Comparison of different models for Active TB Case Finding in Zimbabwe

Authors: S. Gudukeya; K. Hatzold; L. Norman; S. Scholten; M. Ngwenya

BACKGROUND

- Zimbabwe is 17th among the 22 high burden TB countries.
- HIV epidemic is the single most significant contributing factor to the TB epidemic; 70% of TB cases are co-infected with HIV. (WHO 2013)
- Low TB Detection rate: 46% (all forms) against target of 70%. (WHO 2013)
- PSI operates a network of 17 centres and 23 mobile teams offering HIV testing and counselling (HTC) to 400,000 people annually.
- TB symptom screening is offered to all HTC clients and those with TB symptoms are referred for diagnostic and treatment to public sector TB clinics.
- Referral success rate is 50%, with 5% TB cases identified among those with TB symptoms.
- PSI integrated fluorescence smear microscopy and Xpert MTB/RIF in 4 of the 17 fixed HTC centers.

DESIGN/METHODS

- Between October 2011 and March 2013, Active Case Finding (ACF) was conducted using three different approaches:
  1. Screening of all clients visiting fixed HTC sites: All clients visiting the 4 HTC centers were screened for TB, regardless of HIV status and services sought.
  2. Community based TB screening through outreach in urban areas: Mobile teams conducted IPC sessions and collected samples from suspects identified in the general community.
  3. Screening of key populations accessing HTC services provided by mobile teams: Mobile teams provided HTC services to vulnerable and key population groups, such as sex workers and their clients, mobile population groups and mobile workers and offered routine TB screening.
- Two sputum samples were collected an hour apart from those with TB symptoms identified using all three approaches.
- All samples were screened for AFBs using LED Fluorescence microscopy, with Xpert MTB/RIF used for smear negative samples from HIV+ clients.
- The 3 methods of ACF were compared based on the number needed to screen and the number needed to test to identify one TB case.
- All identified cases were actively followed to ensure linkage to treatment in the public sector.
- An electronic SMS reminder and referrals tracking system was developed to improve referral of TB cases and those with suspected TB to TB treatment centers.

RESULTS

- A total of 242,239 individuals were screened for TB symptoms through the 3 ACF strategies, yielding 10,885 suspects with a productive cough.
- Laboratory diagnosis with LED Fluorescence microscopy and Xpert MTB/RIF yielded 754 pulmonary TB cases across ACF strategies.
- ACF through Community-based outreach teams and clients visiting HTC sites required 9 and 2 times more individuals to be screened respectively than in key populations to identify a single bacteriologically positive TB case.
- The number of those with TB symptoms needed to test to identify a single bacteriologically positive TB case was 9, 19, 39 for HTC site, Key Populations and Community Outreach respectively.

<table>
<thead>
<tr>
<th>ACF Strategy</th>
<th>Community</th>
<th>HTC Site</th>
<th>Key Populations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Screened</td>
<td>104,754</td>
<td>133,446</td>
<td>4,039</td>
</tr>
<tr>
<td>Total with TB Symptoms</td>
<td>4,587 (4%)</td>
<td>5,535 (4%)</td>
<td>763 (19%)</td>
</tr>
<tr>
<td>Total TB Cases*</td>
<td>118 (0.1%)</td>
<td>596 (0.4%)</td>
<td>40 (1%)</td>
</tr>
<tr>
<td># needed to screen</td>
<td>888</td>
<td>224</td>
<td>101</td>
</tr>
<tr>
<td># needed to test</td>
<td>39</td>
<td>9</td>
<td>19</td>
</tr>
</tbody>
</table>

*Test for differences in proportion p<0.001

CONCLUSIONS

- Routine TB screening offered to clients accessing HTC services with integrated TB laboratory services is more effective in targeting and identifying TB cases compared to broad community outreach.
- It is essential to target areas with populations at high risk of HIV and TB infection if community based active case finding is to be effective.

This intervention was done in partnership with KNCV for and on behalf of the Ministry of Health and Child Care of Zimbabwe.

The funding for this intervention was provided by TB Reach, USAID, UKAID

Contact: Stephano Gudukeya, sgudukeya@psi-zim.co.zw

For a copy of this poster go to www.psi.org