Prevalence survey update

Epi impact/surveillance assessments linked to programme reviews

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TBTEAM meeting, 14 June 2013
Overview

1. Prevalence survey update

2. Epi/impact assessments and TB surveillance assessments, linked to programme reviews

3. A country example: Indonesia
National TB prevalence surveys
Overview of progress

Most TA is funded through TBTEAM

Since 2009:
- 12 African countries
- 13 in Asian countries

Completed, followed "Lime book" (n=13)
Ongoing, following "Lime book" (n=4)
Preparing, will follow "Lime book" (n=10)
Repeat survey, following "Lime book" (n=3)
Not completed/not according to "Lime book" (n=5)
Overview of progress

Most TA is funded through TBTEAM

- Repeat survey done
- Repeat survey planned
- 1 survey done
- Survey ongoing
- Survey planned 2013 or 2014
Demonstrated impact

China
50% fall in cases 1990–2010

Per 100,000 population

Cambodia
45% fall in cases 2002-2011

World Health Organization
Prevalence estimates (≥15 years old)
Programmatic implications (1)

Prevalence:Notification ratio, sm+ cases

Rwanda 2012**
Ethiopia 2011
Thailand (non-BKK) 2012**
Cambodia 2002
Cambodia 2011
China 2010
PHP 2007
Myanmar 2009
Viet Nam 2007
Nigeria 2012**
Lao PDR 2011

**provisional results
Programmatic implications (2)

Proportion of Sm+ cases that met TB symptom screening criteria

**provisional results
Coming up…

- Analysis workshop with 6 countries, Geneva, September 2013
  - Gambia, Pakistan, Rwanda, Nigeria, Tanzania, Thailand

- Synthesis of results and lessons learned

- Data repository and Book

For more details: Prevalence survey progress update, April 2013

www.who.int/tb/advisory_bodies/impact_measurement_taskforce
Epidemiological and TB surveillance assessments linked to programme (or "mini") reviews
Evidence about trends in disease burden (impact) needs to be strengthened

1. Ensure adequate investments in **routine information systems** and, where needed, surveys
   - Improve ability to measure trends from notification and vital registration data

2. Link this effort to programme or "mini" reviews
   - Strengthen epi/impact analysis component of reviews
   - If prevalence survey being done, *time reviews when prevalence survey results are available*
   - Conduct systematic assessments of TB surveillance during or shortly in advance of programme reviews, *using WHO TB surveillance checklist*, and develop related M&E investment plan
   - Results and recommendations feed into programme strategy and GF (and other) investments
3. Priority countries identified

- TERG priorities: Cambodia, Côte d’Ivoire, DR Congo, Ethiopia, Kenya, Haiti, India, Malawi, Mozambique, Myanmar, Nigeria, Rwanda, South Africa, Tanzania, Uganda, Ukraine, Zambia, Zimbabwe

- Other high burden/impact: Bangladesh, China, Ghana, Indonesia, Pakistan, Philippines, Sudan

4. BUT: Epi/surveillance assessments becoming an essential component of the new funding model – thus relevant to all countries

- E.g. Viet Nam
1. TB surveillance assessments in 15 countries, using TB surveillance checklist, and related development of an "M&E investment plan"
   - As part of or in advance of programme or "mini" reviews wherever possible
   - Funding for M&E investment plan – via grant reprogramming if possible – critical role of FPMs
   - In addition, US$10 million fund for priority countries for HIV, TB, Malaria and cross-cutting investments in routine information systems and surveys can be drawn upon – TB M&E investment plans need to reach GF secretariat (WHO-HQ can facilitate)

2. Support to 15 programme or "mini" reviews, esp. to strengthen epi analysis component
TB surveillance checklist

- Completed with accompanying user guide and ready for roll-out January 2013
  - 10 standards to assess if notification and VR data provide direct measure of TB incidence and mortality
  - 3 supplementary standards: *HIV-related TB, drug-resistant TB and TB in children*
  - Benchmarks for each standard to allow assessment of whether standard is met or not
A country example: Indonesia
# Checklist of Standards and Benchmarks for TB Surveillance and Vital Registration Systems

<table>
<thead>
<tr>
<th>STANDARD</th>
<th>BENCHMARK(S)</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B1. TB SURVEILLANCE SYSTEM DATA QUALITY</strong></td>
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</table>
| B1.2 TB surveillance system is designed to capture a minimum set of variables for reported TB cases | Data are routinely collected for at least each of the following variables:  
- Age or age group  
- Sex  
- Year of registration  
- Bacteriological results  
- History of previous treatment  
- Anatomical site of disease  
- For case-based systems, a patient identifier (e.g. numeric ID) | ☐ Met  
☐ Partially met  
☐ Not met |

<table>
<thead>
<tr>
<th>RESULTS (DESCRIPTION)</th>
<th>CORRECTIVE ACTION(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Have you received TB drugs before, for at least 1 month”</td>
<td>Ensure the plan that already exists for the generation of unique ID’s is implemented</td>
</tr>
<tr>
<td>Patient identifier does not exist yet.</td>
<td>Consider using national ID# for tracking transfer patients across provinces and treatment episodes, checking duplicates and for linking patients in TB system with other systems (e.g. HIV)</td>
</tr>
<tr>
<td>Phase II of SITT will include a patient identifier. To be further discussed (e.g. province, district, health facilities code)</td>
<td></td>
</tr>
<tr>
<td>National ID cards are issued for everyone 17 years and above (EKTP-electronic ID cards being rolled out)</td>
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Process of implementation

- When
  - Introductory visit: 18 January 2013
  - Constant communication to ensure all material (data, guidelines, reports, forms) are available during implementation meeting
  - Checklist implementation: 4-8 February 2013
Process of implementation (cont.)

- **Who**
  - NTP staff, NIHRD, National Bureau of Statistics
  - Members from the Task Force on TB Impact Measurement (Babis, Norio, Matteo)

- **What**
  - Analysis of time series of available national and sub-national surveillance data
  - Desk review of national guidelines, strategic plans, reports, SOPs, data collection and reporting forms, electronic recording and reporting systems
  - Interview with NTP & other stakeholders
System Description

• Based on WHO-recommended paper-based system with quarterly reporting of cases:
  health facility -> 497 district-> 33 provinces -> national

• Transitioning to web- and case-based electronic recording and reporting system – Surveillance Integrated Tuberculosis Information (SITT) System
  – Data entry at district level (June 2013)
  – Data entry at facility level to follow
  – http://sitt.depkes.go.id

• TB mortality measured through vital registration data (ICD-10 in hospitals, verbal autopsy (VR) in community)
  – IMRSSP: pilot 2 sites in 2006, 4 sentinel sites 2007-8
  – Nationally representative sample registration system 2012-4
# Data Quality

<table>
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<tr>
<th>Standard</th>
<th>Main findings</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B1.1</strong> Case definitions consistent with WHO guidelines</td>
<td>Case definitions are consistent with WHO guidelines</td>
<td>MET</td>
</tr>
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</table>
| **B1.2** TB surveillance system designed to capture a minimum set of variables for reported TB cases | • All core variables are captured, except unique patient identifier  
• Phase II of SITT will include electronic ID card numbers (national rollout ongoing)                                                                                     | PARTIALLY MET|
| **B1.3** All scheduled periodic data submissions received and processed at the national level | • 4 x 483/497 (97%) of expected district-level quarterly reports were received and processed at national level in 2011  
• 14 districts (from 3 provinces) did not submit reports                                                                  | PARTIALLY MET|
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<tr>
<td><strong>B1.4</strong> Data in quarterly reports are accurate, complete, and internally consistent <em>(For paper-based systems only)</em></td>
<td>Data audit in nationally representative sample of health facilities not yet done</td>
<td><strong>NOT MET</strong></td>
</tr>
<tr>
<td><strong>B1.5</strong> Data in national database are accurate, complete, internally consistent, and free of duplicates <em>(For electronic case- or patient-based systems only)</em></td>
<td>SITT Phase II (case-based) will only go live in June 2013</td>
<td><strong>NOT APPLICABLE</strong></td>
</tr>
<tr>
<td><strong>B1.6</strong> TB surveillance data are externally consistent</td>
<td>The percentage of new, all forms, childhood (0-14 years) over total TB notifications in 2011 was 8.7%, within the acceptable range of (5%-15%) for low- and middle-income countries</td>
<td><strong>MET</strong></td>
</tr>
<tr>
<td><strong>B1.7</strong> Number of reported TB cases is internally consistent <em>(within country)</em></td>
<td>Not possible to assess trends in case notifications (excluding PPM contribution is not possible before 2012) and TB mortality (sample VR data not analyzed yet)</td>
<td><strong>NOT MET</strong></td>
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## Population Coverage and Vital Registration

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| **B2.1** All diagnosed cases of TB are reported | • TB reporting is NOT a legal requirement  
• No national study to measure the level of under-reporting has been done | NOT MET |
| **B2.2** Population has good access to health care | • Under-5 mortality rate is 32 per 1000 live births, higher than the 10 per 1000 recommended threshold  
• Out-of-pocket total health expenditure is 38%, higher than the 25% recommended threshold  
• Current expansion of health insurance coverage scheme is ongoing | NOT MET |
| **B3.1** Vital registration system has high national coverage and quality | • No national level vital registration system with standard coding of causes of death in place  
• Nationally representative sample registration system is being developed  
• IMRSSP sentinel data are available (2006-2011), not yet fully analyzed and widely disseminated | NOT MET |
# Special Populations

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| **C1** Surveillance data provide a direct measure of drug resistant TB in new cases | • No national drug resistance survey, but provincial level ones in Central and East Java  
• National survey protocol currently being developed  
• Optimal design for DR surveillance currently under discussion (e.g. sentinel) | NOT MET |
| **C2** Surveillance data provide a direct measure of the prevalence of HIV infection in TB cases | Coverage of HIV testing among TB patients is improving but still low. The target is for all TB cases to be tested for HIV in provinces that are in a generalised epidemic state | NOT MET |
| **C3** Surveillance data for children reported with TB are reliable and accurate  
*OR*  
all diagnosed childhood TB cases are reported | • Ratio of 0-4/5-14 notification rates is 1.8 for 2011  
• No nationwide level inventory study to measure the level of under-reporting in childhood TB | PARTIALLY MET |
## Findings: Overview

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<th>Population Coverage</th>
<th>Vital Registration</th>
<th>Special Populations</th>
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</table>
| Out of 7 standards  
• 2 met  
• 2 partially met  
• 2 not met  
• 1 not applicable | Out of 2 standards  
• 2 not met | Out of 1 standard  
• 1 not met | Out of 3 standards  
• 1 partially met  
• 2 not met |
3-4 Key Recommendations (short-term)

1. Strengthening data management and analytical capacity in NTP and NIHRD (e.g. courses, on-the-job training)

2. Technical assistance on the data cleaning and analysis of existing TB data (e.g. health surveys, VR)

3. Link up with WHO/GF to conduct the Service Availability and Readiness Assessment (SARA) of the health information system
   - Specifically the data quality TB module

4. Improve national surveillance of causes of death
   - Further analyze existing sample vital registration data and use in TB burden estimation
3-4 Key Recommendations (mid-term)

1. Improve national surveillance of causes of death
   1. Explore scaling up of routine sample vital registration system, including causes of death
   2. Move from project-based approach into a national system

2. Examine the conduct of a national inventory study to directly assess under-reporting of cases
   1. Measure under-reporting and, if possible, under-diagnosis
   2. Mapping of health providers, link with PPM expansion
   3. Address pediatric under-reporting

3. Encourage comprehensiveness of case reporting and detection by adopting a policy of mandatory notification of TB
Follow-up after implementation

- Findings fed into recommendations of the JEMM
  - Briefing with the Minister of Health Ibu Nafsiah Mboi

- Detailed report including section on M&E investment plan

- Continuous consultation between NTP, Global Fund, WHO CO & HQ
<table>
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<tr>
<th>Activity</th>
<th>Estimated Budget</th>
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<tr>
<td>Vital registration – maintaining and scaling up the SRS</td>
<td>Costs between USD $0.5-$1 per capita in the areas covered</td>
</tr>
<tr>
<td>Inventory study to measure the level of under-reporting</td>
<td>US$ 200,000</td>
</tr>
<tr>
<td>Capacity building for data management and statistical analysis – through attending courses and extra staffing at the central level</td>
<td>US$ 115,901</td>
</tr>
<tr>
<td>SARA tool and health facility data quality assessment</td>
<td>US$ 100,000</td>
</tr>
<tr>
<td>Assessment of the SITT Phase 2 in 2014</td>
<td>US$ 38,575</td>
</tr>
<tr>
<td>Implementing mandatory notification policy</td>
<td>US$ 99,518</td>
</tr>
<tr>
<td>Analysis of available mortality data</td>
<td>US$ 10,000</td>
</tr>
<tr>
<td>Drug resistance survey or sentinel surveillance</td>
<td>US$ 278,806</td>
</tr>
<tr>
<td>Nationally representative survey of HIV prevalence among TB patients</td>
<td>US$ 56,548 (only sentinel surveillance in 6 sites (concentrated and generalized area))</td>
</tr>
<tr>
<td>Corrective actions required to compile all the reports from Papua</td>
<td>US$ 16,000</td>
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</table>
For more details

www.who.int/tb/advisory_bodies/impact_measurement_taskforce

Esp. background documents from Accra workshop, 29 April-3 May

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