TB Disease Prevalence Survey - Progress Report July 2011

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Highlights in last 12 months (1)

• Myanmar (Dec 2010) and China (March 2011) disseminate the survey results;
• Ethiopia launched (Oct 2010) and completed (June 2011) the 1\textsuperscript{st} survey field operation
• Laos, Pakistan and Cambodia launched survey in 2010, completing most by today
• Lime book (2\textsuperscript{nd} edition of WHO survey handbook) has been published
Highlights in last 12 months (2)

- TFG meeting with African countries in Addis Ababa (5-8 Oct 2010)
- Prevalence Survey Seminar in Berlin (12 Nov 2010)
- Training WS for young consultants in Cambodia (24 Feb-4 Mar 2011)
- Joint Training WS on Epidemiology for consultants in Geneva (24-27 May 2011)
- Training Workshop for National Survey Coordinators in Cambodia (28 July-4 August 2011)
Highlights in last 12 months (3)

• Regular Technical Assistance/Consultation provided to 22 Global Focus Countries except a few pending countries in Africa
• Country-Country collaboration expanded i.e. Cambodia - Ethiopia, Laos; Ethiopia – Ghana, Nigeria +
• Consultation or assessment made for other countries such as Laos, Gambia, Mongolia, Nepal, and Sudan
• TF Website regularly updated with education materials
• Coordination with GF
See 3 strategic areas of work of the Task Force once more

- **Strengthening surveillance** - use of routine surveillance data to measure incidence, prevalence and mortality
  - all countries
  - ultimate goal to measure cases and deaths directly from notification and vital registration data

- **Prevalence of TB disease surveys** in ≥ 21 global focus countries

- **Periodic review and revision of methods** used to translate data from surveillance systems and surveys into estimates of disease burden
TB Prevalence survey

- To know TB burden in a country
- To measure the change/impact

(new)
- To know limitation of the current programme to improve the programme/ to revise the strategy
Countries where surveys are recommended
(Approved by Task Force Meeting, Dec 2007)

Note: Ethiopia was added to the global focus countries in 2009
Global Task Force

- Set a global guidance for standardization
- Assist Countries
  - Feasibility assessment
  - Preparation & in-country sensitization
  - Workshops: Study design & Budgeting
  - Protocol Review
  - Coordination of Technical Assistance
  - Survey Operation Review
  - Analysis
  - Certificate the study
- Training (Survey managers, Consultants)
- Provide data for Re-estimation of TB Burden
- Global Advocacy & Fund raising
Global progress with nationwide prevalence surveys of TB disease

Number of surveys

Asia
Africa
Non Global Focus country


21 Global Focus countries selected by Task Force

0 2 4 6 8

Global progress with nationwide prevalence surveys of TB disease

Requirements (1) Chapter 2

- Strong commitment and leadership from the NTP/Ministry of Health and a core group of professionals;
- Identification of a suitable institute, organization or agency to lead and manage survey implementation;
- Adequate laboratory capacity;
- Pre-Approval of survey methods for chest X-ray screening by the National Radiation Authority;
Requirements (2)

- Reliable and timely support for procurement and logistics;
- Funding;
- Field security;
- Community participation;
- Clearance of survey protocols by national and international review boards; and
- The availability of external support and technical assistance.
Current status of survey implementation
Good Progress in Asia

- China: 1990-2000-2010 **Completed**
- Cambodia: 2002-2011 **Ongoing**
- Viet Nam: 2007-(2013/14)
- Indonesia: 2004- (2013/14)
- Thailand: 1991- (2006)-2011 **From September**
- Bangladesh: 2008- (by 2015)
- Pakistan: 1987- 2011 **Ongoing**

- Malaysia: 2003
- Laos: 2010/11 **Ongoing**
Ethiopia Launched National TB Prevalence Survey

Finally Africa began to move
Global progress with nationwide prevalence surveys of TB disease

21 Global Focus countries selected by Task Force

- Myanmar
- Bangladesh
- Viet Nam
- Philippines
- Pakistan
- Tanzania
- Thailand
- Lao PDR
- Malawi
- Uganda
- Nepal
- Ethiopia
- Rwanda
- The Gambia
- Mozambique
- China
- Nigeria
- South Africa
- Indonesia

Number of surveys

Asia
Africa
Non Global Focus country

Countries:
Cambodia, Malaysia, Indonesia, Eritrea, Thailand, Philippines, Bangladesh, Myanmar, Cambodia, Ghana, Kenya, Zambia, Pakistan, Tanzania, Thailand, Lao PDR, Malawi, Uganda, Nepal, Ethiopia, Rwanda, The Gambia, Mozambique, China, Nigeria, South Africa, Indonesia

Years:
Task Force
Major recommendations

Major collaborative effort January–November 2010

46 authors

Multiple agencies/universities/research institutes and NTPs

Funding from USAID, DGIS, Japan

You got first hard copies today
Recommended screening strategy

Do smear and culture at least for with TB symptoms and/or abnormal chest X-ray
Quality indicators

• Study coverage (exclusion due to insecurity…)
• Eligibility
• Participation (screening)
• Eligible for further examinations (lab)
• Sputum collection
• Examination process (recovery, contamination …)
• Data entry (missing values; should be corrected)
We have been shouting to tell Complexity of data management
A carefully designed survey can tell you lots more than TB prevalence

- Changes in TB burden and re-estimation of burden
- Performance of strategies for screening of TB suspects
- Health-seeking behaviour of TB patients and individuals reporting chest symptoms
- Where and why are cases missed by the NTP e.g. access to care, role of private sector
- Risk factors
Limitations

- TB incidence can't be estimated directly from prevalence
- Hard to estimate the TB burden in Children and the burden of Extrapulmonary TB by a community survey
- Sub-national estimations more than a few strata require a huge sample size
- A survey is costly and labour intensive
- Under/Over estimation due to limitations in screening and diagnostic tools
Why Chest Radiogram and Culture are important
Recent National Surveys with CXR screening and culture with Notification Data by routine surveillance

<table>
<thead>
<tr>
<th></th>
<th>Notification rate</th>
<th>Prevalence</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>S+ New</td>
<td>All TB</td>
</tr>
<tr>
<td>Cambodia</td>
<td>125</td>
<td>178</td>
<td>269</td>
<td>898</td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>98</td>
<td>160</td>
<td>200</td>
<td>490</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viet Nam</td>
<td>62</td>
<td>111</td>
<td>145</td>
<td>224</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myanmar</td>
<td>83</td>
<td>257</td>
<td>170</td>
<td>434</td>
</tr>
<tr>
<td>2009</td>
<td></td>
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Conservative point estimates assuming that there is no bacteriologically+ case in children
Strategies for screening TB suspects

40-60% of confirmed cases in surveys do not have chronic cough

<table>
<thead>
<tr>
<th></th>
<th>No Chronic Cough</th>
<th>No symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S+</td>
<td>Bac +</td>
</tr>
<tr>
<td>Cambodia</td>
<td>38%</td>
<td>61%</td>
</tr>
<tr>
<td>Zambia</td>
<td>57%</td>
<td>10%</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>40%</td>
<td>45%</td>
</tr>
</tbody>
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# Myanmar National Survey 2009/10

<table>
<thead>
<tr>
<th></th>
<th>Among Participants</th>
<th>Proportion in SS+ subjects</th>
<th>Proportion in Bac +</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic cough (2w)</td>
<td>4%</td>
<td>41%</td>
<td>25%</td>
</tr>
<tr>
<td>Cough any duration</td>
<td>24%</td>
<td>72%</td>
<td>51%</td>
</tr>
<tr>
<td>Any symptom</td>
<td>37%</td>
<td>79%</td>
<td>62%</td>
</tr>
<tr>
<td>CXR TB susp</td>
<td>5%</td>
<td>79%</td>
<td>73%</td>
</tr>
<tr>
<td>CXR any abnormality in lung</td>
<td>12%</td>
<td>95%</td>
<td>92%</td>
</tr>
</tbody>
</table>
Contributions to Global TB Control Strategies

• Serious discussions and analysis began to review if DOTS and/or on-going TB control strategies in countries really has significant impact on TB incidence.

• Findings of prevalence surveys will be utilized as strong evidences to develop future strategies.

• Quality study and proper analysis are essential.