TB/HIV in the South-East Asia Region

From Mekong to Bali: The scale up of TB/HIV collaborative activities in the Asia Pacific

August 8-9, 2009  Bali, Indonesia
Situation
The countries of SEAR account for over a third of the global burden of TB; >90% in five high TB burden countries.
Five countries account for the majority of PLHIV in the Region: 2008

India: 2,300,000
Myanmar: 242,000
Thailand: 610,000
Nepal: 70,000
Indonesia: 293,000

Four of these countries are among the countries with the highest burden of TB.
HIV prevalence stable/decreasing in most countries...

but increasing in others.

Indonesia has the fastest growing HIV epidemic in Asia
## HIV seroprevalence among TB cases

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimated HIV seroprevalence among incident TB cases</th>
<th>Country</th>
<th>Estimated HIV seroprevalence among incident TB cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>&lt; 0.05 %</td>
<td>Myanmar</td>
<td>10.9%</td>
</tr>
<tr>
<td>Bhutan</td>
<td>Not available</td>
<td>Nepal</td>
<td>2.4%</td>
</tr>
<tr>
<td>DPR Korea</td>
<td>Not applicable</td>
<td>Sri Lanka</td>
<td>0.2%</td>
</tr>
<tr>
<td>India</td>
<td>~4-5%</td>
<td>Thailand</td>
<td>13-24%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2%-15% (Papua)</td>
<td>Timor-Leste</td>
<td>&lt;100 cases of HIV reported/yr</td>
</tr>
<tr>
<td>Maldives</td>
<td>&lt;5 cases of HIV reported/yr</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: *Tuberculosis Control in the South-East Asia Region*, WHO/SEARO, New Delhi, March 2009
PLHIV: Categorization by Districts: India

- Districts with HIV prevalence among ANC attendees >1% at any site in past 3 years
- Districts with HIV prevalence among ANC <1% and > 5% among HRGs in past 3 years
- Districts with HIV prevalence among ANC <1% and < 5% among HRGs in past 3 years

Source: National AIDS Control Organization, MoH and FW, India
Estimates for PLHIV by district: Indonesia

Average age by sex of TB/HIV patients in Indonesia by HIV prevalence in provinces

Average age, all age groups, male and female, by HIV province group, INDONESIA, 2006

Source: National TB Control Programme, MoH, Indonesia, 2006
Progress
WHO Policy on TB/HIV

A. Establish the mechanisms for collaboration
   A.1. Set up a coordinating body for TB/HIV activities effective at all levels
   A.2. Conduct surveillance of HIV prevalence among tuberculosis patients
   A.3. Carry out joint TB/HIV planning
   A.4. Conduct monitoring and evaluation

B. Decrease the burden of tuberculosis in people living with HIV/AIDS
   B.1. Establish intensified tuberculosis case-finding
   B.2. Introduce isoniazid preventive therapy
   B.3. Ensure tuberculosis infection control in health care and congregate settings

C. Decrease the burden of HIV in tuberculosis patients
   C.1. Provide HIV testing and counselling
   C.2. Introduce HIV prevention methods
   C.3. Introduce cotrimoxazole preventive therapy
   C.4. Ensure HIV/AIDS care and support
   C.5. Introduce antiretroviral therapy

3 I’s
+ the “4th I”
“Integrated case management”

D. Systems strengthening
   • Establish regular interaction
   • Resource mobilization
   • Capacity building
   • Involve communities, NGOs
Progress at Country Level

National Coordinating committees: 10/11 countries

Planning and Implementation:

Full package of TB/HIV interventions (barring IPT) now available to over a third of the population in the SEA Region

- Integrated nation-wide implementation: Thailand, India
  - “Intensified” package of interventions available to 400 million population in 11 states of India
- Scaling up in 3 countries: Indonesia, Myanmar and Nepal
- Case by case management: Maldives
- Preparations for collaborative interventions in 5 countries--Bangladesh, Bhutan, Sri Lanka, and Timor Leste
Surveillance, Monitoring and Evaluation

• HIV in TB patients
  – TB R and R formats include data on HIV among TB patients in 8 countries;
  – routine reporting in India, Myanmar, Thailand; others to follow

• TB in PLHIV
  – Much less reported data: better surveillance required in most settings

• Joint Monitoring and Evaluation
  – Needs to be systematically done in most settings
The 3 “I’s”
Intensified Case Finding
Intensified Case Finding – Screening for TB at ICTCs India, 2005-2008

> 8 fold increase in referrals

Source: Monthly reports from ICTCs collated and reported by respective State AIDS Control Societies
TB Cases Detected through ICF: India 2005–2008

Number of TB cases among ICTC referrals

Source: Monthly reports from ICTCs collated and reported by respective State AIDS Control Societies
Intensified TB finding among newly detected PLHIV in Thailand, 2006-8

![Graph showing TB findings among newly detected PLHIV in Thailand, 2006-2008.](image)

% newly detected PHAs

- 2006: 81%
- 2007: 89%
- 2008: 93%

**Target ≥ 90**

**TB screening**

**Known HIV positive TB Patients**

Source: Bureau of Tuberculosis Control, Dept of Disease Control, MopH Thailand, July 2009
And vice versa
TB patients Newly HIV Tested: India 2005-2008

Number of TB pts HIV tested: 29488, 59654, 91807, 125756
Number of detected HIV infected: 10426, 8785, 6411, 11870

Source: Monthly reports from ICTCs collated and reported by respective State AIDS Control Societies

Source: Bureau of Tuberculosis Control, Dept of Disease Control, MopH Thailand, July 2009
Case Management
TB-HIV patients receiving ART during TB treatment: Thailand

Source: Bureau of Tuberculosis Control, Dept of Disease Control, MopH Thailand, July 2009
TB-HIV patients receiving CPT during TB treatment; Thailand

Source: Bureau of Tuberculosis Control, Dept of Disease Control, MopH Thailand, July 2009
## CD4 counts among TB/HIV Patients: Thailand

<table>
<thead>
<tr>
<th>Cohort</th>
<th>No. HIV-Infected TB Patients</th>
<th>Died Before CD4 Test Performed</th>
<th>Had CD4 Test Performed</th>
<th>CD4 Count (cells / mm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 &amp; 3/2003</td>
<td>201</td>
<td>24% (48)</td>
<td>50% (101)</td>
<td>&lt;100 68% (69) 101-250 19% (19) &gt;250 13% (13)</td>
</tr>
<tr>
<td>2004</td>
<td>349</td>
<td>9.2% (32)</td>
<td>76% (266)</td>
<td>&lt;100 69% (182) 101-250 24% (65) &gt;250 7% (19)</td>
</tr>
<tr>
<td>2005</td>
<td>346</td>
<td>4% (14)</td>
<td>69% (237)</td>
<td>&lt;100 70% (165) 101-250 19% (45) &gt;250 11% (27)</td>
</tr>
<tr>
<td>2006</td>
<td>341</td>
<td>5% (17)</td>
<td>55% (187)</td>
<td>&lt;100 69% (129) 101-250 21% (40) &gt;250 10% (18)</td>
</tr>
<tr>
<td>2007</td>
<td>234</td>
<td>5% (12)</td>
<td>77% (181)</td>
<td>&lt;100 59% (106) 101-250 22% (40) &gt;250 19% (35)</td>
</tr>
</tbody>
</table>

*Source: ODPC 7, Ubon Rachatani, Thailand*
## Treatment outcomes: New smear positive TB patients: Thailand, 2007

<table>
<thead>
<tr>
<th></th>
<th>Success</th>
<th>Fail</th>
<th>Died</th>
<th>Default</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total NM+</strong></td>
<td>81.3%</td>
<td>1.7%</td>
<td>8.6%</td>
<td>4.9%</td>
<td>1.6%</td>
</tr>
<tr>
<td><strong>TB (HIV+)</strong></td>
<td>72.5%</td>
<td>2%</td>
<td>23.7%</td>
<td>6.2%</td>
<td>2.8%</td>
</tr>
<tr>
<td><strong>TB (HIV-, unknown)</strong></td>
<td>82.3%</td>
<td>1.7%</td>
<td>6.8%</td>
<td>4.8%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Source: Bureau of Tuberculosis Control, Dept of Disease Control, MopH Thailand, July 2009
Among HIV-infected TB patients in India death was common despite the availability of free co-trimoxazole locally and ART from referral centres. Death was strongly associated with the absence of ART during TB treatment. To minimize death, programmes should promote high levels of ART uptake and closely monitor progress in implementation.
Most HIV-TB patients are young, males, and do not know their HIV status when diagnosed for TB. 80% of those tested have CD4 counts below 250/cm—less than a fifth receive ART (reported) and nearly a quarter die....
Infection Control

- Infection control measures included in national plans: Bhutan, India, Indonesia, Myanmar, Nepal, and Thailand.
- Introduction of appropriate measures a slow process.

Focus on building capacity--

- Bi-regional workshop on air-borne infection with CDC, MOH Thailand and CSR units of SEARO and WPRO held in August 2008.
- Training materials on Airborne infection control developed.
- In-country technical assistance, national workshops.
- Regional workshop on infection control to prevent TB transmission in health facilities – September 2009.
Airborne Infection Control (IC)

Health education,
Administrative,
environmental controls,
Triaging…
IPT

Not policy in any country
Being piloted in Myanmar and Thailand
Commonly heard concerns:

- It is difficult to rule out active TB; so we may end up giving monotherapy
- INH resistance is high; IPT could further magnify INH resistance.
- Managing adherence to IPT is too complicated and would be costly
- Not so effective—and IPT efficacy wanes with time
The 4th “I”: Integrated Case Management

Principles:
- TB and HIV programmes benefit from close coordination and integration at service delivery level
- Patients benefit from a single source care for OI management, DOTS, CPT, and ART
- Programme efficiencies: Training, monitoring and evaluation

• The – “Integrated Management of Adult Illness” (IMAI) training package for health staff is an option to move towards this goal

Caveat:
• Decentralized HIV services are critical to achieving integration
“D” Strengthening systems…jointly

- Establishing regular interaction
- Resource mobilization
- Capacity building
- Involving communities and NGOs
### Addressing TB/HIV: Fundamental challenge: Service delivery mismatch

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>TB Rx</th>
<th>TB Dx</th>
<th>HIV testing</th>
<th>ART</th>
<th>% with TB Tx and ART (assuming overlap; Ideal:100%)</th>
<th>Ratio TB Dx : VCT (Ideal : 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BANGLADESH</td>
<td>954</td>
<td>954</td>
<td>23</td>
<td>2</td>
<td>0.2%</td>
<td>41.48</td>
</tr>
<tr>
<td>BHUTAN</td>
<td>30</td>
<td>30</td>
<td>7</td>
<td>1</td>
<td>3.3%</td>
<td>4.29</td>
</tr>
<tr>
<td>DPR KOREA</td>
<td>285</td>
<td>285</td>
<td>34</td>
<td>0</td>
<td></td>
<td>8.38</td>
</tr>
<tr>
<td>INDIA</td>
<td>300000</td>
<td>12500</td>
<td>4889</td>
<td>211</td>
<td>&lt;0.01%</td>
<td>2.74</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>8000</td>
<td>4855</td>
<td>482</td>
<td>148</td>
<td>1.9%</td>
<td>10.07</td>
</tr>
<tr>
<td>MALDIVES</td>
<td>203</td>
<td>35</td>
<td>22</td>
<td>1</td>
<td>0.5%</td>
<td>1.59</td>
</tr>
<tr>
<td>MYANMAR</td>
<td>329</td>
<td>324</td>
<td>199</td>
<td>53</td>
<td>16.1%</td>
<td>1.62</td>
</tr>
<tr>
<td>NEPAL</td>
<td>4129</td>
<td>429</td>
<td>136</td>
<td>23</td>
<td>0.6%</td>
<td>3.15</td>
</tr>
<tr>
<td>SRI LANKA</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>5</td>
<td>19.2%</td>
<td>1</td>
</tr>
<tr>
<td>TIMOR LESTE</td>
<td>74</td>
<td>18</td>
<td>9</td>
<td>2</td>
<td>2.7%</td>
<td>2</td>
</tr>
<tr>
<td>THAILAND</td>
<td>847</td>
<td>1023</td>
<td>1014</td>
<td>1014</td>
<td>83.5%</td>
<td>1.01</td>
</tr>
</tbody>
</table>
Addressing TB/HIV: Programmatic issues

- Systems for cross-referral, linkages between services:

- **Approaches adopted to provide services**, level of health facilities, involvement of other providers and communities (much to learn from each other)

- Health systems constraints
  - **Diagnostics and drugs**: availability HIV test kits, TB cultures, X-rays; difficult in practice to apply recommended algorithms
  - **Personnel**: Not enough trained, skilled and motivated personnel for counseling—fear among Health Workers, stigmatization of patients

- Infection control measures only now becoming a focus
Addressing TB/HIV: Other challenges

- Confidentiality??
- Contact tracing in the face of strong social stigma?
- Capacity to look for MDR??
- Continuum of care – regular repeat screening for TB?
TB/HIV : Summary

• Wide variations in HIV prevalence, dynamic patterns across the Region, and within individual countries

• Substantial progress towards integration of TB/HIV activities into both programmes

• Less than 1/5th of PLHIV with active TB were reported in 2008 to have received ART

• Further decentralization of HIV counseling, care and treatment centres will help accelerate integration of TB/HIV services (4 “I’s” at every HIV service deliver point)
TB/HIV : The interim Goals in the SEA Region

To achieve by 2015:

• Equitable access to the full package of interventions for TB/HIV “under one roof” to all population groups in the Region, through integration of service delivery by both programmes and further decentralization and as a result,

• Reduction in mortality rates among HIV-TB co-affected individuals to under 5%
With many thanks to

National programme managers and staff of the 11 countries of the WHO South-East Asia Region
and
Staff from WHO HQ, SEARO and Country offices
who helped with the data and graphs used in this presentation