CIFF

Strategic response to treatment gap for children

Initiate 300,000 with HIV on treatment in 9 priority counties in 2 years

Location and Approach

Examine whether activities under the Accelerating Children’s HIV/AIDS Treatment (ACT) initiative increased testing and identification of children with HIV

Methods

- Family AIDS Care & Education Services (FACES)
  - KEMRI & UCSF collaboration
  - Comprehensive HIV prevention, care, and treatment program
  - 144 health facilities supported
  - Migori, Homa Bay, and Kisumu counties
  - Nyanza region of Kenya
- Evaluation time frame
  - October 2015 – September 2016

Effect of Specific Interventions on Identification of HIV Testing

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Intervention</th>
<th>IRR, 95%CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants &lt;12 months</td>
<td>Family Information Table</td>
<td>2.89 (1.53, 5.49)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Children 12 months to 10 years</td>
<td>FIT chart audits</td>
<td>2.15 (1.36, 3.40)</td>
<td>&lt;0.001</td>
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<tr>
<td>Adolescents 10 to 14 years</td>
<td>HTC space improvements</td>
<td>1.45 (1.09, 1.93)</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Effect of Specific Interventions on Identification

<table>
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<th>Intervention</th>
<th>IRR, 95%CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants &lt;12 months</td>
<td>Family Information Table</td>
<td>8.71 (4.45, 52.4)</td>
<td>0.02</td>
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</tbody>
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Conclusion and Recommendation

- Family testing works
  - Optimize the family unit to increase testing reach and care cascade entry
  - Don’t let the untested slip away, track closely and conduct chart audits for follow up
  - Consider structural improvements to facilitate testing, especially among adolescents
  - Try multi-faceted approaches to test children and adolescents

Acknowledgement

We would like to thank UCSF, CIFF, KEMRI, FACES, the Kenyan MOH, our staff, and above all the clients and families served.

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References


Location and Approach

- Objective

Health Facilities

- Characteristics
  - 85% rural
  - 8% peri-urban
  - 6% urban
- Health dispensaries
  - 66%
  - 26% comprehensive outpatient
- Sub county hospitals and county referral hospitals
  - 8%

Intervention Steps for Pediatric Testing

- Family testing focus:
  - Family Information Table (FIT)
  - FIT chart audits
- Additional HIV counselors
  - Create HTC space
- Community outreach testing
  - HIV - exposed infant text messages

Analysis

- Intervention and control sites compared
- Negative binomial generalized estimating equations
- Adjusted for repeated measures, geographic location, health facility tier, and test kit stock outs

HIV Testing/Identification of HIV Positives

<table>
<thead>
<tr>
<th>Age Group</th>
<th>October 2015</th>
<th>September 2016</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18 months</td>
<td>2.8</td>
<td>7.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>18 months to 9 years</td>
<td>48.8</td>
<td>142.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>10-14 years</td>
<td>30.1</td>
<td>131.3</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Results

- Mean number tested per facility per month
  - <18 months: 2.8 (7.2)
  - 18 months to 9 years: 48.8 (142.0)
  - 10-14 years: 30.1 (131.3)

- Mean number identified HIV positive per facility per month
  - <18 months: 0.26 (0.27)
  - 18 months to 9 years: 0.34 (0.63)
  - 10-14 years: 0.17 (0.26)