Public –Private Partnership for DOTS implementation

(IUATLD-Asia Pacific Region Conference 2-5 August 2007 Shangri-La Hotel, Kuala Lumpur, Malaysia)

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Assunta Hospital
Petaling Jaya
DOTS

Launched in 1994

- Government commitment
- Microscopy
- Quality drugs
- DOT
- Records/Reporting
Treatment Completion Rates by Treatment Strategy for PTB reported in 27 studies

- Enhanced DOT (n=12)  91.0
- DOT ( n=4)  86.3
- Modified DOT (n=2)  78.6
- Non-supervised Therapy (n=9)  61.4

% of Patients Completing Therapy in Pulmonary Tuberculosis

*Chaulk CP, Kazdanjian VA. JAMA 1998, 279.*
Tuberculosis cases New York City, 1978-1997

(‘Turning the tide’)
### New York City: Indicators of TB treatment

(Frieden et al. 1995)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1992</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients on HRZE (%)</td>
<td>69</td>
<td>90</td>
</tr>
<tr>
<td>Patients receiving DOT (%)</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>Proportion completing treatment (%)</td>
<td>54</td>
<td>65</td>
</tr>
<tr>
<td>Sputum culture conversion (%)</td>
<td>18</td>
<td>65</td>
</tr>
</tbody>
</table>
Targets

• Detect at least 70% of new s+ cases
• Cure at least 85% of cases detected
Note: DOTS treatment success rate for 2004 will be reported in the 2007 Global Report.

NOTIFIED TB CASES, MALAYSIA
1985-2005

1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005

40 cases/day
2 deaths/day

all forms infectious forms
INCIDENCE RATE OF TB, MALAYSIA 1985-2005

[Graph showing the incidence rate of TB in Malaysia from 1985 to 2005, with two lines representing all forms and infectious forms of TB. The data points are as follows:

- For all forms:
  - 1985: 68.2
  - 1986: 66.6
  - 1987: 67
  - 1988: 64.7
  - 1989: 61.4
  - 1990: 61.2
  - 1991: 60.2
  - 1992: 63.2
  - 1993: 62.2
  - 1994: 59.8
  - 1995: 58
  - 1996: 61
  - 1997: 63.6
  - 1998: 63.6
  - 1999: 65.6
  - 2000: 64.7
  - 2001: 62.3
  - 2002: 58.7
  - 2003: 63.5
  - 2004: 60.3
  - 2005: 60.8

- For infectious forms:
  - 1985: 43.1
  - 1986: 41.3
  - 1987: 41.9
  - 1988: 39.7
  - 1989: 38.6
  - 1990: 38.2
  - 1991: 36.8
  - 1992: 37.4
  - 1993: 35.8
  - 1994: 35.2
  - 1995: 32.9
  - 1996: 35
  - 1997: 35.2
  - 1998: 36.1
  - 1999: 35
  - 2000: 34.9
  - 2001: 32.4
  - 2002: 33.2
  - 2003: 32.6
  - 2004: 34]
Percentage of DOT Coverage, Malaysia, 2005

Target: > 95%
# Target and achievement attained in Malaysia 2002

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>Attainment</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB Incidence (all forms)</td>
<td>113 per 100,000 population (Estimate)</td>
<td>58.7 per 100,000 population</td>
<td>No</td>
</tr>
<tr>
<td>TB Incidence (infectious type)</td>
<td>50 per 100,000 population (Estimate)</td>
<td>32.5 per 100,000 population</td>
<td>No (65%)</td>
</tr>
<tr>
<td>CASE DETECTION RATE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conversion rate at 2mts</td>
<td>&gt;85% (WHO)</td>
<td>89.7%</td>
<td>Yes</td>
</tr>
<tr>
<td>Cure rate</td>
<td>&gt;85% (WHO)</td>
<td>77.6%</td>
<td>No</td>
</tr>
</tbody>
</table>
• Case Detection Rates are unlikely to improve if we focus only on the Public sector TB Control (NTP)
Private sector

• India:
  1/3 Global burden of TB
  60 % of TB cases managed by PP`s

• Pakistan:
  70 % health care in private sector
  66 % of TB cases managed by PP`s

• South Korea:
  43 % of TB cases managed by PP`s
Private Health care Providers in Malaysia

- Qualified Medical Practitioners
- Specialist Chest Physicians
- Pharmacists
- Private Hospitals and Nursing Homes
- Traditional Healers
- Unqualified Medical Practitioners
- Non-Governmental Organisations
Advantages in Private sector

• Easy accessibility
• Shorter waiting time
• Flexible clinic hours
• Availability of doctors and drugs
• Considerate staff attitudes.”” less stigma””
• Stable doctor-patient relationship
• Greater degree of confidentiality
Shortcomings in the Private sector

• Over reliance on X-ray diagnosis
• Failure to confirm diagnosis with lab tests
• Inappropriate treatment regimens
• Failure to educate patients
• No contact tracing and defaulter retrieval
• No supervision of treatment (DOT)
• Inappropriate monitoring with X-ray
• Inadequate treatment records
• No reporting
## TB Case Notification and Treatment by Government. & Pr. Pract. Malaysia 2004

<table>
<thead>
<tr>
<th>State</th>
<th>Number of cases</th>
<th>Government</th>
<th>Private</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.Pinang</td>
<td>910</td>
<td>740</td>
<td>170</td>
<td>23.0 (15.0)</td>
</tr>
<tr>
<td>Selangor</td>
<td>1874</td>
<td>1529</td>
<td>345</td>
<td>22.6 (16.0)</td>
</tr>
<tr>
<td>Malaysia</td>
<td>15307</td>
<td>14561</td>
<td>746</td>
<td>5.1 (4.2)</td>
</tr>
</tbody>
</table>

*Unit Tibi/Kusta, JKA, KKM*
WHO Stop TB Strategy

Vision : A world free of TB

Stop TB Strategy Targets

By 2005 : Detect at least 70% of new s+ cases and cure at least 85 %

By 2015 : Reduce prevalence of and deaths due to TB by 50% relative to 1990

By 2050 : Eliminate TB as a public health problem ( < 1case/million )
Components of Stop TB strategy

1. PURSUE HIGH-QUALITY DOTS EXPANSION AND ENHANCEMENT
   a. Political commitment with increased and sustained financing
   b. Case detection through quality-assured bacteriology
   c. Standardized treatment with supervision and patient support
   d. An effective drug supply and management system
   e. Monitoring and evaluation system, and impact measurement

2. ADDRESS TB/HIV, MDR-TB AND OTHER CHALLENGES
   - Implement collaborative TB/HIV activities
   - Prevent and control multidrug-resistant TB
   - Address prisoners, refugees and other high-risk groups and special situations

3. CONTRIBUTE TO HEALTH SYSTEM STRENGTHENING
   - Actively participate in efforts to improve system-wide policy, human resources, financing, management, service delivery, and information systems
   - Share innovations that strengthen systems, including the Practical Approach to Lung Health (PAL)
   - Adapt innovations from other fields

4. ENGAGE ALL CARE PROVIDERS
   - Public-Public, and Public-Private Mix (PPM) approaches
   - International Standards for TB Care (ISTC)

5. EMPOWER PEOPLE WITH TB, AND COMMUNITIES
   - Advocacy, communication and social mobilization
   - Community participation in TB care
   - Patients’ Charter for Tuberculosis Care

6. ENABLE AND PROMOTE RESEARCH
   - Programme-based operational research
   - Research to develop new diagnostics, drugs and vaccines
PPM-DOTS

Public-Private Mix for DOTS implementation

Engaging all care providers to Stop TB

Building local partnerships to ensure quality TB care for all who need it

Tools package based on pilot projects in cities in Asia and Africa
PPM DOTS: Guiding Principles

- The benefits of DOTS should reach all TB suspects and patients including those not presenting to the NTPs

- TB control is a mandate of the public sector but private sector have responsibilities in TB control as well

- NTPs should initiate and sustain collaboration with private TB care providers within the DOTS framework
Evolution

• The variation across settings is too great to have one common set of global guidelines

• A broad framework could be developed to encourage countries to address the issue

• There is a clear need to develop Regional, National and Local strategies and plans
Evolution

1999: Global assessment
2000: Learning projects
2001: Global consultation
2002: Regional and National Strategies
2003: Economic analysis
2004: Multiple initiatives; Analysis of success factors
2005: Early scale up
<table>
<thead>
<tr>
<th></th>
<th>NAIROBI</th>
<th>PUNE</th>
<th>HCMC</th>
<th>DELHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
<td>Urban</td>
<td>Rural</td>
<td>Urban</td>
<td>Urban</td>
</tr>
<tr>
<td>Duration</td>
<td>13 M</td>
<td>12 M</td>
<td>12 M</td>
<td>16 M</td>
</tr>
<tr>
<td>Target Grp</td>
<td>Specialists</td>
<td>GPs</td>
<td>Specialists</td>
<td>Mix</td>
</tr>
<tr>
<td>Referrals</td>
<td>351</td>
<td>77</td>
<td>1004</td>
<td>1482</td>
</tr>
<tr>
<td>Notified</td>
<td>173</td>
<td>51</td>
<td>314</td>
<td>612</td>
</tr>
<tr>
<td>Sp. +ve</td>
<td>79</td>
<td>18</td>
<td>255</td>
<td>168</td>
</tr>
<tr>
<td>Treated</td>
<td>173</td>
<td>51</td>
<td>314</td>
<td>612</td>
</tr>
<tr>
<td>Evaluated</td>
<td>55</td>
<td>12</td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td>Conv./Succ.rate</td>
<td>84%</td>
<td>100%</td>
<td>54%</td>
<td>81%</td>
</tr>
<tr>
<td>Increase in Sp +ve case detection</td>
<td>18%</td>
<td>58%</td>
<td></td>
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</tr>
</tbody>
</table>
### Case detection

<table>
<thead>
<tr>
<th>PPM Site</th>
<th>Baseline Rate</th>
<th>Increase</th>
<th>Evaluation Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyderabad</td>
<td>50/100,000</td>
<td>23%</td>
<td>Compared to neighbouring TU</td>
</tr>
<tr>
<td>Delhi</td>
<td>60/100,000</td>
<td>36%</td>
<td>Change controlled for trend in other areas</td>
</tr>
<tr>
<td>Kannur</td>
<td>25/100,000</td>
<td>15%</td>
<td>Change in same TU</td>
</tr>
<tr>
<td>Lalitpur</td>
<td>54/100,000</td>
<td>61%</td>
<td>Change in same area</td>
</tr>
<tr>
<td>Ho Chi Minh City</td>
<td>100/100,000</td>
<td>18%</td>
<td>Change controlled for trend in other areas</td>
</tr>
<tr>
<td>Punalur</td>
<td>25/100,000</td>
<td>50%</td>
<td>Change in same TU</td>
</tr>
<tr>
<td>Thane</td>
<td>50/100,000</td>
<td>14%</td>
<td>Change in same TU</td>
</tr>
<tr>
<td>Mumbai, zone IV</td>
<td>55/100,000</td>
<td>19%</td>
<td>Change in same zone</td>
</tr>
</tbody>
</table>
Case notification trend for all cases, New Delhi Model III

Note:
• Gov all = all cases detected in government clinics. Total all = all cases detected in government clinics + PPs.
• No comparison with similar areas in Delhi done yet. Change in whole Delhi 2000-2001 was +8% (all cases).
Case notification trend for new sputum positive cases, HCMC PPM districts

Note:
- Control districts are all other urban and semi-urban districts in HCMC.
- The common seasonal variation in HCMC is that the peak notification is in first quarter and then decreases over the year.
Increase in TB case-detection rate following DOTS expansion (2003) and PPM-DOTS (2004)

Case detection rate


 Courtesy: CDC China
Effect on case detection trend in PPMD areas

2001 2002 2003 2004

53.2% 52.7% 53.3% 63.7% 71.7%

• Public + PPMD
• Public

Courtesy: Dr R Vianzon, NTP, Philippines
Treatment Completion

![Graph showing treatment completion percentages for various locations including Hyderabad, India, New Delhi, India, Kannur, India, Mumbai, India, Lalitpur, Nepal, Manila, Philippines, Cavite, Philippines, Makati, Philippines, Yogya, Indonesia, DFB, Bangladesh, Jungone, Bangladesh, Yangong, Myanmar, Seoul, Korea, Nairobi, Kenya, HCMC, Viet Nam.]
Cost-effectiveness analysis
Number of cases detected in Yogyakarta, Indonesia, before and after implementation of Public-Public Mix for DOTS
Public Private + Public Public Mix

Early effect of networking all health care providers for DOTS implementation. Mumbai, India
Benefits of private health provider inclusion in TB control (PPM DOTS)

1. Improved Case finding and case holding
2. Standardised case management to reduce treatment errors and risk of MDR-TB
3. Enhance access and equity
4. Reduced workload of frontline staff leading to improved work performance
5. Reduce financial burden on patients
HBCs with PPM DOTS initiatives, 2006

- High burden countries without PPM pilots
- High burden countries with PPM initiatives
- High burden countries scaling up PPM
PPM DOTS: Generic Model

Government (NTP)
Steward / Financier
Central, Provincial, Local

MoU

Co-ordination

PPM DOTS Agency
Public, Private, NGO

Agreements

P  P  P  P  P  P  P

Private and public hospitals, clinics, specialists, GPs, nurses, pharmacies, labs, X-ray clinics, traditional practitioners, etc
## DOTS task mix for different provider categories

<table>
<thead>
<tr>
<th>Possible Task</th>
<th>Government / NTP</th>
<th>Public or private PPM DOTS unit</th>
<th>Individual private physician, public hospital or clinic</th>
<th>Private or public laboratory</th>
<th>Non-physician / pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical functions</td>
<td></td>
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<tr>
<td>Refer TB suspects</td>
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<tr>
<td>Recording / notifying</td>
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<tr>
<td>Supervise treatment</td>
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<tr>
<td>Sputum microscopy</td>
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<tr>
<td>Make a diagnosis</td>
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<tr>
<td>Prescribe treatment</td>
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<tr>
<td>Public health functions</td>
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<tr>
<td>Retrieve defaulters</td>
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<tr>
<td>Training &amp; supervision</td>
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<tr>
<td>Reporting</td>
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<tr>
<td>Quality assurance</td>
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<tr>
<td>Drug supply</td>
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<tr>
<td>Stewardship: financing &amp; regulation</td>
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</tbody>
</table>
Essential elements: PPM DOTS

- **NTP commitment** to work with private providers
- Local capacity to provide free, quality-assured **microscopy services** for TB suspects and patients of private providers
- Local capacity to manage free and uninterrupted **drug supply** for TB treatment by private providers
- **Adaptation of DOT** to private practice if required
- Capacity to **supervise and assess** treatment outcomes of TB patients of private providers
## Practical Tools for PPM DOTS

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Tool(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>- Sensitization and orientation of private providers</td>
</tr>
<tr>
<td></td>
<td>- Sensitization and orientation of NTP staff</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>- Referral form for sputum microscopy</td>
</tr>
<tr>
<td></td>
<td>- Case Notification form</td>
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<td></td>
<td>- Feedback / Back-referral forms</td>
</tr>
<tr>
<td>Treatment</td>
<td>- Form of referral for diagnosed cases</td>
</tr>
<tr>
<td></td>
<td>- Adaptation of NTP Treat. Card for use in private practice</td>
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<tr>
<td></td>
<td>- Transfer form for patients started on treatment</td>
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<tr>
<td></td>
<td>- Form requesting supply of drugs</td>
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<td>- Form for retrieval of defaulter tracing</td>
</tr>
<tr>
<td>Monitoring</td>
<td>- Quality-monitoring forms</td>
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<tr>
<td></td>
<td>- Minor adaptations of NTP lab. and treatment registers</td>
</tr>
<tr>
<td></td>
<td>- Adaptation of quarterly report forms</td>
</tr>
<tr>
<td></td>
<td>- Evaluation Indicators for PPM DOTS</td>
</tr>
<tr>
<td>Agreements</td>
<td>- Format of a Memorandum of Understanding</td>
</tr>
<tr>
<td></td>
<td>- Format of a Letter of Agreement</td>
</tr>
</tbody>
</table>
Suggested steps in implementation of PPM-DOTS in Malaysia

• Ministry/NTP to take the initiative
• Situation analysis with estimation of case load in the private sector
• Dialogue with relevant stakeholders
• Establish a mechanism of coordination
• Adaptation / development of guidelines, referral forms etc.
• Sensitization of NTP staff and implementation of tools within the NTP
• Sensitization, recruitment and training of PPs and distribution of forms
Other potential interventions to improve private sector care and collaboration

• Improving referral and information systems through simple practical tools
• Provide microscopy and drugs free of charge to patients and incentives to PPs
• Enhance skills of Public sector managers to work with PP`s
• Enhance knowledge of consumers on what is quality care
• Develop monitoring system with indicators
Situation Analysis

- Identify regions based on notifications via Health Form 1
- Initially, focus on regions with high TB management by PP`s
- Include also Public Hospitals outside NTP
Training
• Choose appropriate place and time
• Incorporate other topics of interest as well

Diagnosis
• Provide free or subsidized microscopy and culture services to deserving patients

Treatment
• Provide free or subsidized drugs to deserving patients
Monitoring : PPM-DOTS indicators

• **Process indicators**
  - Proportion of units implemented PPM
  - Proportion of units providing DOTS

• **Outcome indicators**
  - Proportion of new sm+ referred
  - Proportion of new sm+ detected
  - Proportion of cases on DOT
  - Treatment outcome for new sm+
  - Change in case detection after 1 yr.
LET US WORK TOGETHER

PARTNERS IN

TB

ELIMINATION

N G O`S
Terima kasih !
Thank you !