Final report of the
3rd DOTS Expansion
Working Group Meeting

5–6 October 2002
Montreal, Canada
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1. Introduction

The third meeting of the DOTS Expansion Working Group (DEWG) took place on 5 and 6 October 2002 in Montreal, Canada. The first day was a closed meeting attended by 155 participants, including representatives of the 22 high TB burden countries (HBCs) with the exception of Afghanistan, the main financial and technical agencies, as well as WHO TB staff from the country, regional and headquarter offices. The complete list of participants is attached to this report (Annex 1), as well as the agenda of the meeting (Annex 2). The second day was an open meeting attended by around 300 participants.

The five objectives of the DEWG meeting were:
1. To review the status of TB control and DOTS expansion in the world;
2. To identify and discuss constraints of the 22 HBCs to increase case detection and cure in order to achieve the 2005 targets; and discuss solutions and activities to be implemented in 2003;
3. To review the financial situation of TB control in the world and define a collective plan to fill the gaps;
4. To review the updated Global DOTS Expansion Plan;
5. To review TB/HIV, DOTS plus, Practical Approaches to Lung Health (PAL) and Public–Private Mix (PPM) approaches for DOTS expansion.

The expected outcome of the meeting was a clear plan to support country activities for DOTS expansion in 2003, outlining needed actions, and including new approaches by countries and their international partners within each of the 22 HBCs and within each group of countries in a region.

An opening speech was made by Dr Ernest Loevinsohn, chair of the Stop TB Coordinating Board, who emphasized the need for pragmatic approaches and solution-oriented discussions. New ideas have to be implemented as “Delay is the enemy”. Dr J.W. Lee, Director Stop TB Department, in his opening remarks, put forth the importance of the DOTS strategy and reminded the audience that the funding gap still amounts to around US$ 300 million per year for the 22 HBCs.

2. Status of DOTS expansion

2.2 Progress towards the achievement of the 2005 WHA targets

The treatment success rate under DOTS has reached 84% in 2000 for the HBCs, close to the 2005 target. The geographical coverage of DOTS within governmental services has been regularly increasing and stands above 60% of the population in 2001. However, expanding population coverage does not translate directly to increased case detection, as revealed by a country-by-country assessment. Smear-positive case detection was low at around 30% in 2001. Throughout DOTS expansion, gains in case detection under DOTS have often been associated with the adoption of DOTS in previously non-DOTS areas, rather than with a true increase in case detection. Based on the current trend, the targets for case detection will only be reached around 2013 or may even flatten out at around 40–50% if no additional efforts are undertaken. Thus, new approaches to detect and
notify additional TB cases are necessary in order to accelerate the increase of case
detection towards the 70% target.

So where are the missing cases? One possibility is that the true number of new cases
arising each year is less than estimated by WHO. However, this is unlikely in most
settings. Other explanations for the gap in case-finding are that some TB cases do not
present to any public health facility, because they are, for instance, treated by private
doctors or at pharmacies, or that they are seen by non-DOTS facilities in the public
sector. Data at provincial level can be useful to understand better the situation in a given
country, as the situation between provinces/areas may be quite different within a same
country (Annex 3).

2.2 Report from the secretariat

As the cure rate under DOTS remains close to the 85% target, there is now a need to
focus on case detection, which is still far from the 70% target. In this respect, four
countries have progressed well in 2001: DR Congo, India, Myanmar and Philippines,
whereas there has been less progress in the other 18 HBCs. More rapid progress is,
however, expected to be seen from 2002 onwards, as 2001 was the year of preparation
in many countries and activities have started in 2002.

The 22 HBCs need about US$ 1 billion per year to control tuberculosis over the period
2001–2005. A further US$ 200 million are necessary for other low and lower-middle
income countries. The resource gap has been estimated at US$ 300 million per year for
the 22 HBCs. Resource mobilization is therefore needed, including establishing a link
with the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). Additional
funding has been secured from various donors and agencies and coordination between
the financial partners is ongoing. Free drugs for patients are available in 17 HBCs.
However, supplies of free drugs for all patients is not yet secured in 5 countries,
including China, Mozambique, Nigeria, Pakistan and Zimbabwe.

Coordination has improved with the establishment of a DOTS Expansion Working Group
Core Team, which facilitates decision-making, and regular regional interagency
coordination meetings taking place in almost all regions. National Interagency
Coordination Committees (NICCs) have been established in 18 HBCs. Technical
assistance was offered by partners in order to assist several countries in developing and
finalizing country plans. To date, all 22 HBCs, with the exception of Mozambique, have
a plan.

As training is becoming a key issue, a Task Force Training (TFT) was established under
the umbrella of, and with support from, the Tuberculosis Coalition for Technical
Assistance (TBCTA). The aim is to support National TB Programmes (NTPs), academia
and medical institutions to strengthen human resource development in TB control. The
activities undertaken include workshops for training focal points in HBCs, assistance in
training of consultants and in developing guidelines and training materials, as well as
technical assistance to NTPs on human resources development.
The interaction between TB and HIV has implications for the public health approach to control TB in high HIV prevalence settings. The Stop TB TB/HIV Working Group is addressing these issues. A strategic framework to decrease the burden of TB/HIV as well as guidelines for the phased implementation of collaborative TB and HIV programmes activities were developed and widely distributed in 2002 (see section 5.2).

The Stop TB Working Group on DOTS-Plus for MDR-TB is promoting a rational implementation of DOTS-Plus, a case-management strategy to manage MDR-TB using second-line drugs within the DOTS strategy in low and middle income countries. The Green Light Committee (GLC), a subgroup of the Working Group, reviews applications from projects wishing to benefit from concessional prices for second-line anti-TB drugs and assists and monitors such projects (see section 5.3).

Since the low case detection rate is a major concern, different approaches are necessary to increase case detection. As a result, a PPM Subgroup and a Laboratory Capacity Strengthening Subgroup of the DOTS Expansion Working Group have been established. In many countries, the NTP is not the sole provider of TB diagnosis and care. The mandate of the PPM subgroup is to assist in formulating policy guidelines, provide guidance on PPM DOTS strategies, assist in developing a research agenda, etc. (see section 5.4). Regarding the Laboratory Subgroup, its aim is to assess the laboratory networks within the 22 HBCs and other countries requiring special assistance, as well as help develop plans to strengthen the capacity of the laboratory networks and assist in the implementation of these plans. This Subgroup will respond to countries needing assistance, as identified through various mechanisms (e.g. programme reviews, monitoring missions, ad-hoc requests). Finally, a PAL WHO working group is being established. As part of PAL activities, clinical practice guidelines for standardized case management of patients with respiratory symptoms in primary care services are being validated, tested and implemented (see section 5.5). The PAL strategy aims at improving detection of TB suspects and cases through syndromic algorithms, while at the same time, standardizing care of other important respiratory diseases. Overall, this is an attempt to strengthen primary care services.

Other achievements include the development of an operational guide for national TB programmes on the introduction and use of fixed-dose combination drugs (FDCs) and a guide to expanding DOTS in the context of a changing health system, as well as the revision of the treatment guidelines for national programmes (Annex 4 and 5).

2.3 Standardized programme and financial monitoring guidelines

The objective of the standardized programme monitoring guidelines is to quantify the quality of the various DOTS components based on a set of operational indicators. These indicators have been tested in Sri Lanka in July 2002 and are currently being refined.

Better tools for standardized budgeting for core DOTS components are also needed in order to improve estimated costs and financial gaps. The aim is to monitor the financial needs on a yearly basis. A questionnaire was sent mid-August 2002 to the 22 HBCs.

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1 To be published beginning 2003.
Based on the questionnaires received to date, determining the infrastructure costs seems to be the most problematic item. A budgeting software will be soon developed in order to facilitate the collection of information and assist NTPs in developing budgets (Annex 6).

3. Financial update

3.1 Overview of financial situation

An analysis published in March 2002 (1) estimated that the total resources required in 2001–2005 for TB control, including TB control-specific needs, use of general health services for treatment, and international technical assistance are around US$ 5 billion for the 22 HBCs (21 million treated cases) and US$ 6 billion when other low and lower-middle income countries are included. Regarding the 22 HBCs, it was estimated that governments of endemic countries provide 69% of the funds, whereas grants provide only 4% of the total needs. The total gap was estimated at US$ 1.4 billion for the 22 HBCs for the period 2001–2005. This gap has since been reduced from US$ 1.4 to 1.1 billion, reflecting new funding of US$ 270 million from new grants and loans. Most of the new funds are from the GFATM and a new World Bank loan for China.

However, a funding gap still exists and may be underestimated. To improve the existing estimates of funding gaps, important priorities are: (i) more country-specific analyses of what additional resources are required to strengthen general health services, and (ii) better definition and costing of the new interventions and strategies needed to increase case detection and cure rates (Annex 7).

3.2 Global Fund to Fight AIDS, Tuberculosis and Malaria

According to Professor Richard Feachem, Executive Director of the GFATM, tuberculosis is a high priority for the Fund, which is an independent country-driven public–private partnership. Not only does the Fund promote broader partnerships, it also supports innovative approaches. The current priorities are to disburse the first round of approved grants, ensure that the funds are getting directly to the communities and develop a policy framework.

In the first round, TB proposals, including grants for the control of TB/HIV, accounted for 23% of approved proposals amounting to US$ 370 million. Seven HBCs were funded for TB including China, Ethiopia, India, Indonesia, South Africa, Thailand and VietNam. The main focus of the proposals were to expand access to treatment. The grant recipients are strongly advised to use the GDF for drug procurement. Regarding second-line anti-TB drugs, recipients are strongly advised to use the GLC, and using the GLC mechanism may become a mandatory requirement for all proposals which include the purchase of second-line anti-TB drugs for MDR-TB.

The DEWG has a major role to play vis-à-vis the GFATM by assisting countries in developing proposals, encouraging countries to use the GDF and GLC mechanisms, reviewing the proposals, etc. Finally, according to Richard Feachem, the TB community is well ahead compared to the other diseases in terms of strategies and organizations.
However, the financial needs in terms of TB might be underestimated, for example to address MDR-TB and because of worsening HIV epidemics in some parts of the world (Annex 8).

China presented its experience in applying to the Fund. Its proposal was approved in the first round for a total amount of US$ 48 million. In order to succeed, the proposal was based on the national plan for prevention and control of TB and demonstrated that there was a clear need for support. The proposal was technically sound and sustainable. Other funding sources, such as the World Bank, United Kingdom Department for International Development (DFID), Japan and Canadian International Development Agency (CIDA) were taken into consideration in order to avoid duplication of funding (Annex 9).

4. Country achievements and remaining constraints

4.1 Analysis of constraints to DOTS expansion and overview of groups of countries

In preparation for the DEWG meeting, countries were asked to define their constraints to reaching the 2005 targets and identify remedial actions. The tables containing such information served as background documents for the group discussions, which took place on the first day of the meeting around country poster presentations. The discussions and conclusions were presented by five facilitators, and the main constraints and identified solutions are summarized in Table 1.

The first group, focusing on low DOTS coverage, included Afghanistan, Brazil, Nigeria, Pakistan and the Russian Federation. These countries have relatively new programmes and some also suffer from weak public health systems, which partly explains the low DOTS coverage. Decentralization often means that TB is not always maintained as a priority. The lack of human resources was considered a crucial impediment, with staff often underpaid and unmotivated, recruitment sometimes blocked by the government, etc. Long-term investment in human resources is essential. Furthermore, these countries often suffer from poor surveillance systems and lack sustainable funding from local authorities or from donors. The non-involvement of the private sector was also identified as a major constraint. The solutions envisaged were to strengthen the ownership of the TB programme by countries and local authorities as well as enhance the coordination between financial and technical partners. Donors were encouraged to follow the country’s strategic plan.

The second group was composed of Bangladesh, Ethiopia, Indonesia, Mozambique and Thailand, countries with high DOTS coverage but low case detection. Reporting deficiencies were noted in Indonesia and Thailand, which could be improved by regular monitoring meetings to collect reports and training. The involvement of other health care providers, such as private practitioners, hospital doctors, NGOs and traditional healers, is essential to increase case finding. Furthermore, community involvement should be expanded where possible. Human resources was also identified as another key constraint, which could be improved by training staff and increasing supervision.

China, DR Congo, India and Myanmar, which have intermediate case detection and intermediate DOTS coverage, were part of group 3. The first constraint identified was the multiple sources and the non-sustainability of funding, which could be addressed by
NICCs and increased commitment of government at all levels. In China, advocacy to increase funding at provincial level has to be promoted. The lack of human resources, including the small number of staff, the high turnover and low technical capacity, has to be addressed. Proposed solutions included advocacy to fill in vacancies, private partnerships and training. In order to increase case detection, not only should the accuracy of estimates be improved, but access to diagnostic services should be expanded and IEC projects undertaken. Public-private mix would also help increase case detection. Other special concerns included urban TB, migration and war, TB/HIV and MDR-TB.

Group 4 included Kenya, Uganda, UR Tanzania and Zimbabwe, countries heavily affected by the TB/HIV dual epidemic. The lack of human resources was identified as a major issue, stemming from shortages at all levels, poor quantification of human resources needs, lack of training, administrative constraints, etc. Staff remuneration should be improved and performance incentives considered. Involving training schools by including TB control in the pre-service curriculum is essential. Human resources for supervision and monitoring should be increased. In view of the high mortality among TB/HIV co-infected patients, co-trimoxazole prophylaxis and treatment of opportunistic infections were recommended. An antiretroviral delivery system should be developed as part of the general health care system. A joint TB/HIV communication strategy would increase awareness. However, advocacy addressing decision- and policy-makers is necessary as well. Regarding laboratories, there is a need to improve existing services by adding new equipment and training laboratory staff. The development of new diagnostic tools would also help detect additional cases, especially in high HIV prevalence settings which have relatively more smear-negative cases. TB programmes often suffer from unrealistic or sub-optimal planning in the context of decentralization, which could be improved by special management training. The restructuring of the health care system should be integrated into DOTS expansion plans.

Finally, Cambodia, the Philippines, South Africa and Viet Nam formed group 5. A key constraint identified in the above-mentioned countries was insufficient political commitment at local level, which could be addressed by advocating in order to increase local ownership. Capacity building is necessary, as well as increasing staff motivation. Low salaries could be complemented by incentives and training carried out. The growing private sector was considered problematic as it is not part of national TB control plans and does not follow the DOTS standards. The solutions envisaged included developing clear guidelines and coordinating with the private sector. In view of the TB/HIV epidemic, joint approaches should be developed. For South Africa, developing a TB/HIV treatment package, which includes Highly Active Antiretroviral Therapy (HAART), was seen as a possible solution. Both South Africa and the Philippines indicated problems with their laboratories. South Africa should improve the variable quality in laboratory services and the Philippines establish a laboratory network for quality assurance.

4.2 Health systems constraints

A short assessment of health systems constraints to DOTS expansion was undertaken in September and covered three countries: Bangladesh, Kenya and Uganda.
In Kenya and Uganda, identified constraints included the limited health service capacity, especially in urban areas. TB programmes should consider a link with the private sector, as public services are not acceptable to all patients. The increasing involvement of the private sector with no control is, however, problematic and public–private partnerships should be established.

The analysis also highlighted the fact that health workers often lack knowledge and understanding of TB. For instance, in Kenya, nurses, who provide at least 50% of TB care, do not receive any training on TB. The major providers of TB diagnosis and care should therefore be trained. Staff retention schemes and incentives are other possible measures. In Uganda, rural populations have poor access to health services and community based care should be rapidly expanded from the initial pilot areas to the whole country.

There is clearly a need to undertake a more in-depth analysis of health system capacity in several countries in order to better understand the constraints in regards to the health system and find adequate solutions.

The final draft of the document on “Expanding DOTS in the Context of Changing Health System” was distributed to all participants. This new document outlines the steps to be followed by NTP managers to ensure that TB remains a high priority following health system reform.

5. Other DOTS Expansion approaches

5.1 The Global Drug Facility

An initiative of the Global Partnership to Stop TB, the GDF is a novel approach which provides grants for anti-TB drugs to lower-income countries, and a direct procurement mechanism for countries and organizations that wish to buy high-quality drugs at a reduced price. Its aim is to provide free drugs to 10 million people with TB by 2005.

The GDF has reviewed over 50 applications since its launch in March 2001, resulting in approvals of support to treat 1.6 million patients in 33 countries. The cost of first-line drugs has fallen by about 30%, and, the GDF has promoted the use of FDCs.

Country experience indicates that the GDF also supports capacity-building at country level. For instance, in Pakistan, the GDF filled gaps in DOTS areas and improved drug management by standardizing the products. The quality of the anti-TB drugs was also improved. GDF support in Myanmar not only reduced the uncertainty in drug supply, mainly due to lack of foreign currency, but also allowed the DOTS programme to expand. Drug shortages in DR Congo were frequent and buffer stocks in the NTP non-existent prior to GDF support. This help has also allowed the country to move from 3FDC to 4FDC. Experience in Uganda has demonstrated the importance of close cooperation between the NTP and the National Drug Regulatory Authority in ensuring access to high-quality drugs.

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1 To be published beginning 2003.
5.2 TB/HIV: improving DOTS in high HIV prevalence settings (2)

HIV is driving the TB epidemic with TB notification rates rising sharply in high HIV prevalence countries, most of which are in Africa. Coordination of TB and HIV programme activities at country level is necessary to limit the impact of the overlapping epidemics of TB and HIV. The expanded scope of the new strategy for TB control in high HIV prevalence populations comprises interventions against TB (full implementation of the DOTS strategy, with intensified TB case-finding and cure and TB preventive treatment) and interventions against HIV (and therefore indirectly against TB), e.g. condoms, treatment for sexually transmitted infections (STIs), safe injecting drug use and HAART.

The goal of the global TB/HIV working group is to reduce TB morbidity and mortality in settings where HIV is driving, or is likely to drive in the future, the TB epidemic. The working group has endorsed a global strategic framework to decrease the burden of TB/HIV, as well as practical guidelines for national and district level collaborative TB and HIV programme activities. WHO is coordinating technical assistance to countries and developing regional TB/HIV frameworks. The use of mathematical modelling to compare the relative effectiveness of a range of different interventions will help determine priorities for implementation.

In South Africa, 4 TB/HIV pilot sites have been established to implement and evaluate a comprehensive package of HIV/AIDS/STI/TB prevention, care and support. Preliminary results indicate an increase in Voluntary Counselling and Testing (VCT) for HIV and in TB case-finding. However, high interruption rates for TB preventive therapy were noted. The issue of sharing resources between programmes was raised, as well as the identification of areas of mutual involvement of TB and HIV programmes, e.g. the involvement of the HIV programme in intensified TB case-finding and in TB preventive treatment, and the potential involvement of TB programmes in the delivery of antiretroviral treatment.

5.3 DOTS Plus for MDR-TB

The objective of the working group on DOTS-Plus for MDR-TB is to promote the rational implementation of DOTS-Plus, a case management strategy, under development, designed to manage MDR-TB using second-line drugs within the DOTS strategy in low- and middle-income countries. Guidelines for establishing DOTS-Plus pilot projects for the management of MDR-TB (3) have been developed.

Other achievements of the working group include the reduction in the cost of second-line drugs up to 99% through the establishment of the GLC. The GLC reviews applications from projects wishing to benefit from concessional prices for second-line drugs. Several projects have been approved with the pre-requidment that any area considering DOTS-Plus must have already implemented DOTS. The GLC also provides technical support to countries in proposal preparation, implementation and monitoring.
5.4 Public-Private Mix (PPM) (4)

Successful private provider involvement in DOTS implementation is essential to help strengthen TB control, the aim being that DOTS benefits all TB suspects and cases regardless of the provider. A PPM Subgroup of the DEWG was established in 2002 to assist WHO in formulating policy guidelines for Member States, provide guidance on strategies aimed at involving private providers in DOTS implementation, as well as develop and implement a research agenda. The Subgroup will hold its first general meeting in late November 2002 in Geneva, Switzerland.

In addition to a global framework, the African region is developing a regional framework and guidelines for PPM, the next step being the development of country plans. Technical and human resources will, however, be necessary to translate the plans into action.

In India, the government developed and implemented guidelines to involve private practitioners and nongovernmental organizations (NGOs) regarding the referral of TB patients and the provision of DOTS. It also developed schemes for NGOs on health education and community outreach. To date, over 550 NGOs and 1’500 private practitioners are involved.

5.5 Practical Approach to Lung Health

As part of the essential package of primary care services, the PAL strategy standardizes the management of patients presenting with respiratory symptoms. The objectives are to improve the quality of respiratory care and the efficiency of the respiratory service delivery system. Besides strengthening primary health care services, PAL aims to increase TB detection. The strategy is applicable to all settings, but has to be adapted to the countries’ priorities.

The implementation of PAL in Morocco is expected to improve TB case detection and the quality of TB diagnosis. It also allows TB to remain visible among health priorities and promotes respiratory health in public health services. Finally, it contributes to a better management of health resources. For instance, a study showed a 30% reduction in antibiotic prescription and a 18% reduction in drug prescription cost per patient. In Nepal, the PAL guidelines have been adapted to local circumstances and training on the guidelines has been undertaken in one district.

6. Conclusions and recommendations

In view of the current trend in case detection, the target of 70% case detection may not be reached in 2005 even if DOTS geographical coverage within governmental facilities approaches 100%. The DOTS strategy, implemented in public health facilities, does guarantee high cure rates, but is not sufficient to detect all cases. The following steps were recommended:

1. Continue to support and facilitate DOTS expansion in countries based on their TB plans. More precisely, the DEWG should:
   - Develop a plan on human resource capacity strengthening
- Enhance national coordination through NICCs and Country Coordination Mechanisms
- Assist in planning and offer financial support
- Increase technical cooperation where necessary
- Strengthen laboratory networks via the Laboratory Subgroup of the DEWG
- Ensure adequate monitoring and evaluation of programmes
- Engage the Stop TB Coordinating Board to build commitment and develop collaboration with the GFATM to finance country plans
- Coordinate with the other Stop TB working groups

2. Implement new approaches to accelerate DOTS expansion:
- Decentralize TB diagnosis and care to primary services
- Involve hospitals in TB diagnosis and care, where they are not engaged
- Establish and/or expand community TB care programmes
- Establish and/or expand PPM DOTS programmes through the PPM DOTS Subgroup of the DEWG
- Scale-up involvement of NGOs in TB control and in metropolitan TB control
- Support TB/HIV phased implementation of activities
- Promote DOTS-Plus for MDR-TB as part of DOTS expansion plans, where necessary

3. Collaborate with new partners at local and global level to pursue the targets:
- Develop or strengthen the collaboration with financial partners, including the GFATM
- Develop human resources programmes and other priority public health programmes with partners
- Work with NGO networks and operational research networks
- Analyse the health system constraints to DOTS expansion in selected countries

To conclude, the aim is to continue to support and facilitate DOTS expansion in countries. In parallel, additional new approaches should be considered and implemented in order to increase case detection under DOTS programmes. Collaboration with new partners at local and global level is essential to pursue this work.

The fourth meeting of the DOTS Expansion Working Group will take place on 7 and 8 October 2003 in the Hague, The Netherlands, and an open session on DOTS Expansion will also take place on 29 October 2003 in Paris, France, in conjunction with the IUATLD World Conference on Lung Health.
References:


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<th>22 High TB Burden Countries</th>
<th>Main identified constraints</th>
<th>Main possible actions</th>
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<tbody>
<tr>
<td><strong>India</strong></td>
<td>1) Insufficient financial support at State level, uncertainty of future funding 2) Private sector handling large TB case loads but not following DOTS strategy</td>
<td>1) Advocate at State level for higher commitment on TB control and start mobilising external funds for the future 2) Engage NGOs, private practitioners and large hospitals in DOTS strategy</td>
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<td><strong>China</strong></td>
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<td>1) Insufficient cooperation between TB institutions and general hospitals 2) Insufficient political and financial support at local level in some Provinces for expanding or maintaining DOTS 3) Lack of TB staff and TB programme managers at central and lower levels</td>
<td>1) Pilot different scenarios for the involvement of general hospitals in DOTS implementation 2) Establish multisectoral leading groups and hold NICC meetings to improve political and financial support at Provincial level 3) Advocate national and local Government to post additional staff on TB control, train staff rapidly</td>
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<td><strong>Indonesia</strong></td>
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<td>1) Decentralization with insufficient commitment at local level and limited staff capacity at central and provincial level 2) Poor drug management and quality control 3) Weak reporting and supervision 4) Limited involvement of private sector</td>
<td>1) Strengthen central and provincial TB teams; train staff on management and supervision 2) Establish drug quality control system and train staff on drug distribution 3) Strengthen quarterly reporting and supervision, build proper surveillance system 4) Engage private sector in DOTS strategy</td>
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<td><strong>Bangladesh</strong></td>
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<td>1) Slowdown of main DOTS activities during the process of health sector reform 2) Insufficient human resources capacity 3) Lack of effective partnership with other sectors</td>
<td>1) Continue advocating at national and regional level to ensure commitment 2) Train staff 3) Expand involvement of NGOs, private practitioners and academicians</td>
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<td><strong>Nigeria</strong></td>
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<td>1) Insufficient budget for TB control; poor condition of health care infrastructure at PHC level 2) Lack of supervision; low staff motivation 3) Limited involvement of hospitals</td>
<td>1) Obtain commitment of Federal and State level for increased financial support and mobilization of external support 2) Strengthen supervision 3) Engage hospitals in DOTS strategy</td>
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<td><strong>South Africa</strong></td>
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<td>1) Unequal access to quality laboratory services 2) Inadequate recording and lack of monitoring 3) High level of TB/HIV with limited collaboration between programmes</td>
<td>1) Strengthen contracts for laboratory services 2) Train staff, develop electronic information system 3) Implement TB/HIV collaborative strategy</td>
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<td></td>
<td><strong>Pakistan</strong></td>
</tr>
<tr>
<td></td>
<td>1) Lack of human resources at local level 2) No engagement of or guidance to private sector 3) Weak monitoring and supervision</td>
<td>1) Recruit and train staff rapidly 2) Training of private sector practitioners, expand PPM-DOTS project 3) Increase supervisory visits and strengthen reporting</td>
</tr>
<tr>
<td></td>
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<td><strong>Philippines</strong></td>
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<tr>
<td></td>
<td>1) Underdeveloped partnership with private sector to deliver DOTS 2) Inadequate monitoring and supervision 3) Low community awareness of TB</td>
<td>1) Fully develop and scale-up PPM-DOTS project 2) Establish supervision guidelines and strengthen central team 3) Develop IEC strategy</td>
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<tr>
<td></td>
<td></td>
<td><strong>Russian Federation</strong></td>
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<tr>
<td></td>
<td>1) Lack of coordination and resistance to DOTS policy implementation 2) Lack of financial and trained human resources 3) High level of MDR-TB in certain areas</td>
<td>1) Advocate at Federal level, coordinate partners and donors 2) Resource allocation, donor meeting, train staff in DOTS principles 3) DOTS plus implementation and monitoring</td>
</tr>
<tr>
<td>Country</td>
<td>Problems</td>
<td>Solutions</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>1) Lack of human resources (quantity and quality); high staff turn-over</td>
<td>1) Increase number of health staff and limit turn-over; train staff</td>
</tr>
<tr>
<td></td>
<td>2) Weak access to PHC and TB services</td>
<td>2) Expand successful community TB care, especially in under-served areas</td>
</tr>
<tr>
<td></td>
<td>3) No link with the private sector</td>
<td>3) Involve private practitioners in large cities</td>
</tr>
<tr>
<td>Kenya</td>
<td>1) Lack of trained staff at local level</td>
<td>1) Improve recruitment and retention of staff, training</td>
</tr>
<tr>
<td></td>
<td>2) High level of TB/HIV with limited collaboration between programmes</td>
<td>2) Develop TB/HIV collaborative strategy</td>
</tr>
<tr>
<td>DR Congo</td>
<td>1) Lack of TB units in large cities</td>
<td>1) Request resources to establish additional facilities in large cities</td>
</tr>
<tr>
<td></td>
<td>2) Poor access to TB services</td>
<td>2) Establish and scale-up community TB care projects</td>
</tr>
<tr>
<td></td>
<td>3) Lack of TB staff at provincial level</td>
<td>3) Advocate for and train new TB staff</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>1) Limited health services in remote areas</td>
<td>1) Outpatient TB services in PHC units</td>
</tr>
<tr>
<td></td>
<td>2) Large TB activity in private sector with little guidance and no reporting</td>
<td>2) Regulate and involve private sector in delivery of DOTS standards of care</td>
</tr>
<tr>
<td>UR Tanzania</td>
<td>1) Lack of trained health and laboratory staff</td>
<td>1) Increase number of staff, train and retain staff</td>
</tr>
<tr>
<td></td>
<td>2) High level of TB/HIV with limited collaboration between programmes</td>
<td>2) Develop TB/HIV collaborative strategy</td>
</tr>
<tr>
<td></td>
<td>3) Insufficient number of diagnostic centres</td>
<td>3) Increase number of diagnostic centres</td>
</tr>
<tr>
<td>Brazil</td>
<td>1) Lack of political commitment at state level, uncertainties about sustainability of national level commitment</td>
<td>1) Advocate with new government to obtain full commitment and implement DOTS at all levels</td>
</tr>
<tr>
<td></td>
<td>2) Poor reporting and monitoring</td>
<td>2) Train staff on standard DOTS reporting and monitoring</td>
</tr>
<tr>
<td>Thailand</td>
<td>1) Fragmented programme and resources due to health reform</td>
<td>1) Advocate for TB at provincial level</td>
</tr>
<tr>
<td></td>
<td>2) Potential breakdown of monitoring and reporting system</td>
<td>2) Provinces to develop TB targets; central office to ensure accuracy of reporting</td>
</tr>
<tr>
<td></td>
<td>3) Low access and adherence to DOTS in mobile and marginal population</td>
<td>3) Improve services in remote and border areas</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>1) Lack of TB health staff and TB managers</td>
<td>1) Advocate to increase number of staff, train staff</td>
</tr>
<tr>
<td></td>
<td>2) Insufficient funding</td>
<td>2) Financial resource mobilisation around a well structured plan</td>
</tr>
<tr>
<td></td>
<td>3) High level of TB/HIV with limited collaboration between programmes</td>
<td>3) Develop TB/HIV collaborative strategy</td>
</tr>
<tr>
<td>Cambodia</td>
<td>1) Low motivation and capacity among staff</td>
<td>1) Train staff, offer incentives</td>
</tr>
<tr>
<td></td>
<td>2) Low adherence to DOTS in the private sector</td>
<td>2) Develop pilot PPM-DOTS projects</td>
</tr>
<tr>
<td></td>
<td>3) High HIV prevalence in some areas</td>
<td>3) Develop TB/HIV collaborative strategy</td>
</tr>
<tr>
<td>Uganda</td>
<td>1) Poor access to TB services</td>
<td>1) Keep expanding community TB care</td>
</tr>
<tr>
<td></td>
<td>2) Insufficient laboratory capacity, no QA system</td>
<td>2) Train laboratory staff, equip laboratories, identify lab focal points in charge of QA</td>
</tr>
<tr>
<td></td>
<td>3) High level of TB/HIV with limited collaboration between programmes</td>
<td>3) Develop TB/HIV collaborative strategy</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1) Insufficient financial resources</td>
<td>1) Resource mobilisation</td>
</tr>
<tr>
<td></td>
<td>2) Lack of human resources (quantity and quality)</td>
<td>2) Advocate to increase number of health staff, train staff</td>
</tr>
<tr>
<td></td>
<td>3) Weak infrastructure for implementation</td>
<td>3) Build infrastructure with donors and partners</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>1) Poor health infrastructure</td>
<td>1) Reconstruction of health system</td>
</tr>
<tr>
<td></td>
<td>2) Lack of human resources, weak NTP capacity</td>
<td>2) Train new staff, strengthen NTP</td>
</tr>
<tr>
<td></td>
<td>3) High stigma, low community involvement</td>
<td>3) IEC strategy, develop community-based care</td>
</tr>
<tr>
<td>Mozambique</td>
<td>1) No published DOTS expansion plan</td>
<td>1) Develop a DOTS expansion plan</td>
</tr>
<tr>
<td></td>
<td>2) Lack of trained staff</td>
<td>2) Increase number of staff with additional funding and based on plan</td>
</tr>
<tr>
<td></td>
<td>3) Weak laboratory capacity</td>
<td>3) Establish adequate laboratory services</td>
</tr>
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Ms Cora Dolores, Secretary, STB/TBS
Dr Marcos Espinal, Medical Officer, STB/TBS
Dr Katherine Floyd, Scientist, STB/TBS
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Dr Erwin Cooreman, Medical Officer, STB
Dr Marcus Hodge, Medical Officer, STB
Dr Pieter van Maaren, Medical Officer, STB
Annex 2: Agenda

3rd DOTS EXPANSION WORKING GROUP MEETING
MONTREAL, CANADA

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter/Co-chair</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 - 08:30</td>
<td><strong>REGISTRATION</strong></td>
<td>Dr Mario Raviglione, Chairman</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Deepak Gupta, Co-chair:</td>
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<tr>
<td>08:30 - 09:00</td>
<td>Opening and welcome</td>
<td>Dr Jong Wok Lee</td>
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<td>Dr Ernest Loevinsohn</td>
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<tr>
<td>09:00 - 09:30</td>
<td>Report from the secretariat</td>
<td>Dr Léopold Blanc</td>
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<tr>
<td>09:30 - 10:00</td>
<td>Projections on case detection and cure</td>
<td>Dr Chris Dye</td>
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<tr>
<td>10:00 - 10:15</td>
<td>Introduction to standardized programme and financial monitoring tool guidelines</td>
<td>Dr Holger Sawert</td>
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<tr>
<td>10:15 – 10:30</td>
<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td>10:30 – 11:00</td>
<td>GFATM: the experience of China</td>
<td>China</td>
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<tr>
<td>11:00 – 13:00</td>
<td>Group work on constraints in the 22 HBCs in reaching the case detection and cure targets, possible solutions.</td>
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<tr>
<td>13:00 – 14:00</td>
<td><strong>LUNCH BREAK</strong></td>
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<td></td>
<td>Co-chair: Dr Phil Hopewell</td>
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<tr>
<td>14:00 – 15:30</td>
<td>Presentations from group discussions</td>
<td>Rapporteurs of the groups</td>
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<tr>
<td>15:30 – 16:00</td>
<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td>16:00 – 17:30</td>
<td>Review of major constraints and general discussion of the overall plan of activities for 2003</td>
<td>Dr James Newell</td>
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<td>Rapporteur of the meeting</td>
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<tr>
<td>17:30 – 18:00</td>
<td>Conclusions of the day</td>
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<tr>
<td>Time</td>
<td>Session</td>
<td>Speaker/Panel</td>
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<tr>
<td>08:30 - 09:10</td>
<td>Global DOTS Expansion: how are we doing? GDEP</td>
<td>Dr Mario Raviglione, Léopold Blanc</td>
</tr>
<tr>
<td>09:10 - 09:25</td>
<td>Overview of financial situation for TB control in the world</td>
<td>Dr Katherine Floyd</td>
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<tr>
<td>09:25 - 09:45</td>
<td>GFATM and DOTS Expansion</td>
<td>Dr Richard Feachem</td>
</tr>
<tr>
<td>09:45 – 10:00</td>
<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td>10:00 - 11:00</td>
<td>The Global Drug Facility as a tool to expand DOTS</td>
<td>Jaap Broekmans, Etienne Bahati, Aye Tun, Karam Shah, Francis Adatu-Engwau</td>
</tr>
<tr>
<td>11:00 - 12:30</td>
<td>TB/HIV: country presentation and a panel discussion on collaborative activities between TB and HIV control programmes</td>
<td>Gijs Elzinga, South Africa: Refiloe Matji, Saidi Egwaga, Christy Hanson, Tony Harries, Refiloe Matji</td>
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<tr>
<td>12:30-13:30</td>
<td><strong>LUNCH BREAK</strong></td>
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<tr>
<td>13:30 - 14:30</td>
<td>TB and Public-Private Mix: country experiences and panel discussion on the need to involve private practitioners</td>
<td>Mukund Uplekar, L.S. Chouhan, Phil Hopewell, Jose Caminero, Daniel Kibuga, Shanta Pande, Clydette Powell, Charles Yu</td>
</tr>
<tr>
<td>14:30 - 15:30</td>
<td>DOTS Plus for MDR-TB : country experiences and panel discussion on mainstreaming DOTS-plus into DOTS Expansion</td>
<td>Jim Kim, Eduardo Ticona, Kitty Lambregts, Thelma Tupasi, Vaira Leimanis, Jaime Bayona, Michael Kimerling</td>
</tr>
<tr>
<td>15:30 - 16:00</td>
<td>DOTS Expansion and beyond DOTS</td>
<td>Pierre Chaulet, Jaouad Mahjour, Bam</td>
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<tr>
<td>16:00 - 16:15</td>
<td>Conclusions, next meeting</td>
<td>Mario Raviglione, Myrna Cabotaje</td>
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</table>
Annex 3: What limit to case detection?

What limit to case detection under the DOTS strategy for TB control?

Chris Dye, Catherine Watt, Dan Bleed & Brian Williams
and all the rest of you...

Trends in treatment success
HBC 1994-2000

0 10 20 30 40 50 60 70 80 90 100


Treatment success (%)

Improvements in DOTS population coverage, HBC 1995-2001

0 10 20 30 40 50


Covered (% population)

Progress in case detection under DOTS 1995-2001, HBC

0 5 10 15 20 25 30 35


Case detection (%)

Growth of DOTS coverage and case detection in India

0 5 10 15 20 25 30


DOTS coverage (%)

Growth of DOTS coverage and case detection in Philippines

0 5 10 15 20 25 30


Smear-positive case detection under DOTS (%)
CASE DETECTION IS PROPORTIONAL TO COVERAGE DURING DOTS EXPANSION

Anticipated spread of DOTS: high burden countries to 2005

A limit to case detection under DOTS?
Where do DOTS programmes get their cases?

- Increase in cases notified, non-DOTS
- Increase in cases notified, DOTS

Why are TB cases “undetected”?  

Steps in the chain of case detection:
- Estimated TB cases
- All TB cases
- Smear-positive cases
- Cases presenting to public health facilities
- Cases presenting to DOTS facilities
- Cases correctly diagnosed by DOTS facilities
- Cases reported by DOTS facilities
- Treatment success

Implementation of DOTS in Pakistan cases 2001, outcomes 2000
A limit to case detection under DOTS?

70% target case detection

all ss+ notifications ss+ notifications under DOTS


A TB-HIV MODEL REVEALS INCONSISTENCIES IN DISTRICT DATA IN KENYA

NAIROBI KISII
Annex 4: DOTS expansion progress and next steps

Overview of the presentation

- What countries have achieved
- What are the responses to action points decided in Paris DEWG meeting and what has been done in addition
- Next steps

DOTS Expansion Progress and Next Steps

Leopold Blanc
DEWG secretariat
Stop TB WHO

DEWG meeting
Montreal, 5-6 October 2002

What is the GDEP?

A mid-term global strategic plan for accelerated expansion of DOTS

- Accelerate progress towards achievement of global TB control targets through:
  - Co-ordinated global planning + mobilisation of resources
  - Emphasis on partnerships
- Initial focus on the 22 “High-Burden” Countries but covers all countries.

What countries have achieved in 2001

- Outstanding countries:
  - DRC, India, Myanmar and Philippines
- Slow or no progress in other countries:
  - Year 2001: year of preparation in many countries
  - Year 2002: year of implementation (expect higher progress)

Countries with good progress

Philippines: DOTS expanded country-wide in 5 years

World Health Organization

DOTS detection: 73%

Population in million: 81.5 million
Philippines: DOTS detection approaching targets, success rate exceeding targets

Paris : Action points
Nov 2001 - Oct 2002
- Financial needs and monitoring
- Resource mobilisation
- Drugs
- Coordination and partnership
- Training
- TB/HIV, MDR-TB
- Increasing case detection

Financial needs and monitoring
- Completion of cost estimates in HBC
  Some countries have still very raw estimates on needs
- Cost estimates for all high incidence countries and determine the gap (revised estimates)
- Financial monitoring system for country (to be presented)

Analysis published
March 2002

Resource mobilisation
Link with GFATM
- Assist, with all partners (IUATLD, KNCV, GLRA, DFB etc.), in preparing proposals
Workshops in all regions
In-country support to prepare proposals
- Stimulate applications in countries with large funding gap
- Help with implementation and monitoring will be next step
- Assist GFATM in policies and best practices

Identified funding gap
March vs. Oct 2002

- Identified gap for 2001-5 reduced from ≈ US$500 to ≈ US$300M
- Plus additional 85M for gaps not identified in March 2002
Resource mobilisation

**Link with other financial partners**
- Additional funds for countries from CIDA, DFID, Italy, Japan and USAID among others

**Total funding**
- Documented additional funding in 16 HBC including GFATM first round (4 HBC: China, India, Indonesia, Thailand)

Drugs:
- Secured free for patients in 17/22 HBC
- Uncertain drug supply in 5 countries:
  - 2 with uncertainty: Pakistan and Zimbabwe
  - 1 with no information: Mozambique
  - 2 with many areas where patients have to buy drugs: China and Nigeria
- GDF: support 10 HBC partially for their drug supply

Coordination and partnership

- Regular regional inter-agency coordination meetings in all regions

DEWG: Montreal 5-6 October 2002
- Establishment of a DEWG core group
  - Kenya, Philippines, IUATLD, KNCV, RIT, USAID, WHO, CIDA (co-opted member for 2002)

Status of establishment of inter-agency committees (N-ICC, R-ICC)

<table>
<thead>
<tr>
<th>High-Burden Countries</th>
<th>N-ICC</th>
<th>R-ICC</th>
<th>Established</th>
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<tbody>
<tr>
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<td>18</td>
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</tbody>
</table>

National Interagency Coordination Committee (ICC): status in 22 HB countries

- Government leads N-ICC
- ICC coordinates partners
- WHO facilitate Gvt and partners efforts
- WHO office in all countries

Training

- At country level: assessment of training needs and development of national training materials
- At international level: many actors involved on training (WHO, IUATLD, KNCV)
  - Establishment of a task force on training (TFT)
TBCTA- TFT: Purpose

TBCTA: Tuberculosis Coalition for Technical Assistance
- Improve and expand the capacity of USAID
- Complement global TB control efforts

TFT: Task Force Training of TBCTA
Support NTPs, academic and medical institutions to strengthen HRD in TB control

TBCTA - TFT: Participants

- ALA - American Long Association
- ATS - American Thoracic Society
- CDC - Centers for Disease Control & Prevention
- IUATLD - International Union against Tuberculosis and Lung Disease
- KNCV - Royal Netherlands Tuberculosis Association
- WHO - World Health Organization

TFT Activities

- Workshops training focal points HBCs
  - Goal: Guide participants in designing strategic plans of problem solving for Human resource Development (HRD)
  - African HBCs in November 2002
  - Asian HBCs in November 2003
- Support training of consultants
  - Description of competencies of consultant

TB and HIV

- Collaboration and coordination of TB and HIV/AIDS programmes where relevant
- Publication of the framework for TB/HIV activities
- TB/HIV plan of action in 8 countries in Africa being implemented.
- Guidelines for TB/HIV collaborative activities (Panel discussion on 6 October)

MDR-TB

- Addressing MDR-TB: links with DOTS + working group and GLC where relevant
  - 3 HBCs with DOTS plus projects (Russia, Philippines and Peru)
    (Panel discussion on 6 October)
Case detection

Increase case detection

- Study different approaches to increase case detection
  - PPM sub-group: to engage PPs (panel discussion on 8 Oct)
  - Laboratory sub-group: to strengthen network
  - PAL: to improve primary care for respiratory diseases
- Urban TB: need global assessment and plan of action
- TB in workplace: guidelines being developed

Subgroup on Laboratory Capacity Strengthening

To assist the DEWG members, in particular the NTP managers of endemic Countries, to:

1. Improve the performance of:
   - sputum smear microscopy,
   - culture,
   - and drug susceptibility testing (DST)
2. Implement quality control
3. Implement external quality assessment
4. Improve bio-safety conditions in TB laboratories
5. Develop curricula and training tools to cover laboratory functions
6. Develop operational research capacity
7. Implement Good Laboratory Practices (GLP)

PPM DOTS

Case notification trend in a New Delhi PPM Model

TOR FOR THE MEMBERS OF THE SUBGROUP ON LABORATORY CAPACITY STRENGTHENING

Long term
- Assess the laboratory networks within 22 HBC and other countries requiring special assistance.
- Plans to strengthen capacity of lab networks.

Immediate
- Identify eight countries in five regions for evaluation
- Immediate technical assistance in 3 or 4 locations

Practical approach to Lung Health: PAL

1. Better identify respiratory problems: acute and chronic
2. Guidance on treatment of acute respiratory conditions
3. Identification of TB symptomatic for sputum smear examination
4. Guidance on management of chronic respiratory diseases

Beyond DOTS

- Develop with partners consensus on “beyond DOTS” activities
  - Stage 1: Achieving quality DOTS (85% cure) in MOH
  - Stage 2: Involving other health care providers to achieve 70% case detection
  - Stage 3: DOTS plus for failures and chronic
  - Stage 4: PAL for Chronic Respiratory Diseases
- Expanding DOTS in the context of changing health system (document)
### Other achievements in 2002

- Operational Guide for national TB programmes on the introduction and use of FDC drugs
- Revision of treatment guidelines
- Guide to expanding DOTS in the context of a changing health system
- External quality assessment for AFB smear microscopy

### Conclusion

- Financial gaps are progressively decreasing
- Need to strengthen DOTS implementation capacity by all health care providers

Year 2001: preparation  
Year 2002: implementation  
**Year 2003:** scaling up
Annex 5: Global DOTS Expansion: how are we doing?

Global DOTS Expansion: how are we doing?

Mario C. Raviglione
Stop TB
World Health Organization

This Talk will...

- Review where we are today in DOTS expansion efforts
- Propose a framework for identifying solutions to reach the 2005 targets
- Assess the main constraints in countries based on day-1 discussions

The Burden of Tuberculosis, 2002

- 1.8 million deaths
- 98% of these deaths in the developing world
- About 230,000 deaths due to TB/HIV
- 8.2 million new cases, 80% in 22 high-burden countries
- Multi-drug resistance (MDRTB) present in 63 of 72 countries surveyed in 1994-1999 and important in some

History of DOTS expansion

1991: WHA establishes the 70/85 targets for 2000
1992: TB as a global emergency
1994: New TB control framework
1995: DOTS launched as a brand
1996: Global monitoring established
1998: London committee assesses constraints
1998: StopTB Partnership launched
2000: Amsterdam declaration; targets in 2005; DEWG
2001: GDEP and GDF launched
2001: GPSTB and Washington Commitment (+GFATM)

The WHO TB Control Strategy (DOTS)

- Government commitment to TB control
- Diagnosis by smear microscopy mostly on self-reporting symptomatic patients
- Standardised SCC with DOT
- Efficient system of drug supply
- Efficient recording and reporting system with assessment of treatment results

DOTS Expansion 1990-2000: rapid and impressive

- Total number of countries
- Number of countries
Projected DOTS Case Detection

Global Case Detection & Cure: Take-home Message...

- 70% (148/210) of countries adopted DOTS and 55% of global population accessing DOTS.
- Average cure rate stable at 80% under DOTS and <40% elsewhere.
- 27% infectious cases detected under DOTS vs. 11% in 1995, but far from target.
- Compared to 1999, an extra 152,000 SS+ cases reported under DOTS; if 330,000 yearly, 70% of cases under DOTS in 2005.

Progress in TB Control, high-burden Countries, 1999-2000

DOTS Expansion in India increased 25-fold over the past 3.5 Years

Is DOTS geographical Coverage all that counts?

- Evidence that DOTS geographical coverage may be paralleled by a similar increase in case detection, but below the target curve.
- At maximum DOTS coverage, case detection seems to remain below the target level (70%) in most settings.
The current trend is such that the detection target may not be reached until 2013.

Even if geographical coverage of 100% is achieved in the near future, the 70% detection target may not be achievable.

What DOTS currently does is to guarantee high cure rates and detection of the "easier" cases. However, additional interventions are necessary to increase case detection/notification.

New case finding methods and improved surveillance are crucial.

At home, if DOTS programmes not accessible
Missed, if DOTS programmes do not suspect/diagnose
Missed, if DOTS programmes do not notify
In prisons, if un-linked
In other public health systems, if un-linked
In non-DOTS programmes, if R&R do not exist
In the private sector, if it remains un-linked

Conclusions of this Analysis

World Health Organization

How to recruit the missing Cases?

1. Widen access to DOTS
   - Governmental health services
   - Patients’ constraints
2. Improve quality of DOTS
   - Increase suspicion, diagnostic capacity and notifications
3. Enlist all care providers to deliver DOTS:
   - Other MOH facilities
   - Non-MOH governmental systems and services
   - Private sector: Private practitioners, NGOs, Academia, etc

Actions necessary to maximise Recruitment of Cases under DOTS

1. Government
   - Expand coverage to 100% and ensure access
   - Improve quality of DOTS delivery
   - Enlist all other MOH and non-MOH care providers
   - Support all partners in their contribution to TB control
2. Others not governmental
   - People and communities: social movements and support
   - NGOs: care and IEC
   - Private sector: care

Some principles on how to act...

- First, the non-negotiable principle: governments carry the responsibility to pursue their WHA targets. They are central to TB control and must provide their people with 100% DOTS coverage.
- Second, all non-governmental action needs to be supported by governments, especially where governments cannot do it alone and partners need to be enlisted.
- Third, all entry points are good to achieve the targets and should be exploited in parallel, rather than in sequence: at 3 years before the target date, it is not business as usual.

Countries in need of political will, new policy, donor coordination

- A: re-build health system
- B: DOTS coverage of all States
- C: DOTS coverage of all States
- D: DOTS coverage of all Provinces
- E: DOTS coverage in all Oblasts
Countries concerned with access to DOTS
- A: difficult areas, IEC, community care
- B: need to increase services and staff
- C: integration PC and communities, IEC
- D: community care expansion, IEC

Countries concerned with quality of DOTS services
- A: HRC, training, IEC
- B: training, IEC, need to increase services and staff
- C: training and community care

Countries needing wider engagement of all HC providers
- A: NGOs, traditional healers, IEC
- B: hospital system, advocacy in Provinces
- C, D, E: private sector, hospitals and urban control
- F: integration PC and private sector
- G: hospitals and NGOs
- H: private sector, training Provinces
- I, J: primary care, prisons

Summary
- Latest information (2000)
  - Treatment success increasing (84% of 85%)
  - DOTS case detection increasing slowly (30% of 70%)
- Quality DOTS Expansion is top priority of governments to achieve full geographical coverage
- Full DOTS coverage in public health services does not seem sufficient to achieve detection target and all partners must be enlisted to contribute
- Additional approaches are necessary to increase case detection: e.g., involve communities, social mobilisation and people IEC; improve primary care; integrate hospital, prison, army and urban systems; engage private sector sensu lato

Specifically, the DEWG should ensure that:
- Country assessments are conducted on request followed by planning of interventions
- The Lab Subgroup improves diagnosis
- The PPM and PAL Subgroups identify solutions
- There is a funded plan for Human Resources
- The STB-CB assists with building commitment
- The GFATM finances country plans

DOTS Results in TB Incidence Decline
The Success Story of Peru, 1980-2000

- DOTS 1990 case finding
- PTB falling at 6%/yr
The Success Story of the Philippines: Cure Target reached, Detection Target closer

The Success Story of Cuba, 1962-2001

Source: Ministry of Health, Cuba
Annex 6: Standardized monitoring

Standardized Monitoring
of DOTS components
and TB financing

Holger Sawert
3rd Meeting DEWG, Montreal, 2002

Logical framework in TB control

- Goal
  - Eliminate TB as a public health problem
  - Mortality, prevalence

- Objectives
  - Detect and cure cases
  - CDR, success rate

- Activities
  - DOTS
  - Staff, equipment, supplies

- Inputs
  - Staff, equipment, supplies

How can ‘DOTS’ be measured?

- Five components
  - Commitment
  - Smear-Dx
  - DOT
  - SCC
  - Recording/reporting

- Nine basic operations
  - NTP with central unit
  - Plan/budget
  - Manual
  - Recording/reporting
  - Training
  - Lab network
  - DOT services
  - Drugs / Dx supplies
  - Supervision

Quantifying DOTS components

<table>
<thead>
<tr>
<th>Activity</th>
<th>Indicator</th>
<th>How to determine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular supply of SCC drugs</td>
<td>% of time drugs available at treatment centers</td>
<td>Visit sample of treatment centers</td>
</tr>
<tr>
<td>National manual</td>
<td>Manual in line with international standards</td>
<td>Define key components and ‘scores’</td>
</tr>
</tbody>
</table>

Sri Lanka - summary indicators

Sri Lanka - Management indicators
Logical framework in TB control

- Goal: Eliminate TB as a public health problem
- Mortality, prevalence
- objectives: detect and cure cases
- CDR, success rate
- activities: DOTS
- inputs: staff, equipment supplies

Budgeting for DOTS programs

Determining the ‘funding gap’

Financial monitoring - round 1

- 22 HBCs contacted mid August
- 7 forms received by 3 October
- all forms with at least partial budget/infrastructure information
- 6 forms with complete budget data
- 2 forms with complete infrastructure information
Some preliminary statistics

<table>
<thead>
<tr>
<th>Country</th>
<th>$ / case</th>
<th>% NTP</th>
<th>% drugs</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12,274</td>
<td>NA</td>
<td>5%</td>
<td>856,800,000$</td>
</tr>
<tr>
<td>B</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>C</td>
<td>140</td>
<td>30%</td>
<td>20%</td>
<td>-$</td>
</tr>
<tr>
<td>D</td>
<td>69</td>
<td>19%</td>
<td>14%</td>
<td>2,022,230$</td>
</tr>
<tr>
<td>E</td>
<td>98</td>
<td>26%</td>
<td>33%</td>
<td>-$</td>
</tr>
<tr>
<td>F</td>
<td>94</td>
<td>5%</td>
<td>93%</td>
<td>-$</td>
</tr>
<tr>
<td>G</td>
<td>35</td>
<td>22%</td>
<td>49%</td>
<td>-$</td>
</tr>
</tbody>
</table>

Observations - round 1

- Need better tools for standardized budgeting for core DOTS components
- difficulties in determining ‘infrastructure costs’

TB Budget Planning main menu

TB Budget Planning main menu

Is money enough?

Regional level

Basic information
- No of zones: 14
- No of cars: 1
- km per car: 20,000
- zones per trip: 3
- duration per trip (days): 5

Fuel and maintenance
- Fuel: 1 x 20,000 x 0.3 = 6,000
- Maintenance: 1 x 12,000 = 12,000

Per diems (days per cycle) (frequency) (per diem)
- Per diem RTLC: 25 x 4 x 110 = 11,000
- Per diem driver: 25 x 4 x 50 = 5,000

Other
- Total: 34,000

Provincial level

Basic information
- No of districts per province: 15
- No of cars per province: 1
- km per car: 20,000
- districts per trip: 3
- duration per trip (days): 5

Fuel and maintenance
- Fuel: 1 x 20,000 x 0.3 = 6,000
- Maintenance: 1 x 12,000 = 12,000

Per diems (days per cycle) (frequency) (per diem)
- Per diem PTLC: 25 x 4 x 70 = 7,000
- Per diem driver: 25 x 4 x 50 = 5,000

Other (trips per cycle) (frequency) (per trip)
- Public transport: 0

Total per zone: 30,000
Annex 7: Financing of TB control in the 22 HBCs

Financing of TB control in the 22 HBCs

3rd DOTS Expansion Working Group meeting
October 6th 2002

Overview

1. Analysis published March 2002
   - objectives, methods, results, conclusions
2. New funding committed March-Oct 2002
3. Updated estimates of funding gaps

Analysis published March 2002 (1)

3 Objectives:
1. Estimate financial resources required for TB control in the 22 HBCs 2001-5, assuming targets reached by 2005
2. Identify existing sources of financing, and funding gaps, in the 22 HBCs
3. Assess resources required and funding gaps for all LICs and LMICs outside the 22 HBCs

Analysis published March 2002 (2)

Methods: country-specific in 3 main steps
1. Estimated total cases to be treated 2001-5, using:
   - WHO global monitoring project data, UNDP population projections
2. Estimated total resources required 2001-5:
   - TB control-specific needs*
   - Use of general health services for treatment
   - DOT visits, days in hospital
   - International technical assistance
   *first-line drugs, dedicated TB programme or project staff and facilities, diagnostic devices and equipment, training, programme management, activities specifically designed to increase case detection and cure rates

Analysis published March 2002 (3)

3. Analysed financing according to 4 categories:
   - HBC governments (regular budgets and loans)
   - Grants
   - Identified gap (i.e. country recognises gap)
   - Possible gap (gap may exist but not identified by countries)
   Possible gaps:
   - general health services: funding sources not usually identified
   - assumed guaranteed government funding = number of cases detected 1999 x cost per case
   - funding for TB control specific inputs not identified for some years
   - assumed gap = total need

Analysis published March 2002 (4)

Resources required 2001-5 in the 22 HBCs to achieve WHO control targets, US$ billions

- TB control-specific inputs
- Use of general health services for treatment
- International technical assistance

Total need = US$6.2 billion (23M treated cases), or US$8 billion p.a.; US$8 billion or US$12 billion p.a. with other LICs and LMICs
Conclusions

1. Significant improvement in global TB control possible with resources that are:
   - large in context of existing spending on TB control in HBCs
   - small in context of global health spending

2. Priorities for improving estimates =
   - more country-specific analyses of what new investment (if any) is required to strengthen general health system
   - definition and costing of new interventions or strategies required to facilitate improved CDR and cure rates

3. In meantime, direct new resources to already identified gaps

New funding since March 2002

Substantial new funding for China, Indonesia, Ethiopia

Funding gaps in 22 HBCs for 2001-5, March vs. October 2002

Big impact in reduction in identified gap at country level
Plus additional US$41M for gaps not identified at all
Identified gaps in 22 HBCs, March vs. October 2002 by country

Reducing gaps to zero may not be enough....

Possible gaps in 22 HBCs, March vs. October 2002 by country

Conclusions

1. Important reduction in identified funding gaps, due to new grant funding and government commitment

2. Funding gaps still exist, and identified gaps may underestimate the real gap
   - New investment required to strengthen GHS?
   - Additional investment needed for new interventions or strategies to increase CDR and cure rates?

3. Continue to direct new funds to already identified gaps while assessing need for other investments and addressing constraints beyond funding
The Global Fund is committed to adding value to the fight against diseases of poverty by being different & innovative:

- **Independent, public/private partnership:**
  
  The Fund is not a UN entity and plans to conduct its affairs in a business-like manner, from resource mobilization to operations.

- **Country driven, centrally accountable:**
  
  The Fund defers to countries to design proposals based on local needs but holds these to central standards of best practice.

- **Results-based disbursement:**
  
  Disbursement to country partnerships will be efficient and light, but not an entitlement; partners must meet their milestones for the funds to keep flowing.

The Global Fund has quickly distinguished itself in the landscape of global public health with clear early “wins”:

- **Broader partnerships**
  
  Catalyzed country-led mechanisms bringing together public actors with NGOs and private sector to act as local consensus groups to design proposals and oversee programs.

- **Innovative approaches**
  
  Approved unparalleled volume of grants (1.6 billion to 40 countries over 5 years) to new approaches, e.g. ITN vouchers for local vendors in Tanzania to prevent malaria.

- **Better processes**
  
  Launched a 2nd round of proposals with clearer guidelines, better pacing for countries, streamlined screening and more robust technical review (approvals in January).

Three priorities are driving the current work of the Secretariat and the Global Fund:

- **Find innovative, efficient and effective ways of getting investments directly to the front line of communities in need:**
  
  Initiate first disbursements as soon as possible.

- **Project likely short term capital requirements:**
  
  Agree to sound governance procedures.

- **Recruit a first calibre permanent secretariat:**
  
  Establish efficient business systems.

- **Move into new offices with working infrastructure:**
  
  Establish efficient business systems.
The Global Fund’s model will have 4 steps from Board approval to dollars out the door

- **Primary Recipient (PR)** nomination
- **Local Fund Agent (LFA)** completion
- **Primary Recipient (PR)** confirmation
- **Grant Agreement** negotiation

<table>
<thead>
<tr>
<th>Description</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Country Coordinating Mechanism (CCM) identifies a legally accountable party in country to manage the implementation of programs.</td>
<td>- PR can be an individual (government), NGO, or sub-contractor (for technical support) to be selected through a competitive process.</td>
</tr>
<tr>
<td>- LFA in the eyes and ears of the Global Fund, assessing PR and advising the Board.</td>
<td>- LFA can be a “referee”, quiet if all is going well, “captain” of program.</td>
</tr>
<tr>
<td>- Ongoing disbursements will be based on light reporting of PR and program performance.</td>
<td>- Assessment is hypothesis-driven and design as possible, while leveraging existing accountability and management firms.</td>
</tr>
<tr>
<td>- The Global Fund &amp; DOTS Expansion</td>
<td>- The majority of funds target Africa, with grants to seven of the 22 high-burden countries capturing 80% of this global burden</td>
</tr>
</tbody>
</table>

Ongoing disbursements will be based on light reporting of minimum progress against mutually agreed indicators

- **Primary Recipient (PR)** nomination
- **Local Fund Agent (LFA)** completion
- **Primary Recipient (PR)** confirmation
- **Grant Agreement** negotiation

The disbursement model has been designed to be innovative relative to existing mechanisms, accountable and light

- **Primary Recipient (PR)** nomination
- **Local Fund Agent (LFA)** completion
- **Primary Recipient (PR)** confirmation
- **Grant Agreement** negotiation

Overview of innovative disbursement architecture

- Background & update on the Global Fund
- Partnership with Stop TB

The Global Fund & DOTS Expansion

- Background & update on the Global Fund
- Overview of innovative disbursement architecture
- Partnership with Stop TB

TB commands about a quarter of Round One approvals

- **Country split based on total year budget requirements**
- **High-burden country**
- **HIV/TB and HIV/TB/Malaria components have been split evenly across disease**
Funds approved in first round are a catalytic first step towards substantially expanded access to treatment

Endorsement of broad supply and competitive pricing

- Clearing house of TRIPS, including the Doha Declaration, to enable compulsory licensing in what are clearly health emergencies
- Recommendation to DOTS to re-consider its hold prices and anticipated supply volumes, to encourage competitive market response
- Leverage of international mechanisms for QA & procurement

Through the GDF, with the aim for substantial partnership & synergy

- Required pre-qualification of suppliers, with support to the WHO pre-qualification process, now for ARVs too with plans to expand to TB and malaria
- Open option and clear availability for central procurement mechanisms, including the "approved to buy" option of the Global Drug Facility
- Light but necessary requirements for rational use
- Recommendation that all procurement for MDR-TB be conducted through the Green Light Committee
- Recommendation to the Board that resistance surveillance be a mandatory component of monitoring & evaluation

The Global Fund & DOTS Expansion

- Background & update on the Global Fund
- Overview of innovative disbursement architecture
- Round One approvals for TB funding

The Fund's Technical Review Panel draws on global experts, and all TB members serve on the GDF's review committee

The Fund is already "mapping" its DOTS approvals with those of the GDF, with the aim for substantial partnership & synergy

Collaboration with the Stop TB partnership across the Global Fund's core processes is critical to their success

- Partnership with the STOP TB Partnership
- M&E data gathering & harmonization
- Ensure additional creation of synergies

NY-070626.001/020419VtsimSL001
The Stop TB Coordinating Board has outlined a series of principles to guide ongoing partnership with the Global Fund:

- Recommends the "Global Plan to Stop TB" be the guide to disbursement decisions
- Commits to regularly updating the Global Fund on issues related to TB
- Requests that the Global Fund works with the Green Light Committee regarding the treatment of MDR-TB
- Commits to work on ensuring proposals incorporate joint TB & HIV program activities
- Requests consideration on how the Global TB Drug Facility can provide procurement services to Global Fund grantees
- Stands ready to assist countries in the development of plans and proposals and in the implementation and monitoring of funded projects
- Is prepared to collaborate with the GFATM in advocacy, communication and resource mobilization
Annex 9: Introduction of the GFATM – Application on tuberculosis

**Situation at End of 2001**
- DOTS coverage: 68%
- Case-detection: 32%
- Cure rate: >85%
- State Council of China developed National Plan for Prevention and Control of TB (2001-10) and set key targets:
  - DOTS coverage to 90% by 2005 and 95% by 2010
  - 2 million infectious (mainly smear+) TB cases treated from 2001-05, 4 million cases from 2001-10. (If achieved, 70% case-detection target would also be reached.)
  - Cure rate >85%

**Partnership to Stop TB in China as of the end of 2001**
- Central Government – $4.8 million per year for TB drugs
- World Bank/DFID – $104 million loan (2002-08) for DOTS implementation 16 provinces
- Government of Japan – $2.5 million grant (2002) for drugs and microscopes in 11 provinces, support to be considered year-by-year
- Damien Foundation of Belgium - Support for part of Tibet and Inner Mongolia

**Remaining Financial Gaps to Reach 2005 TB Control Targets**
- Among 15 provinces not in World Bank/DFID project, funding gap most serious in 8 poor central-western provinces
- In the 16 provinces in the World Bank/DFID project,
  - Poverty counties have great difficulty implementing DOTS
  - Poverty counties have difficulty providing counterpart funding to complement loan fund
- 5 provinces with inadequate funding for free TB drugs
Main Objectives for GFATM Application

To achieve nationwide expansion of DOTS and the global TB control targets by 2005, the proposal requests funds for the following:

- DOTS expansion in 8 poor central-western provinces not in the World Bank/DFID TB project
- DOTS expansion in the 625 national and provincial-designated poverty counties that are in the World Bank/DFID TB project

Key Considerations When Preparing Proposal

Most important consideration is how to reach TB control targets. Other considerations include:

- Demonstration of need
- Technically sound — based on DOTS
- Complementarity of various projects
- Additionality of funds
- Sustainability
- Sound monitoring and evaluation plan

Demonstration of Need

- Seriousness of current TB epidemic
  - High incidence and prevalence
  - 40% of population already infected
- Risk of a worsening TB epidemic
  - Worsening in areas without DOTS
  - Worsening of drug-resistant TB epidemic without DOTS
  - Worsening in urban areas due to internal migration
  - Worsening due to HIV-TB co-epidemic

Technical Soundness Project Components Based on DOTS

<table>
<thead>
<tr>
<th>Component</th>
<th>% of Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drugs, injection syringe &amp; waste</td>
<td>2.4%</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>3.5%</td>
</tr>
<tr>
<td>Reporting and case management fee</td>
<td>2.7%</td>
</tr>
<tr>
<td>Training</td>
<td>4.2%</td>
</tr>
<tr>
<td>Supervision</td>
<td>8.8%</td>
</tr>
<tr>
<td>IEC</td>
<td>5.1%</td>
</tr>
<tr>
<td>Program management</td>
<td>1.1%</td>
</tr>
<tr>
<td>Surveillance</td>
<td>0.0%</td>
</tr>
<tr>
<td>Equipment</td>
<td>13.3%</td>
</tr>
<tr>
<td>Other</td>
<td>3.9%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Complementarity and Additionality

- Funding from all sources considered together when planning project
  - In some provinces, funding from the World Bank/DFID, the Government of Japan, and the GFATM are used together
- No duplication of funding
- Existing financial commitment not reduced

Sustainability

Example from Financing in 8 Poor Provinces

<table>
<thead>
<tr>
<th>Component</th>
<th>GFATM</th>
<th>Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>50%</td>
<td>30%</td>
</tr>
<tr>
<td>Reporting and case management fee</td>
<td>43%</td>
<td>58%</td>
</tr>
<tr>
<td>Training</td>
<td>45%</td>
<td>57%</td>
</tr>
<tr>
<td>Supervision</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>IEC</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>Program management</td>
<td>45%</td>
<td>57%</td>
</tr>
<tr>
<td>Operational research</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>X-ray machines</td>
<td>58%</td>
<td>42%</td>
</tr>
</tbody>
</table>
Overall Financing of TB Program (2002-2006)

Sound Monitoring & Evaluation Plan
- Inter-agency Coordinating Committee (ICC) to oversee the work
- Joint program review by national and international expert on semi-annual basis
- Monitoring and supervision by national experts
- Utilization of data from routine reporting and recording system

Additional Reasons for Success
- 10 years of DOTS implementation (in World Bank and MOH projects) demonstrated ability of China to implement DOTS successfully
- Detailed budget for national programme available
- Preparation for the World Bank/DFID project provided much of the basis for the proposal

Total Amount Requested from the Global Fund (in million US$)

<table>
<thead>
<tr>
<th>Component 1</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.53</td>
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<td>7.28</td>
<td>7.13</td>
<td>4.53</td>
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<table>
<thead>
<tr>
<th>Component 2</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<tbody>
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<td>2.22</td>
<td>4.60</td>
<td>4.38</td>
<td>2.88</td>
<td>1.46</td>
<td>18.54</td>
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</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.49</td>
<td>11.88</td>
<td>11.61</td>
<td>7.41</td>
<td>3.68</td>
<td>48.07</td>
<td></td>
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