MDRTB: The Philippine Situation

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Philippine Coalition Against Tuberculosis
MDRTB

- Multi-drug Resistant Tuberculosis
- Special type of poly-resistant TB
- Resistance of the TB bacilli to both isoniazid and rifampicin
- Entirely man-made phenomenon
- A consequence of poor TB control
Drug susceptible TB*§

*or limited resistance manageable with 4 drug regimen – DOTS
Cure virtually 100%

§ Worse outcomes in people with HIV infection
The March of Resistance

**Drug susceptible TB**

- *or limited resistance manageable with 4 drug regimen – DOTS
- Cure virtually 100%

**MDR-TB 1990**

- Resistance to H&R –
  - **Treatable with Second line drugs**
  - Cure up to 80%

* § Worse outcomes in people with HIV infection
**The March of Resistance**

- **Drug susceptible TB**
  - *or limited resistance manageable with 4 drug regimen – DOTS
  - Cure virtually 100%

- **MDR-TB 1990**
  - Resistance to H&R – **Treatable with Second line drugs**
  - Cure up to 80%

- **XDR-TB 2006**
  - Resistance HR & SLD – treatment options seriously restricted
  - Cure up to 60%

§ Worse outcomes in people with HIV infection
The March of Resistance

- **Drug susceptible TB**
  - Resistance to H&R – treatable with second line drugs
  - Cure virtually 100%

- **MDR-TB 1990**
  - Resistance to HR & SLD – seriously restricted
  - Cure up to 80%

- **XDR-TB 2006**
  - Resistance to all available drugs – no treatment options
  - Cure up to 60%

- **Total DR ?**
  - Worse outcomes in people with HIV infection

* or limited resistance manageable with 4 drug regimen – DOTS

S 80%

$ 60%
MAP 4 Distribution of proportion of MDR-TB among previously treated TB cases, 1994–2009

* Australia, Democratic Republic of the Congo, Fiji, Guam, New Caledonia, Solomon Islands and Qatar reported data on combined new and previously treated cases.
### Magnitude of MDRTB in the Philippines

<table>
<thead>
<tr>
<th>Data Sources</th>
<th>Type of Resistance</th>
<th>New</th>
<th>Previously treated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National Prevalence Survey, 1997</strong> <em>(Tupasi, et.al)</em></td>
<td></td>
<td>1.5%</td>
<td>14.5%</td>
</tr>
<tr>
<td><strong>National Drug Resistance Survey, 2004</strong> <em>(NTP, WHO, JICA)</em></td>
<td></td>
<td>4.4%</td>
<td>21.0%</td>
</tr>
<tr>
<td><strong>National Prevalence Survey, 2007</strong> <em>(Tupasi, et.al)</em></td>
<td></td>
<td>2.1%</td>
<td>13.0%</td>
</tr>
</tbody>
</table>
2007 National Prevalence Survey

- Pan-susceptible strains: 82.3%
- Resistant strains: 17.7%
  - Mono-resistance: 11.5%
  - Polyresistance: 2.3%
  - MDRTB: 3.9%
National Policy on MDR-TB

- Increase coverage of quality DOTS program to reduce the generation of MDRTB

- Integration of the management of MDR-TB through a programmatic approach to break transmission
**MDRTB management in the Philippines**

- **August 2000**: Green Light Committee of the WHO Working Group on DOTS-Plus approved Makati Medical Center DOTS Clinic as the first pilot project on DOTS-Plus in the Philippines
- **2003**: DOTS-Plus project expanded through Global Fund Round 2 support
- **2004**: Decentralization of MDR-TB services to public health centers
**MDRTB management in the Philippines**

- **2006**: Mainstreaming of MDR-TB services into the NTP thru Global Fund Round 5 (2500 patients), mainly in Metro Manila

- **2009**: Scale up of MDR-TB services beyond Metro Manila to provide nationwide coverage access thru Consolidated Global Fund Grant (integration of Round 5 Phase 2 and 6-year extension of Round 2)
MDRTB management in the Philippines

- **2010**: PBSP designated as Principal Recipient of Consolidated GF Grant & Lung Center as Sub-recipient and implementor of Programmatic Management of Drug-resistant TB (PMDT)
Current Set-up of MDR-TB Program

- Department of Health
  - National Center for Disease Prevention and Control - NTP
    - Centers for Health Development
      - Program Management Office
        - Lung Center of the Philippines
          - Philippine Business for Social Progress
        - Global Fund
          - Programmatic Management of Drug Resistant Tuberculosis
            - Treatment Centers
            - Treatment Satellites
            - Treatment Sites
            - Culture Sites
            - DST Sites
Global Fund support for MDR-TB treatment

Yearly no. to treat

Cumulative no. to treat
15 Functioning Treatment Centers

NCR
Lung Center
Kasaka-QI
PTSI-Tayuman
Tala
San Lazaro
15 Functioning Treatment Centers

Region I
Ilocos Training & Region Medical Center

CAR
Baguio Gen Medical TC

Region IVA
De La Salle Health Science Institute TC

Region VII
Eversley-Child Sanitarium
15 Functioning Treatment Centers

**Region VI (Iloilo)**
Western Visayas TC

**Region V**
Sorsogon Medical Mission Group Hospital and Health Services Cooperative TC

**Region X (CDO)**
German Doctors Hospital
15 Functioning Treatment Centers

Region XII (Davao)
Southern Philippines Medical Center TC

Region XII
Koronadal City Health Office TC

Region IX
Zamboanga Medical TC
6 Identified Regions for 1Q 2011

NCR
Region II
Region III
Region VIII
CARAGA
Agusan Del Norte
Agusan Del Sur
Surigao Del Norte
Surigao Del Sur
Identified Satellite TCs

1. Lacson Health Center (City of Manila)
2. Tondo Foreshore   NCR
3. Gat Andres Bonifacio Memorial Medical Center  NCR
4. Batasan Hills Super Health Center   QC
5. Lagrosa Health Center   Pasay
6. Pitogo Health Center (Makati)
7. Alabang Health Center
8. Moonwalk Health Center (Paranaque)
9. Caloocan City (1 unidentified HC)
Case Finding Strategy in the Philippines

TS, DOTS facilities, PPMDs, hospitals, clinics

Identification and referral of suspects

Screening, assessment, sputum collection

Category IV treatment

Main and Satellite TC

Confirmed DR-TB

Quality Assured Laboratory

DSSM, TB Culture, DST
## Identification of DR-TB Suspects

<table>
<thead>
<tr>
<th>Previously Treated Cases</th>
<th>New or Previously Treated Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Failure cases of Category I and II</td>
<td>1. Symptomatic contact of confirmed or suspected DR-TB</td>
</tr>
<tr>
<td>2. Other/ Chronic TB cases</td>
<td>2. Confirmed case of HIV with symptoms of TB</td>
</tr>
<tr>
<td>3. Non-converter of Category II</td>
<td></td>
</tr>
<tr>
<td>4. Relapse cases</td>
<td></td>
</tr>
<tr>
<td>5. Return After Default (RAD)</td>
<td></td>
</tr>
</tbody>
</table>
## Empiric MDRTB regimens

<table>
<thead>
<tr>
<th>Standard regimen</th>
<th>Case type</th>
<th>Drugs</th>
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</thead>
<tbody>
<tr>
<td>Regimen A</td>
<td>New</td>
<td>Pyrazinamide Ofloxacin</td>
</tr>
<tr>
<td></td>
<td>Relapse</td>
<td>Kanamycin Prothionamide</td>
</tr>
<tr>
<td></td>
<td>After default</td>
<td>Cycloserine</td>
</tr>
<tr>
<td></td>
<td>Others: non-DOTS with only 1 previous TB treatment</td>
<td></td>
</tr>
<tr>
<td>Regimen B</td>
<td>Category I failure</td>
<td>Ofloxacin Kanamycin Prothionamide Cycloserine PAS</td>
</tr>
<tr>
<td></td>
<td>Category II failure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others: with multiple treatments</td>
<td></td>
</tr>
</tbody>
</table>
Accomplishments for Case Finding 2010

- **DR-TB suspects screened:** 2,139
- **w/ 2 samples:** 1,144
- **(+ TBC):** 579
- **MDR:** 40
- **Other DR-TB:** 20

**Quarterly Breakdown:**

- **Quarter 1:**
  - DR-TB suspects screened: 783
  - w/ 2 samples: 275
  - (+ TBC): 95
  - MDR: 37
  - Other DR-TB: 0

- **Quarter 2:**
  - DR-TB suspects screened: 822
  - w/ 2 samples: 768
  - (+ TBC): 328
  - MDR: 156
  - Other DR-TB: 39

- **Quarter 3:**
  - DR-TB suspects screened: 1,210
  - w/ 2 samples: 1,107
  - (+ TBC): 339
  - MDR: 0
  - Other DR-TB: 0

- **Quarter 4:**
  - DR-TB suspects screened: 1,117
  - w/ 2 samples: 1,025
  - (+ TBC): 1025
  - MDR: 0
  - Other DR-TB: 0
DR-TB Suspects Identified 2010 in all existing treatment centers

![Bar chart showing the number of DR-TB suspects identified in different quarters across various treatment centers.

- **KSK**
- **LCP**
- **Tala**
- **TYM**
- **ECS**
- **DLSHSI**
- **ITRMC**
- **SMMGH**
- **GD**
- **SPMC**

Quarter 1:
- KSK: 89
- LCP: 54
- Tala: 31
- TYM: 40
- ECS: 10
- DLSHSI: 14
- ITRMC: 29
- SMMGH: 25
- GD: 60
- SPMC: 14

Quarter 2:
- KSK: 246
- LCP: 214
- Tala: 60
- TYM: 201
- ECS: 42
- DLSHSI: 14
- ITRMC: 26
- SMMGH: 24
- GD: 41
- SPMC: 22

Quarter 3:
- KSK: 430
- LCP: 323
- Tala: 100
- TYM: 201
- ECS: 14
- DLSHSI: 29
- ITRMC: 53
- SMMGH: 51
- GD: 55
- SPMC: 24

Quarter 4:
- KSK: 385
- LCP: 246
- Tala: 45
- TYM: 178
- ECS: 79
- DLSHSI: 35
- ITRMC: 57
- SMMGH: 94
- GD: 13
- SPMC: 7

Quarterly total:
- KSK: 984
- LCP: 709
- Tala: 165
- TYM: 475
- ECS: 73
- DLSHSI: 28
- ITRMC: 103
- SMMGH: 196
- GD: 86
- SPMC: 54

Total for 2010:
- KSK: 3,936
- LCP: 2,754
- Tala: 660
- TYM: 1,898
- ECS: 292
- DLSHSI: 112
- ITRMC: 416
- SMMGH: 762
- GD: 346
- SPMC: 216
Outcome of Diagnosed Cases 2009 to Q2 of 2010

<table>
<thead>
<tr>
<th>Period</th>
<th>MDR-TB</th>
<th>Empiric</th>
<th>DR-TB</th>
<th>Waitlisted</th>
<th>Died before treatment</th>
<th>Lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 2009 (n=241)</td>
<td>51%</td>
<td>16%</td>
<td>1%</td>
<td>4%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Q2 2009 (n=274)</td>
<td>49%</td>
<td>17%</td>
<td>14%</td>
<td>10%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Q3 2009 (n=255)</td>
<td>51%</td>
<td>16%</td>
<td>6%</td>
<td>7%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Q4 2009 (n=108)</td>
<td>46%</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Q1 2010 (n=155)</td>
<td>33%</td>
<td>16%</td>
<td>6%</td>
<td>5%</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Q2 2010 (n=265)</td>
<td>32%</td>
<td>18%</td>
<td>6%</td>
<td>2%</td>
<td>14%</td>
<td>3%</td>
</tr>
</tbody>
</table>
No. of Enrolled Confirmed MDR-TB Cases 2009 to Q2 of 2010

<table>
<thead>
<tr>
<th></th>
<th>KSK</th>
<th>LCP</th>
<th>Tala</th>
<th>TYM</th>
<th>ECS</th>
<th>DLSHSI</th>
<th>ITRMC</th>
<th>SMMGH</th>
<th>GD</th>
<th>SPMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 2009</td>
<td>43</td>
<td>35</td>
<td>7</td>
<td>21</td>
<td>18</td>
<td>9</td>
<td>54</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2 2009</td>
<td>61</td>
<td>38</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>54</td>
<td>43</td>
<td></td>
<td></td>
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<tr>
<td>Q3 2009</td>
<td>28</td>
<td>28</td>
<td>1</td>
<td>11</td>
<td>11</td>
<td>15</td>
<td>14</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4 2009</td>
<td>54</td>
<td>20</td>
<td>1</td>
<td>11</td>
<td>10</td>
<td>9</td>
<td>4</td>
<td>15</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Q1 2010</td>
<td>21</td>
<td>12</td>
<td>1</td>
<td>21</td>
<td>21</td>
<td>12</td>
<td>12</td>
<td>3</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Q2 2010</td>
<td>11</td>
<td>11</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>
Six Month Interim Outcome
2009 to Q1 of 2010

- Neg 5th & 6th:
  - Q1 2009: 78%
  - Q2 2009: 59%
  - Q3 2009: 65%
  - Q4 2009: 60%
  - Q1 2010: 62%

- Pos 5th or 6th:
  - Q1 2009: 4%
  - Q2 2009: 3%
  - Q3 2009: 1%
  - Q4 2009: 0%
  - Q1 2010: 2%

- Other outcome:
  - Q1 2009: 5%
  - Q2 2009: 18%
  - Q3 2009: 17%
  - Q4 2009: 17%
  - Q1 2010: 15%

- Unknown:
  - Q1 2009: 13%
  - Q2 2009: 20%
  - Q3 2009: 18%
  - Q4 2009: 20%
  - Q1 2010: 15%
24\textsuperscript{th} Month Treatment Outcome of Confirmed & Empirically Treated MDRTB cases registered in 2008

- Cured: 40%
- Completed: 11%
- Died: 0%
- Failed: 12%
- Defaulted: 13%
- Transferred: 23%
- On-going: 1%
36th Month Treatment Outcome of Confirmed & Empirically Treated MDRTB cases registered in 2007

- **Cured**: 51%
- **Completed**: 21%
- **Died**: 12%
- **Failed**: 12%
- **Defaulted**: 4%

Cured: 51%
Completed: 21%
Died: 12%
Failed: 12%
Defaulted: 4%
MDRTB: Philippine situation

- MDRTB is an on-going concern
- Proportion of MDRTB cases has not increased over the past decade
- MDRTB management already incorporated into NTP
- Funding of MDRTB program largely derived from external sources
MDRTB: Philippine situation

- Need to accelerate establishment of treatment center nationwide
- Need to enhance case-finding activities
- Need to reduce waiting time to initiation of SLD treatment
- Need to enhance case-holding, reduce default rates
Thank You.
MAP 3 Distribution of proportion of MDR-TB among new TB cases, 1994–2009

- Australia, Democratic Republic of the Congo, Fiji, Guam, New Caledonia, Solomon Islands and Qatar reported data on combined new and previously treated cases.

Data source: WHO/End TB Strategy

No data available
Subnational data only
## 24th Month Treatment Outcome of Confirmed MDRTB, Empirically Treated as MDRTB and XDRTB in 2008 According to Registration Group

<table>
<thead>
<tr>
<th>Registration Group</th>
<th>Cured</th>
<th>Treatment Completed</th>
<th>Died</th>
<th>Failed</th>
<th>Defaulted</th>
<th>Transferred out</th>
<th>Still on Treatment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Relapse</td>
<td>32</td>
<td>9</td>
<td>7</td>
<td>1</td>
<td>17</td>
<td>0</td>
<td>10</td>
<td>76</td>
</tr>
<tr>
<td>After default</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>After failure of Category I treatment</td>
<td>18</td>
<td>4</td>
<td>8</td>
<td>0</td>
<td>14</td>
<td>0</td>
<td>5</td>
<td>49</td>
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<tr>
<td>After failure of Category II treatment</td>
<td>52</td>
<td>13</td>
<td>14</td>
<td>0</td>
<td>29</td>
<td>0</td>
<td>9</td>
<td>117</td>
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<tr>
<td>After failure of Category IV treatment</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>New extra-pulmonary</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>Extra-pulmonary- empiric</td>
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<td>0</td>
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<tr>
<td>Other</td>
<td>97</td>
<td>35</td>
<td>31</td>
<td>3</td>
<td>52</td>
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<td>28</td>
<td>247</td>
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<td>Chronic Case</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>203</td>
<td><strong>65 (40%)</strong></td>
<td><strong>61 (12%)</strong></td>
<td>4 (1%)</td>
<td><strong>119 (23%)</strong></td>
<td><strong>1 (0.2%)</strong></td>
<td><strong>55 (11%)</strong></td>
<td><strong>508</strong></td>
</tr>
</tbody>
</table>
### 36th Month Treatment Outcome of Confirmed MDRTB, Empirically Treated as MDRTB and XDRTB in 2007 According to Registration Group

<table>
<thead>
<tr>
<th>Registration Group</th>
<th>Cured</th>
<th>Treatment Completed</th>
<th>Died</th>
<th>Failed</th>
<th>Defaulted</th>
<th>Ongoing</th>
<th>Total</th>
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<tbody>
<tr>
<td>New</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Relapse</td>
<td>14</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>After Default</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>6</td>
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<tr>
<td>After Failure of Cat I Treatment</td>
<td>11</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>23</td>
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<tr>
<td>After Failure of Cat II Treatment</td>
<td>47</td>
<td>10</td>
<td>7</td>
<td>4</td>
<td>18</td>
<td>0</td>
<td>86</td>
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<td>After Failure of Cat IV Treatment</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>New EPTB</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
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<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>77</td>
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<td>20</td>
<td>5</td>
<td>32</td>
<td>0</td>
<td>152</td>
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<tr>
<td>Chronic Case</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>153 (51%)</td>
<td>36 (12%)</td>
<td>34 (11%)</td>
<td>11 (4%)</td>
<td>61 (21%)</td>
<td>0 (0%)</td>
<td>298</td>
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</table>