Monitoring top 10 indicators

Philippe Glaziou
September 2016
1. Introduction

2. The SDGs, End TB Strategy and a new era of global TB monitoring

3. TB disease burden  
   - Case fatality ratio

4. Diagnosis and treatment: TB, HIV-associated TB, drug-resistant TB
   - Treatment coverage
   - Treatment success
   - % of cases tested using rapid tests at time of diagnosis
   - DST coverage
   - Treatment coverage with new TB drugs
   - Documentation of HIV status among TB patients

5. TB prevention services
   - LTBI treatment coverage (PLHIV, children <5)
   - Contact investigation coverage

6. Universal health coverage, social protection and social determinants: TB perspective
   - % TB patients facing catastrophic total costs

7. Financing

8. Research and development
2016 round of global TB data collection, and additional guidance

1. WHO annual data collection captures 4 new indicators
   Includes guidance notes on sources of data

2. The Essentials includes guidance (p28-31) on how to measure each of the top-10 indicators at global and country levels
   - 5 indicators already being monitored
   - Cost surveys for assessment of % TB patients facing catastrophic costs
   - 4 new indicators: no change recommended for routine surveillance systems – if indicator not in case-based electronic reporting system, surveys suggested
## New indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>Rationale</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>% TB affected households that experience catastrophic costs due to TB (&gt;20% annual HH income)</td>
<td>0%</td>
<td>Marker of financial risk protection and social protection for TB-affected households</td>
<td>National survey</td>
</tr>
<tr>
<td>% new and relapse TB tested with WRD at time of diagnosis</td>
<td>≥90%</td>
<td>Accurate and early diagnosis</td>
<td>Surveillance or survey</td>
</tr>
<tr>
<td>LTBI treatment coverage</td>
<td>≥90%</td>
<td>prevention</td>
<td>Surveillance or survey</td>
</tr>
<tr>
<td>• HIV+ newly enrolled in HIV care</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• HH contact children &lt;5 yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact investigation coverage</td>
<td>≥90%</td>
<td>prevention</td>
<td>Surveillance or survey</td>
</tr>
<tr>
<td>Treatment coverage, new drugs</td>
<td>≥90%</td>
<td>innovation</td>
<td>Surveillance or survey</td>
</tr>
</tbody>
</table>
Data sources

- Electronic case-based TB notifications
- District or facility paper-based register
- Patient cards (data not in register)
- Medical records (data not in patient cards and not in register)
Countries reporting electronic case-based TB surveillance

Countries at this workshop
# Reporting new indicators

<table>
<thead>
<tr>
<th></th>
<th>4 WRD</th>
<th>5 LTBI Rx</th>
<th>6 Contact</th>
<th>8 New Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>??</td>
<td></td>
<td></td>
<td>??</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>??</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenya</td>
<td></td>
<td></td>
<td>??</td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>??</td>
<td></td>
<td></td>
<td>No Bdq</td>
</tr>
<tr>
<td>Mozambique</td>
<td>??</td>
<td></td>
<td></td>
<td>No Bdq</td>
</tr>
<tr>
<td>Nigeria</td>
<td>??</td>
<td></td>
<td></td>
<td>No Bdq</td>
</tr>
<tr>
<td>South Africa</td>
<td>??</td>
<td></td>
<td></td>
<td>??</td>
</tr>
<tr>
<td>Swaziland</td>
<td>??</td>
<td></td>
<td></td>
<td>??</td>
</tr>
<tr>
<td>UR Tanzania</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zimbabwe</td>
<td></td>
<td></td>
<td></td>
<td>No Bdq</td>
</tr>
</tbody>
</table>
Options for compiling data on new indicators

Paper-based

• Transition to electronic case-based
• Update patient cards, registers and quarterly reporting forms
• Avoid creating additional registers
• Retrospective survey of existing records/registers

Electronic case-based

• Add relevant variables to online TB forms
Survey of medical records

- Retrospective
- Sampling of facilities then TB patients (among cases notified one year before)
- Calculate sample size (http://samplesize.herokuapp.com/)
- Review facility-level records/registers for sampled patients
- Compile data for sampled patients, record missing data

^http://www.who.int/tb/advisory_bodies/impact_measurement_taskforce/meetings/tf6_backgroun
d_5a_patient_cost_surveys_protocol.pdf
## Sample size example

<table>
<thead>
<tr>
<th>Anticipated guess</th>
<th>Absolute precision d=5.0%</th>
<th>Absolute precision d=10.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cluster size 25 clusters</td>
<td>Cluster size 30 clusters</td>
</tr>
<tr>
<td>30.0%</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>40.0%</td>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>50.0%</td>
<td>31</td>
<td>26</td>
</tr>
</tbody>
</table>

http://samplesize.herokuapp.com/
Case report form example

Investigator name ___________ Date __/__/__
Investigator signature ______________

Facility ________________
Patient ID number (TB register) __________
Year of case notification __________
Number of household contacts __________
Number of HH contacts investigated __________
Example of key survey steps

• Consult with qualified statistician
  – sampling
  – analysis plan (adjusting for cluster sampling effect)
• Write protocol, enlist data manager
• Sample facilities and patient numbers
  – e.g. district X, facility Y, patients #5, 13, 21, 40, 55
• Inform relevant district coordinators
• Send docs, CRFs and sampling info to relevant district coordinators
• Receive, compile, review and analyse data