TB-HIV in the South-East Asia Region

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

April 17-18 New York, USA

Dr Nani Nair
Regional Advisor-TB

World Health Organization
Regional Office for South-East Asia
New Delhi
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 in the South-East Asia Region: 2007
HIV prevalence stable/decreasing in most countries…

but increasing in others.

Indonesia has the fastest growing HIV epidemic in Asia
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
- 3 million 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

Age group (years)

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**

### 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
<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>Coordinating body at all levels</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>Surveillance of HIV among TB patients</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>Joint TB/HIV planning</td>
<td>National framework</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>Joint monitoring and evaluation</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>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------------------------</td>
</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 refusal 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>
<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>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

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

1. Routine offer of VCT to all TB patients
   - One page guidance tool developed

2. Provision of CPT to HIV infected TB pts
   - Programmatic implementation of shared confidentiality of HIV status in HIV high burden states
   - CPT at DOTS centres by RNTCP

3. HIV status, CPT, and ART integrated into TB programme records and reports

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

Type of TB case | Total No. known to be HIV infected | Treatment outcomes
---|---|---
Cure | Treatment completed | Died | Treatment failure | Default | Transfer out
NSP
All TB cases

# During TB treatment
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
## Issues (4): Implementation

### Surveillance, monitoring and evaluation

<table>
<thead>
<tr>
<th>TB-HIV Surveillance</th>
<th>Need to move towards routine referral and reporting. In the meantime, what surveillance strategies, in light of heterogeneous HIV prevalence in most countries?</th>
</tr>
</thead>
</table>

| Monitoring, Evaluation | Most countries yet to firmly adopt indicators and to set targets that are relevant to their programmes  
|                       | Joint M and E just beginning |

### Decreasing the burden of TB in PLHA

| Intensified case finding | Need to establish TB screening into longitudinal care among PLWHA  
|                         | Most health providers still not “thinking TB” among PLWHA and other high risk groups |
| Isoniazid preventive therapy | Most question feasibility; others worry about amplifying INH resistance |
| Infection control | Largely not in place; lack policies, clear operational guidelines for what to do in programme context |
# 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>