Identify the impact of standard operation procedures for TB case detection on case notification and treatment outcomes in Afghanistan, 2009–2012

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Introduction

- Afghanistan’s National TB Program (NTP) developed standard operation procedures (SOPs) for tuberculosis (TB) case detection and treatment in 2004.
- Until 2009, health workers had not been trained on the SOPs and the guidelines had not been disseminated to health facilities.

Intervention

- From 2009 - 2012, USAID’s Tuberculosis Control Assistance Program (TB CAP) and its follow-on, TB CARE I, provided technical and financial assistance to help the NTP roll out the SOPs in 13 provinces of Afghanistan by:
  - Updating, printing, and disseminating 2,000 copies of the SOPs to health facilities;
  - Conducting a training workshop to teach 3,072 frontline health workers to use the SOPs;
  - Providing on-the-job training to support 420 health workers in using the SOPs;
  - Establishing 36 centers where TB patients could receive directly observed treatment, short course (DOTS), as outlined in the SOPs;
  - Conducting regular supervision and monitoring visits to the DOTS centers to ensure staff were using the SOPs;
  - Providing feedback to staff on their performance in implementing the SOPs, and
  - Setting and reviewing quarterly performance improvement targets with implementing staff.

Intervention Assessment

- In 2013, TB CARE I and its implementer, Management Sciences for Health (MSH), worked with the NTP to assess the impact of SOP implementation on:
  - TB screening,
  - TB case notification, and
  - TB treatment outcomes.
- To do so, the partners reviewed and analyzed data that had been collected from 2009-2012 at TB facilities in 34 provinces.
  - 13 provinces where the SOPs had been implemented
  - 21 control provinces

Results

- In the 13 intervention provinces:
  - TB suspected cases identified increased by 95% (from 49,630 to 96,750);
  - Sputum smear positive TB case notiication improved by 9% (from 6,139 to 6,676);
  - Case notification for all forms of TB improved by 27% (from 12,454 to 15,825); and
  - TB treatment success rate improved by 7% (from 83% to 90%).
- In the 21 control provinces:
  - TB suspected cases identified increased by 85% (from 45,812 to 84,622);
  - 10% less than in the intervention provinces
  - Sputum smear positive TB case notiication improved by 3% (from 6,358 to 6,547);
  - 6% less than in the intervention provinces
  - Case notification for all form of TB declined by 2.7% (from 13,904 to 13,545); and
  - Compared to a 27% increase in the intervention provinces
  - TB treatment success rate improved by 3% (from 89% to 92%).
  - 4% less than in the intervention provinces

Conclusion

- SOP implementation contributed to improved suspect identification, case notification, and treatment success rates in the intervention provinces.
- SOPs should be implemented at all health facilities throughout Afghanistan's 34 provinces for improved national TB detection and treatment outcomes.
- Furthermore, SOPs for TB case detection and treatment should be developed and implemented in other countries with high burdens of TB.

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TB indicator improvements in provinces where SOPs were implemented compared to the control provinces where SOPs were not implemented, 2009–2012

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Intervention Health Facilities (13 provinces)</th>
<th>Control Health Facilities (21 provinces)</th>
<th>% Change Between Control &amp; Intervention Facilities*</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB suspected cases identified</td>
<td>49,630</td>
<td>85,000</td>
<td>99,272</td>
</tr>
<tr>
<td>TB sputum smear positive cases notified</td>
<td>6,139</td>
<td>6,565</td>
<td>7,051</td>
</tr>
<tr>
<td>TB cases notified, all forms</td>
<td>12,454</td>
<td>14,097</td>
<td>14,792</td>
</tr>
<tr>
<td>Treatment success rate</td>
<td>83%</td>
<td>88%</td>
<td>89%</td>
</tr>
</tbody>
</table>

* For all interventions, the percentage of change is statistically significant.