Ethiopia

The Ethiopian Ministry of Health has declared the ambitious target of increasing case detection to 60% in 2007. The expansion of the network of general health-care facilities will help with this goal, as will plans to increase the involvement of Health Extension Workers in identification and referral of TB suspects, and to continue the scale up of collaboration with private health clinics. Intensified case-finding among HIV patients would also contribute. However, numerous challenges face the NTP, including retaining skilled staff, adequately supervising the activities of the programme and improving the relationship with the laboratories. The treatment success rate is low, partly as a result of poor reporting. The integration of TB recording and reporting into a multi-disease information system, unless carefully managed, is likely to result in a further deterioration in the quality of routinely collected data.

Population (thousands)\(^a\) 81 021

Estimates of epidemiological burden\(^1\)
Incidence (all cases/100 000 pop/yr) 379
Trend in incidence rate (%/yr, 2005–2006)\(^2\) -1.3
Incidence (ss+/100 000 pop/yr) 168
Prevalence (all cases/100 000 pop)\(^2\) 643
Mortality (deaths/100 000 pop/yr)\(^2\) 84
Of new TB cases, % HIV+ 6.3
Of new TB cases, % MDR-TB (2005)\(^1\) 1.6
Of previously treated TB cases, % MDR-TB (2005)\(^1\) 12

Surveillance and DOTS implementation
Notification rate (new and relapse/100 000 pop/yr) 151
Notification rate (new ss+/100 000 pop/yr) 45
DOTS case detection rate (new ss+, %) 27
DOTS treatment success (new ss+ cases, 2005 cohort, %) 78
Of new pulmonary cases notified under DOTS, % ss+ 48
Of new cases notified under DOTS, % extrapulmonary 36
Of new ss+ cases notified under DOTS, % in women 45
Of sub-national reports expected, % received at next reporting level\(^2\) 100

Laboratory services\(^1\)
Number of laboratories performing smear microscopy 713
Number of laboratories performing culture 1
Number of laboratories performing DST 1
Of laboratories performing smear microscopy, % covered by EQA 0

Management of MDR-TB
Of new cases notified, % receiving DST at start of treatment –
Of new cases receiving DST at start of treatment, % MDR-TB –
Of re-treatment cases notified, % receiving DST –
Of re-treatment cases receiving DST, % MDR-TB –

Collaborative TB/HIV activities
National policy of counselling and testing TB patients for HIV? Yes
National surveillance system for HIV-infection in TB patients? Yes
Of TB patients (new and re-treatment) notified, % tested for HIV 2.6
Of TB patients tested for HIV, % HIV+ 40
Of HIV+ TB patients detected, % receiving CPT 86
Of HIV+ TB patients detected, % receiving ART 27

DOTS expansion and enhancement

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DOTS coverage (%)</td>
<td>39</td>
<td>39</td>
<td>48</td>
<td>64</td>
<td>63</td>
<td>85</td>
<td>70</td>
<td>95</td>
<td>95</td>
<td>70</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>DOTS notification rate (new and relapse/100 000 pop)</td>
<td>43</td>
<td>67</td>
<td>92</td>
<td>106</td>
<td>107</td>
<td>131</td>
<td>133</td>
<td>151</td>
<td>157</td>
<td>160</td>
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<td>151</td>
</tr>
<tr>
<td>DOTS notification rate (new ss+/100 000 pop)</td>
<td>15</td>
<td>21</td>
<td>25</td>
<td>29</td>
<td>32</td>
<td>44</td>
<td>46</td>
<td>50</td>
<td>53</td>
<td>54</td>
<td>49</td>
<td>45</td>
</tr>
<tr>
<td>DOTS case detection rate (all new cases, %)</td>
<td>19</td>
<td>27</td>
<td>35</td>
<td>37</td>
<td>35</td>
<td>40</td>
<td>37</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>DOTS case detection rate (new ss+, %)</td>
<td>15</td>
<td>20</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>31</td>
<td>31</td>
<td>29</td>
<td>27</td>
</tr>
<tr>
<td>Case detection rate within DOTS areas (new ss+, %)(^1)</td>
<td>38</td>
<td>51</td>
<td>45</td>
<td>36</td>
<td>38</td>
<td>36</td>
<td>43</td>
<td>32</td>
<td>33</td>
<td>45</td>
<td>32</td>
<td>27</td>
</tr>
<tr>
<td>DOTS treatment success (new ss+, %)</td>
<td>61</td>
<td>73</td>
<td>72</td>
<td>74</td>
<td>76</td>
<td>80</td>
<td>76</td>
<td>76</td>
<td>70</td>
<td>79</td>
<td>78</td>
<td>–</td>
</tr>
<tr>
<td>DOTS re-treatment success (ss+, %)</td>
<td>79</td>
<td>71</td>
<td>69</td>
<td>60</td>
<td>74</td>
<td>71</td>
<td>64</td>
<td>60</td>
<td>60</td>
<td>54</td>
<td>56</td>
<td>–</td>
</tr>
</tbody>
</table>

\(^a\) Estimates for 2006.
\(^1\) DOTS cases notified include self-reported cases; % for sub-national reports reflect coverage level.
\(^2\) DALYs (disability-adjusted life years).

Surveillance and DOTS implementation

<table>
<thead>
<tr>
<th>Source</th>
<th>Notification rate (new and relapse/100 000 pop)</th>
<th>Notification rate (new ss+/100 000 pop)</th>
<th>Case detection rate (new ss+, %)</th>
<th>Case detection rate within DOTS areas (new ss+, %)(^1)</th>
<th>DOTS treatment success (new ss+, %)</th>
<th>DOTS re-treatment success (ss+, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO – Ethiopia</td>
<td>151</td>
<td>45</td>
<td>27</td>
<td>38</td>
<td>61</td>
<td>79</td>
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<tr>
<td>Other countries in AFR</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other HBCs in AFR</td>
<td></td>
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</tr>
</tbody>
</table>

Case notifications

Notifications equally spread among ss+, ss– and extrapulmonary, suggesting underutilization of microscopy for diagnosis, and possible over-diagnosis of extrapulmonary cases.

Unfavourable treatment outcomes, DOTS

Treatment success rate remains below target; treatment outcomes not reported for 7% of 2005 cohort.
### Implementing the Stop TB Strategy

#### DOTS Expansion and Enhancement

**Political commitment, standardized treatment, and monitoring and evaluation system**

#### Achievements
- Received approval for Global Fund round 6 proposal for TB control activities
- Finalized 2007–2010 Strategic Plan for TB Control with participation and agreement of all stakeholders
- Revised standard regimen for Category III
- Developed monitoring and evaluation plan for NTP
- Recruited data manager, but planned move to integrated health information system poses challenges
- Produced annual report of NTP activities

#### Planned activities
- Improve case detection through identification of TB suspects by health extension workers (HEWs), through collaboration with private health clinics and expansion of the network of general health clinics
- Update, disseminate and implement the new manual for management of TB and leprosy
- Conduct Global Fund 5-year assessment surveys

#### Quality-assured bacteriology

#### Achievements
- Set up EQA system for sputum microscopy
- Revised AFB microscopy and EQA manual
- Conducted training of peripheral-level laboratory staff in all regions

#### Planned activities
- Strengthen EQA system for sputum microscopy
- Establish 6 regional reference laboratories with culture and DST facilities
- Open 120 new TB diagnostic facilities with AFB microscopy
- Recruit and equip national laboratory consultants for six regions in order to strengthen the EQA system

#### Drug supply and management system

#### Achievements
- Developed plan for procurement of drugs and management of supplies

#### Planned activities
- Obtain paediatric anti-TB formulations from GDF

#### Collaborative TB/HIV activities

#### Achievements
- Established functional TB/HIV Advisory Council and TB/HIV Technical Working Group
- Updated national guidelines on implementation of collaborative TB/HIV activities
- Trained over 800 health staff on collaborative TB/HIV activities
- Pilot collaborative TB/HIV activities expanded to more than 330 health facilities, 98 of which are hospitals
- Drafted comprehensive TB/HIV plan of action involving most stakeholders

#### Planned activities
- Improve monitoring and reporting of TB/HIV activities at all levels
- Reinforce human resources for collaborative TB/HIV activities
- Develop and implement guidelines on infection control in main hospitals

#### Diagnosis and treatment of multidrug-resistant TB

#### Achievements
- MDR-TB addressed and granted approval in the round 6 Global Fund proposal
- Developed MDR-TB control plan
- Established functional MDR-TB technical advisory group

#### Planned activities
- Develop guidelines for MDR-TB management and treatment
- Procure second-line TB drugs for 100 patients in the first year
- Set up MDR-TB treatment centre in Addis Ababa (St Peter’s Hospital)
- Provide necessary MDR-TB training to health workers and health managers

#### High-risk groups and special situations

#### Achievements
- Included specific targets in the strategic plan

#### Planned activities
- None described

#### Health system strengthening, including human resource development

#### Achievements
- Trained over 900 health-care workers and public health managers in diagnosis and treatment of TB and leprosy
- Supplied office and transport equipment for the regional health bureaux
- Developed plan for PAL adaptation and implementation

#### Planned activities
- Strengthen diagnostic facilities through provision of X-ray machines, fluorescence microscopes, culture and DST equipment and vehicles for regional laboratories
- Standardize training material on TB and on TB/HIV
- Develop specific training material on TB for physicians

---

1. Unless otherwise specified, achievements are for financial year 2006; planned activities are for financial year 2007.
ETHIOPIA

**ENGAGING ALL CARE PROVIDERS**

**Achievements**
- Published guidelines for management of TB in private health facilities
- Pilot tested PPM projects in 21 private health facilities; NTP provided training and anti-TB drugs

**Planned activities**
- Expand PPM to 100 private health facilities in 3 regions
- Initiate collaborative TB/HIV activities in all PPM facilities
- Supervise PPM activities and assess their performance

---

**EMPowering PEOPLE WITH TB, AND COMMUNITIES**

**Advocacy, communication and social mobilization**

**Achievements**
- Broadcast radio and TV messages aimed at improving health-seeking behaviour of people with TB
- Developed and disseminated posters and flyers to the general public and to community workers

**Planned activities**
- Develop and disseminate posters and flyers on TB awareness for the general public

---

**Community participation in TB care**

**Achievements**
- Sensitized community health extension workers (HEWs) on identification and referral of TB suspects
- Conducted sensitization workshops for community leaders on community TB control

**Planned activities**
- Develop training curriculum and modules for HEWs
- Train and supervise all HEWs to educate and mobilize the community for identification and referral of TB suspects
- Develop and disseminate reference materials for health extension workers

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**Patients’ Charter**

**Achievements**
*The Patients’ Charter was published in 2006 and was therefore not available for use in countries until then.*

**Planned activities**
- None reported

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**RESEARCH, INCLUDING SPECIAL SURVEYS AND IMPACT MEASUREMENT**

**Achievements**
- Conducted studies on variations of sputum smear microscopy techniques and diagnosis of extrapulmonary TB (lymph nodes)

**Planned activities**
- Study health-seeking behaviour, gender disparities and contact tracing
**FINANCING THE STOP TB STRATEGY**

### NTP budget by source of funding

Substantial increase in budget and external funding in 2008, mainly from the Global Fund and other donors.

![Graph showing NTP budget by source of funding](image)

### NTP budget by line item

Increased budget in 2008 for DOTS component mainly for laboratory supplies and equipment.

![Graph showing NTP budget by line item](image)

### Total TB control costs by line item

Costs for clinic visits based on 66 outpatient visits per new TB patient to health facilities during treatment.

![Graph showing Total TB control costs by line item](image)

### Comparison of country report and Global Plan

Country reports similar to Global Plan for the DOTS component; much higher budget for TB/HIV, PPM and ACSM in Global Plan.

![Graph showing Comparison of country report and Global Plan](image)

### NTP budget and funding gap by Stop TB Strategy component

(US$ millions)

<table>
<thead>
<tr>
<th>Component</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOTS expansion and enhancement</td>
<td>6.9</td>
<td>9.2</td>
</tr>
<tr>
<td>TB/HIV, MDR-TB and other challenges</td>
<td>0.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Health system strengthening</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Engage all care providers</td>
<td>0</td>
<td>0.5</td>
</tr>
<tr>
<td>People with TB and communities</td>
<td>0.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Research</td>
<td>0</td>
<td>0.6</td>
</tr>
<tr>
<td>Other</td>
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</tbody>
</table>

**Financial indicators for TB**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government contribution to NTP budget (including loans)</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>Government contribution to total cost TB control (including loans)</td>
<td>58%</td>
<td>0%</td>
</tr>
<tr>
<td>NTP budget funded</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Per capita health financial indicators (US$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTP budget per capita</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Total costs for TB control per capita</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Funding gap per capita</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Government health expenditure per capita (2004)</td>
<td>2.9</td>
<td>5.6</td>
</tr>
<tr>
<td>Total health expenditure per capita (2004)</td>
<td></td>
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</tr>
</tbody>
</table>

### NTP funding gap by line item

Funding gap reported only in 2005.

![Graph showing NTP funding gap by line item](image)

### Per patient costs, budgets and expenditures

Costs for clinic visits based on 66 outpatient visits per new TB patient to health facilities during treatment.

![Graph showing Per patient costs, budgets and expenditures](image)

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**SOURCES, METHODS AND ABBREVIATIONS**

1. See footnote on page 169
2. See footnote on page 169
3. See footnote on page 169
4. See footnote on page 169
5. See footnote on page 169
6. See footnote on page 169
7. See footnote on page 169
8. See footnote on page 169
9. See footnote on page 169