TB-HIV in the South-East Asia Region

13th Core Group Meeting of the TB/HIV Working Group

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Dr Nani Nair
Regional Advisor-TB
TB and HIV in South-East Asia

Outline

- Epidemiology of TB and HIV
- Context, issues and concerns
- The Response
- Future steps
But most of world’s TB cases are in the SEA Region

The Burden:

- 5 million TB cases
- 3 million new cases/year
- 500 000 TB deaths/year
- 4 million people with HIV/AIDS
- Multi-drug resistance:
  - 2.8% among new cases
  - 18.8% among previously treated cases

Source: Tuberculosis in the South-East Asia Region, WHO/SEARO, March 2008
Five countries account for the majority of HIV burden in the Region:

- **India**: 2,500,000
- **Myanmar**: 242,000
- **Thailand**: 562,000
- **Nepal**: 70,000
- **Indonesia**: 193,000
HIV prevalence is generally stable or decreasing in most countries, but increasing in some others. Indonesia has the fastest growing HIV epidemic in Asia.

**Graphs:**

- **Rapid increase in reported AIDS cases, Indonesia.**
- **Steady increase in HIV prevalence among injecting drug users, Bangladesh.**

Source: National AIDS Programme, Ministry of Health, Indonesia, 2006
Source: National AIDS Programme, Ministry of Health, Bangladesh, 2006
Determinants for the frequency of HIV-associated TB in a community: SEAR

Total population of 1.6 billion

600 million TB infected

4 million HIV infected

TB/HIV co-infected

3 million new cases per year – TB epidemic being primarily driven by the 596 million TB infected non-HIV infected pool
Notifications by age and sex
New Smear-positive TB cases
SEA Region

Source: Tuberculosis in the South-East Asia Region, WHO/SEARO, March 2008
Age and sex distribution of TB/HIV co-infected patients: Myanmar

Source: Ministry of Health Union of Myanmar, December 2007
Characteristics of TB/HIV Patients in Thailand*

- Median age 34
- 80-90% with CD4 < 200
- High death rates, up to 43%-56% in some settings;
- Most deaths occur in first 2-3 months
- ART during TB treatment reduces mortality dramatically: 4 -7% when provided ART (Akksilp, et. al., Emerg Infect Dis, 2007)
- 70% male; but HIV now altering the predominantly male pattern of TB disease in areas of high HIV prevalence

*multiple data sources

Source: Directorate-General of DC and EH, Ministry of Health, Indonesia
## TB-HIV prevalence in SEAR

<table>
<thead>
<tr>
<th>Countries with Generalized/Concentrated HIV Epidemics</th>
<th>Estimated Seroprevalence of HIV Among Incident Tuberculosis Cases, 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>13% - 24%*</td>
</tr>
<tr>
<td>Myanmar</td>
<td>7.1%*</td>
</tr>
<tr>
<td>Nepal</td>
<td>2.4%*</td>
</tr>
<tr>
<td>India</td>
<td>1.2%‡</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1.9%*</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>&lt; 0.05%‡</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Countries with Low-Level HIV Epidemics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>0.3%‡</td>
</tr>
<tr>
<td>DPR Korea</td>
<td>NA*</td>
</tr>
<tr>
<td>Maldives</td>
<td>0.1%‡</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>0.2%‡</td>
</tr>
<tr>
<td>Timor Leste</td>
<td>&lt; 0.1%‡</td>
</tr>
</tbody>
</table>

Incidence of TB based on Nationwide ARTI survey: India

<table>
<thead>
<tr>
<th>Zone</th>
<th>ARTI</th>
<th>Incidence of NSP TB / 100,000 / year</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>1.5</td>
<td>75</td>
</tr>
<tr>
<td>North Zone</td>
<td>1.9</td>
<td>95</td>
</tr>
<tr>
<td>East Zone</td>
<td>1.3</td>
<td>65</td>
</tr>
<tr>
<td>West Zone</td>
<td>1.6</td>
<td>80</td>
</tr>
<tr>
<td>South Zone</td>
<td>1.0</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: RNTCP, India, MoH &FW, India; 2006
Q: What is the likely impact of HIV on the future of TB control in India?

Source: National AIDS Control Organization, MoH &FW, India; 2007
Regional Strategic framework of interventions for TB/HIV

TB Infection

HIV Infection

HIV/TB Co-Infection

Active TB and HIV

Strategy I
Prevent HIV
- VCT
- Condoms
- STD
- Blood Safety
- Harm Reduction
- MTCT

Strategy II
Prevent progression of latent TB
- TB Screening
- IPT

Strategy III
Reduce morbidity and mortality of HIV associated active TB and AIDS
- DOTS
- CPT
- ART
- HIV/AIDS Care & Support

Strategy IV: Strengthening the health systems response to TB/HIV
Building capacity for implementing TB/HIV collaborative activities

- Joint programme managers’ meeting 2004, 2006, and 2008
- Inter-country Training of trainers: 2005 and 2006
- In-country technical assistance missions

- Module 1: Introduction to TB/HIV Policies and Programmes
- Module 2: TB/HIV Surveillance
- Module 3: TB/HIV Interventions
- Module 4: TB/HIV Planning and Management
- Module 5: Translating knowledge and lessons learned into action
Progress at Country Level

- Fully integrated nation-wide implementation—Thailand
- Rapidly scaling up: India, Myanmar
- Pilot projects: Indonesia and Nepal
- Preparing for interventions: Bangladesh*, Bhutan, Sri Lanka, and Timor-Leste

*HIV NGOs in Bangladesh are spearheading TB/HIV interventions; use of IPT, modifying the R & R formats, cross-referrals, provision of ART and CPT
## Establish mechanisms of coordination

<table>
<thead>
<tr>
<th>Intervention</th>
<th>India</th>
<th>Indonesia</th>
<th>Myanmar</th>
<th>Nepal</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coordinating body at all levels</strong></td>
<td>National, Regional, and now, at districts</td>
<td>National working group</td>
<td>Coordinating bodies at central, state and townships</td>
<td>National committee and working group</td>
<td>National working group</td>
</tr>
<tr>
<td><strong>Surveillance of HIV among TB patients</strong></td>
<td>Routine notification in high HIV states</td>
<td>Special surveys; routine notifications in Papua</td>
<td>TB patients included in annual HIV sentinel surveillance</td>
<td>TB patients included in periodic HIV sentinel surveillance</td>
<td>Routine HIV testing and recording all TB patients</td>
</tr>
<tr>
<td><strong>Joint TB/HIV planning</strong></td>
<td>National framework State level plans</td>
<td>Guidelines being developed</td>
<td>National plan in place; needs strengthening</td>
<td>Strategy in place; plans, guidelines being developed</td>
<td>National level planning</td>
</tr>
<tr>
<td><strong>Joint monitoring and evaluation</strong></td>
<td>In high HIV prevalence states</td>
<td>Indicators being finalized; TB patients on ART known</td>
<td>Needs strengthening</td>
<td>Not yet in place</td>
<td>Limited</td>
</tr>
<tr>
<td>Intervention</td>
<td>India</td>
<td>Indonesia</td>
<td>Myanmar</td>
<td>Nepal</td>
<td>Thailand</td>
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</tr>
<tr>
<td>Establish intensified case finding</td>
<td>National guidelines; ICF at all ICTCs</td>
<td>In some clinics; guidelines being developed</td>
<td>ICF at 11 TB/HIV sites; selective cross referral between STI and TB staff at other sites</td>
<td>Not in place; guidelines being developed</td>
<td>National guidelines; TB screening of all newly detected HIV +ve people</td>
</tr>
<tr>
<td>Isoniazid preventative therapy (IPT)</td>
<td>Operations research</td>
<td>Not being considered</td>
<td>OR planned</td>
<td>Not being considered</td>
<td>Being piloted in some hospitals</td>
</tr>
<tr>
<td>Ensure TB infection control</td>
<td>Not yet in place</td>
<td>Not in place</td>
<td>Guidelines developed; measures not yet in place</td>
<td>Not in place</td>
<td>Registration desk screening for cough, fast tracking</td>
</tr>
</tbody>
</table>
## Decrease the burden of HIV in TB patients

<table>
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<tr>
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<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provide HIV Testing and Counseling</strong></td>
<td>VCT for all TB patients in high HIV prevalence states; selective referral in others</td>
<td>Selective referral from TB clinics</td>
<td>VCT for all TB patients; VCT centres and test kits a limitation</td>
<td>Not in place</td>
<td>DICT for all TB patients; Uptake: 44-85%</td>
</tr>
<tr>
<td><strong>Introduce HIV prevention methods</strong></td>
<td>Integrated into general health services</td>
<td>Not routinely practiced</td>
<td>Integrated into general health services</td>
<td>Not in place</td>
<td>Integrated into general health services</td>
</tr>
<tr>
<td><strong>(CPT) and Antiretroviral therapy (ART)</strong></td>
<td>National policy for CPT and ART; availability to all an issue</td>
<td>CPT at HIV, IMAI clinics in Papua; ART at HIV clinics</td>
<td>CPT and ART national policy; available at 11 TB/HIV sites</td>
<td>Not in place</td>
<td>ART and CPT widely available; uptake varies CPT:66% ART:33%</td>
</tr>
</tbody>
</table>
Increasing Acceptance of HIV testing among TB Patients

Source: ODPC 7, Ubon Ratchatani Province, Thailand
TB patients tested and referred to IHCs
Myanmar

Source: Ministry of Health, Union of Myanmar, November 2007
HIV Seroprevalence in TB patients - 2006-07

- Koch Bihar: 1%
- Uttar Dinajpur: 2.2%
- Vadodara: 2.5%
- Jodhpur: 2.8%
- Nashik: 4%
- Junagadh: 4%
- Thrissur: 5.5%
- Vizianagaram: 6.5%
- Villipuram: 7.7%
- Raigarh: 8.2%
- Tiruvanamalai: 9.3%
- Davangere: 9.3%
- Dhule: 11%
- Parbhani: 12%
- Guntur: 13.8%
**Intensified TB/HIV package for high HIV burden states**

<table>
<thead>
<tr>
<th>Intensified TB/HIV package</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Routine offer of VCT to all TB patients</td>
</tr>
<tr>
<td>• One page guidance tool developed</td>
</tr>
<tr>
<td>2. Provision of CPT to HIV infected TB pts</td>
</tr>
<tr>
<td>• Programmatic implementation of shared confidentiality of HIV status in HIV high burden states</td>
</tr>
<tr>
<td>• CPT at <strong>DOTS centres by RNTCP</strong></td>
</tr>
<tr>
<td>3. HIV status, CPT, and ART integrated into TB programme records and reports</td>
</tr>
</tbody>
</table>

9 states; 158 districts; 317 million population
Intensified TB/HIV package - Expanded RNTCP recording & reporting

TB Treatment cards with HIV status, CPT, ART

Case-finding and treatment outcome reports

<table>
<thead>
<tr>
<th>Of all Registered TB cases no. known to be tested for HIV before or during the TB treatment (a)</th>
<th>Of (a), No. known to be HIV infected (b)</th>
</tr>
</thead>
</table>

TB registers with HIV status, CPT, ART

<table>
<thead>
<tr>
<th>Type of TB case</th>
<th>Total No. known to be HIV infected</th>
<th>Treatment outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cure</td>
<td>Treatment completed</td>
<td>Died</td>
</tr>
</tbody>
</table>

NSP

All TB cases

<table>
<thead>
<tr>
<th>Total no of TB patients known to be HIV infected</th>
<th>No. given CPT#</th>
<th>No. given ART#</th>
</tr>
</thead>
</table>

# During TB treatment
Expansion of HIV counseling and testing services in India

The RNTCP of India has 12,000 microscopy centres and over 200,000 centres offering TB treatment.
Challenges in Linking HIV-infected TB Patients for Care and Support

CPT Pilot Project Outcomes, Andhra Pradesh (3 districts), Mar-Aug 2007

- Detected HIV/TB: 724
- Initiated CPT: 721
- Referred to ART*: 518 (100 %)
- Reached ART: 242 (46 %)
- Started ART: 162 (31 %)

* Excludes 94 patients already on ART at TB diagnosis
“Slow expansion of HIV services is the rate limiting step.... ”

--SEAR NTP Managers, November 2006
Issues (2) Are the programs equipped?

- Programmatic
  - Level at which TB and HIV services are delivered (HIV: centralized, TB: decentralized to sub-district level)
  - Availability of diagnostics and drugs: HIV test kits, TB cultures, X-rays limited
  - Availability of trained, skilled and motivated personnel (both programs)
  - Existence of plans, with clear indicators and targets (TB, HIV and general health services)

- Operational
  - systems for cross-referral, linkages
  - level of involvement and approaches of NGOs and private providers in the two programmes

- Other
  administrative, ethical, social, etc.
Issues: (3) A firm footing??

Relative to the problem---

- Attention at higher policy level, to TB/HIV as an issue; TB programs still the primary “drivers”? 
- Mandated well-functioning TB-HIV coordinating/technical working groups with representation from all concerned sectors at the planning and operational level?
- TB a priority for national HIV/AIDS programmes?
- Health system constraints?!
- Mindsets!!.. also,
  
  stigmatization/fear on part of health workers
<table>
<thead>
<tr>
<th>Issues (4): Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surveillance, monitoring and evaluation</strong></td>
</tr>
<tr>
<td><strong>TB-HIV Surveillance</strong></td>
</tr>
<tr>
<td>- Need to move towards routine referral and reporting. In the meantime, what surveillance strategies, in light of heterogeneous HIV prevalence in most countries?</td>
</tr>
<tr>
<td><strong>Monitoring, Evaluation</strong></td>
</tr>
<tr>
<td>- Most countries yet to firmly adopt indicators and to set targets that are relevant to their programmes</td>
</tr>
<tr>
<td>- Joint M and E just beginning</td>
</tr>
<tr>
<td><strong>Decreasing the burden of TB in PLHA</strong></td>
</tr>
<tr>
<td><strong>Intensified case finding</strong></td>
</tr>
<tr>
<td>- Need to establish TB screening into longitudinal care among PLWHA</td>
</tr>
<tr>
<td>- Most health providers still not “thinking TB” among PLWHA and other high risk groups</td>
</tr>
<tr>
<td><strong>Isoniazid preventive therapy</strong></td>
</tr>
<tr>
<td>- Most question feasibility; others worry about amplifying INH resistance</td>
</tr>
<tr>
<td><strong>Infection control</strong></td>
</tr>
<tr>
<td>- Largely not in place; lack policies, clear operational guidelines for what to do in programme context</td>
</tr>
</tbody>
</table>
## Issues (5) Implementation

### Decreasing the burden of HIV in TB patients

| Routine cross-referral | • Limited VCT centres; Limited availability of HIV test kits  
|                       | • Increased burden on available (yet very limited) VCT centres  
|                       | • Selective referral in low HIV settings—(missed opportunities)  
|                       | • HIV screening of TB suspects—sheer numbers of non-HIV infected; yield seen as low vs increased load on system; inviting ‘unnecessary’ stigmatization |

| HIV prevention | • Limited to limited VCT, HIV treatment facilities, and TB-HIV pilot/program sites |

| Cotrimoxazole (CPT) and Antiretroviral therapy (ART) | • Policy for CPT exists; practice highly variable  
|                                                     | • Policy for ART in line with international guidelines; CD4 and ART available only at secondary and tertiary care facilities  
|                                                     | • Widespread (mis) use of both first and second line ART and ATT in private sector  
|                                                     | • Use of Rifabutin? Second-line ART? Second-line ATT? |
The Way Forward: Implementation

- **Ensure adequate capacity** (human, financial resources, infrastructure)
- **Focus on implementation!!**
  - Urgently address programmatic challenges in ensuring diagnosis and treatment
  - Expand best practice interventions for ICF, IC and IPT with HIV programmes as they scale up
  - Engage more with private providers and communities
  - Address sociological challenges: stigma, high-risk behaviours; psycho-social support systems
- **Improve surveillance, monitor and evaluate** interventions and their impact
The way forward: establish a firm foundation

- Advocate at the highest levels for commitment to addressing TB/HIV based on evidence (need better surveillance)

- Prioritize TB on the agenda of national HIV/AIDS programmes as they scale up “not just another opportunistic infection”

- Establish a well-functioning Regional level and national TB-HIV technical committees, with representation from all stakeholders and partners

- Help address health system constraints
## TB/HIV targets: SEA Regional Strategic Plan for TB Control, 2006-2015

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Currently…</th>
<th>By 2010…</th>
</tr>
</thead>
<tbody>
<tr>
<td>National coordinating bodies/technical working groups established</td>
<td>5/11 countries</td>
<td>All countries</td>
</tr>
<tr>
<td>Proportion of newly diagnosed TB patients tested for HIV</td>
<td>&lt;30% (estimated)</td>
<td>&gt;70%</td>
</tr>
<tr>
<td>Proportion of VCT attendees screened for TB</td>
<td>Largely unknown</td>
<td>&gt;70%</td>
</tr>
<tr>
<td>Proportion of PLWHA with active TB receiving ATT</td>
<td>Unknown</td>
<td>&gt;85%</td>
</tr>
<tr>
<td>Proportion of TB patients with HIV eligible for ART, who receive ART</td>
<td>&lt;5%</td>
<td>&gt;80%</td>
</tr>
</tbody>
</table>