Index case contact testing to improve HIV case identification in the community settings of Ethiopia

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Background
Community-based index case testing (ICT) is an innovative and person-centered approach to increase HIV testing yield for epidemic control. This abstract summarizes the HIV testing yield in a Community HIV care and treatment (CHCT) activity in Ethiopia.

Description
Local partner organizations have been implementing the PEPFAR/USAID-funded CHCT activity. They deploy community engagement facilitators (CEFs) who are health professionals to provide HIV testing services. CEFs received index case line lists from health facilities or community platforms and locate, counsel, and elicit their sexual contacts or biological children. Index contacts who accepted the offer were tested at the community or referred to the health facility. The community ICT data from October 2020 to September 2022 were analyzed. The testing protocol was the same for community and facility testing.

The yields between community- and health facility-based ICT services were compared using HIV program data from seven high burden regions. The CommCare application collected individual client level data. Excel and STATA software version-13 were used for data analysis.

Result
Between April 2019 to September 2022, a total of 120,256 index case contacts were tested for HIV, of whom 53% were females. The majority, 72% were tested at the community and 28% were tested at the health facility.

Overall, 7,475 new HIV cases were identified with 6.2% testing yield (95% CI: 6.09 to 6.3). The yield was higher among females (7.4%) than in males (5.3%) and was 19.7% in 50+ age groups.

Majority of new cases 6,059 (81%) were identified at the community level, and the yield was 7% (95% CI: 6.9 to 7.1) for the community-based testing compared to 4.2% (95% CI: 4.01 to 4.50) for the facility level. The testing yield was 10.1% in Gambella region, 6.4% in Oromia and Amhara regions, 6.1% in SNNP, and 5.3% in Addis Ababa. Almost all (97.7%) of the newly identified positives were linked to care and treatment services.

Table 1: Summary of USAID CHCT activity ICT data for the period from April 2019 to September 2022.

<table>
<thead>
<tr>
<th>Ser. No.</th>
<th>Testing setting</th>
<th># Tested</th>
<th># identified HIV +yes</th>
<th>Testing yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Community</td>
<td>86,890</td>
<td>6,059</td>
<td>7% (95% CI: 6.9 to 7.1)</td>
</tr>
<tr>
<td>2.</td>
<td>Health Facility</td>
<td>33,360</td>
<td>1,416</td>
<td>4.2% (95% CI: 4.01 to 4.50)</td>
</tr>
<tr>
<td>3.</td>
<td>Overall testing</td>
<td>120,256</td>
<td>7,475</td>
<td>6.2% (95% CI: 6.09 to 6.3)</td>
</tr>
</tbody>
</table>

Conclusions
Community based ICT showed better testing yield, and increased access to care and treatment in older age groups. Therefore, we recommend wider implementation of the community ICT model to enhance the HIV epidemic control in Ethiopia and other similar African settings.