Global Plan to Stop TB (2006-2015)
DOTS Expansion Working Group Strategic Plan

Working draft, 25th April 2005. This draft was discussed in a teleconference with the DEWG core team on 22 April. A series of follow-up discussions are planned over the coming weeks, after which the draft will be revised. Sections that need to be expanded are highlighted in the draft.

1. Background

The 2nd Global Plan to Stop Tuberculosis (2006-2015) sets out the actions needed to reach the 2015 global targets for TB control, which are part of the United Nations (UN) Millennium Development Goals (MDGs). The five MDG targets directly relevant to TB control are: to detect at least 70% of new smear-positive cases and to treat successfully at least 85% of these cases; by 2015, to have halted and begun to reverse incidence; between 1990 and 2015, to halve TB prevalence and death rates.

The DOTS Expansion Working Group (DEWG) strategic plan 2006-2015 looks at the progress in TB control made since the launch of the 1st Global Plan to Stop TB (GPSTB), analyzes current challenges and outlines the strategic vision of the Working Group 2006-2015 and beyond, while keeping in mind the long term goal to eliminate TB as a global public health problem by 2050.

A plan for DEWG related activities has been developed in line with the long term goals and strategic directions. This plan, which has been informed by regional and global epidemiological and cost analyses should also serve as a powerful tool for resource mobilization.

2. Progress since the launch of the 1st Global Plan to Stop TB

In order to meet the global targets of 70% detection of infectious cases and 85% successful treatment by 2005, the 1st GPSTB identified rapid DOTS expansion in the high-burden countries as key to TB control worldwide.

The Working Group on DOTS Expansion, which includes national TB programme managers from the 22 high-burden countries, has helped develop detailed DOTS implementation plans at country level, and monitored and evaluated progress. It has fostered coordination among partners, supported technical and financial agencies in their TB-control efforts and helped mobilize resources for DOTS expansion.

The main pillars of the DEWG activities have been the support to the adoption of the DOTS strategy in countries; the preparation of national plans to control TB; and the creation of national inter-agency coordination committees (which have developed into national partnerships in a few countries). Further, the DEWG has encouraged and supported operational research, demonstration projects and early scale-up of new approaches to improve quality and access, such as the involvement of all health care providers through Public-Private Mix for DOTS (PPM DOTS), Community DOTS and Practical Approach to Lung Health (PAL). All DEWG activities have been

implemented with an overall concern for the strengthening of the health system, giving special attention to the human resource crisis and to the need for stronger laboratory services.

Through these activities, TB case detection under DOTS has increased steadily over the last five years, with an acceleration seen in 2004-2005, and the treatment outcome target has been met in most regions. According to the Global TB Control Report 2005, by the end of 2003 about 77% of the world's population lived in countries which had officially adopted the DOTS strategy. TB cases notified under DOTS programmes in 2003 represented 45% of estimated new smear-positive TB cases: this is a significant improvement since the launch of the 1st GPSTP, which was reporting 27% case notification rates. The rate of treatment success in the 2002 DOTS cohort was 82% on average, just below the 85% goal.

3. Strategic directions 2006-2015

Broaden the scope of DOTS

More than a decade of DOTS in countries with diverse characteristics has offered two distinct lessons: DOTS is indeed essential for TB control, but the original 5 elements of DOTS alone are not enough to control TB globally. DOTS has been evolving continuously right since its inception and countries have been adapting DOTS to suit local situations. The new strategies that are evolving to help tackle some of the major barriers for TB control -- the HIV epidemic, multi-drug resistance, poor TB management in large parts of the private as well as public health care sectors, weak health systems, poverty, poor access to care and weak community participation -- all indicate that much is required to be built and built sooner, on the core foundations of DOTS.

The limitations of available TB control tools make TB care demanding on part of both the care providers and the patients. In an era of rapid technological development pervading every sphere of life, developing new tools for TB diagnosis, treatment and prevention must receive the top priority it deserves. Sustaining the core of DOTS should help reach tomorrow's new tools seamlessly to the millions who need it.

Today, the DOTS strategy needs to convey a clearer message about its patient-centred evolution and the importance of furthering TB control. It is now essential to articulate a comprehensive and inclusive vision for global TB control as we progress from meeting the 2005 global targets to achieving MDGs by 2015. This vision includes the following essential elements:

- ***Consolidate DOTS:*** Optimize, sustain and measure achievements, through a patient-centred approach, by building capacity and mobilizing human and financial resources within strengthened health systems
- ***Adapt DOTS:*** Address TB/HIV, MDR-TB and other special situations
- ***Engage all Health Care Providers:*** Ensure all care givers, public and private, use the international standard of TB care, making it accessible to all patients, especially the poor
- ***Mobilize Communities:*** Promote community participation and engage civil society to increase demand for, and contribute to, proper care. Communities

can advocate for long-term political commitment and contribute to sustainability of interventions.

- ***Promote R&D for new Tools:*** Support efforts by public and private enterprises to develop better tools for TB diagnosis, treatment and prevention

Broaden the scope of DOTS expansion

In line with the broad strategic directions for TB control, the DEWG is broadening the scope of DOTS expansion. DOTS expansion means more than expanding geographical coverage of DOTS. It means improving equity in access to quality services, expanding the use of international standards for TB to all health care providers, and expanding the involvement of communities in TB control. While geographical coverage has increased steadily over the past decade and is near completion in most regions, expanding equitable access, quality and involvement of relevant partners in DOTS implementation need to continue and be intensified.

Intensify country support and monitoring

The DEWG will support countries to further improve quality of DOTS as the basis for a TB control strategy, which is open for adapting new approaches and innovations. The DEWG will assist countries developing TB control plans with a particular focus on strategies to reach MDG targets. The DEWG will continue to monitor country progress, including progress of improving access and the implementing new approaches such as PPM DOTS, Community DOTS, PAL, and strengthened capacity for performing culture and DST.

Effective TB control requires both functioning general health services and a strong TB control organisation and infrastructure. Development of the overall health system will boost TB control. However, TB control may be de-prioritised as part of health sector reform processes, particularly when responsibilities for health care are decentralised to administrative levels that lack capacity to overview important public health threats such as TB. Intensified efforts is therefore required by the DEWG to help boost political commitment in countries, among donors and in international agencies in order to increase resources for TB control within the context of strengthening health systems. A strong argument is that improving human resource capacity and laboratory services as well as strengthening linkage between health care providers and other partners within the context of TB control will contribute to the development of the overall health system.

Current achievements to expand DOTS coverage have required considerable technical and financial support from a wide range of partners within DEWG. This support need to be sustained and further strengthened. The unprecedented amount of resources made available by bilateral and multilateral agencies, in particular the GFATM, has made the recent rapid expansion possible. However, it has also amplified the request for technical support for planning, implementation, monitoring and evaluation of interventions. Over the coming 10 years, sufficient resources are needed to sustain the capacity for technical support in the 22 High Burden Countries, as well as in other priority countries. *(The question of possible strategic focus beyond 22 HBCs was raised in the teleconference with the DEWG core team 22 April. A follow up discussion is planned, after which this text might be complemented or revised)*

Further the operational research agenda
Approaches to improve access to quality TB care, including PPM DOTS, Community DOTS, and PAL, are still in an early scale up stage in most countries. Continued documentation and evaluation of barriers and enablers for scaling up these initiatives is required. More in-depth analyses of hard-to-reach segments of the population and barriers to access health services are needed. DEWG will play an important role in setting the agenda and supporting operational research in this field. The operational research agenda also need to be adapted to the challenge of measuring processes, output and impact of TB control in relation to MDGs as well as equity, access and quality objectives

DOTS programmes will have to adapt to accommodate the expansion of TB/HIV collaborative activities and treatment of MDR TB. During the coming 10 years it is expected that new tools to prevent, diagnose and treat TB will become available. DOTS programmes will be the main vehicle for introduction of these new tools. Effective strategies for the adaptation of DOTS to new approaches and innovations need to be developed based on careful documentation and evaluation of new initiatives and pilots.

4. Objectives for DOTS expansion 2006-2015

In line with the general strategic directs outlined above, DEWG need to continue to assist countries to work towards the following objectives:

Objective 1. To achieve and sustain the "70/85" targets.
There will be continued efforts to improve and sustain quality of basic DOTS through strengthening human resources and improving laboratory services for sputum smear microscopy. However, in most countries this will not be enough to reach the case detection and cure rate targets. Involvement of all relevant partners is essential to reach patients currently treated outside DOTS programmes as well as patients who are not diagnosed and treated at all. The PPM DOTS, Community DOTS and PAL approaches can help increase case detection and should be applied more widely. Once all sector have become involved in DOTS implementation, it is relevant to aim for case detection well above 70%, with an ultimate vision to reach all patients with TB.

Objective 2. To ensure equitable access to quality TB care for all people with TB, especially the poor and marginalised
The completion of DOTS expansion starts with achieving the 70/85 targets and ends with all people with TB having true access to quality TB services! Neither type of TB, nor financial capacity or social status should determine access to quality TB services.

Given the poor socio-economic status of most people with TB, a pro-poor and equity-based approach requires that health services pay special attention to the needs of the most disadvantaged groups. This means identifying barriers and implementing measures that will ensure early diagnosis and effective treatment, and thereby reduce the social and financial burden of the disease for patients. People in remote rural areas often lack geographical access to even basic health services. Urban poor have

geographical access to health services but often lack financial means to access them. People with poor understanding of TB and of the health care system have difficulties identifying relevant providers and utilize them in an effective way. Migrants, "floating populations" and the homeless are difficult to provide with seamless care.

Community involvement in DOTS expansion is an effective strategy to improve access for the rural poor and help channel health information to communities. In order to reach the poor and disadvantages, health care providers that are used by this segment of the population need to be involved in DOTS. A wide range of public and private health care providers need to be targeted, including the informal private sector which is often utilised by the poor and marginalised. Slum dwellers, other urban poor and migrant populations deserve special attention. Special strategies for Urban TB Control are needed. Furthermore, referral and information systems need to be improved in order to secure efficient transfer of patients and information between different geographical areas and different types of providers.

Improving access to quality services also means reducing harmful effects of poor medical practice. Inappropriate medical practices for TB diagnosis, treatment and case management contributes to unnecessary suffering for patients, diagnostic delays, continuous spread of TB, high health care costs for patients and society, and development of MDR TB. Appropriate technologies, such as sputum smear microscopy, evidence-based treatment regimens and standardised patient monitoring mechanisms are under-used. At the same time, there is a tremendous over-use of a range of unstandardised and non-evidence based medical technologies in most health systems. High costs of unnecessary health care interventions make poor TB patients poorer and puts additional burden on the overall health system finances. The key strategies to reduce these harmful effects is to make sure that all health care providers adopt the international standards of TB care and to educate patients to utilise available services in a rational way.

5. Outline of activity areas for DOTS expansion in countries

In order to achieve above objectives, the DEWG will assist countries to implement the following activities:

1. Complete ***coverage of basic DOTS*** services
2. ***Improve quality of DOTS*** through strengthening Human Resource Capacity, training, laboratory capacity for sputum smear microscopy, drug management, supervision, and recording and reporting practices
3. Introduce / scale up ***Public Private Mix DOTS*** to promote international standard of TB care among all relevant health care providers
4. Introduce / scale up ***Community DOTS*** initiatives
5. Introduce / scale up ***Practical Approach to Lung health***
6. Introduce / scale up facilities and technical capacity for ***culture services and drug susceptibility testing***

5.1. Complete DOTS coverage

Basic coverage of DOTS within public health structures will soon be completed in the 22 high burden countries. Main challenges include to achieve 100% coverage in all HBCs and other priority countries.

5. 2. Improve quality of DOTS

Substantial investments in quality improvements of DOTS programmes have been made in many countries over the last couple of years. A major challenge for the future is to sustain the current level of financial and technical support for DOTS. However, most countries are in need of further quality improvement. The core element of improved quality is improved human resource capacity for undertaking required DOTS tasks: sputum smear microscopy, drug management, supervision, recording and reporting practices, etc. For some countries, this can be achieved through making more efficient use of available resources. For other countries, additional financial resources are needed. Yet other countries face a human resource crises that will not be resolved with additional financial resources. DOTS quality improvement need to be planned in parallel with plans for general improvement in human resource capacity. Decentralization of health service planning and financing and diminishing public financing for health poses a general threat to the sustainability of TB control. Plans to improve DOTS quality should be developed while considering general health systems challenges and competing needs within the health services. Increased political commitment for the continued support to DOTS is essential in most countries.

5.3. Public Private Mix DOTS (PPM DOTS)

¨The term "PPM DOTS" has evolved to represent a comprehensive approach to involve all relevant health care providers in DOTS and ensure that they apply international standard of TB care, while taking on DOTS tasks according to their capacity. PPM DOTS targets a wide range of public as well as private health care providers not yet sufficiently linked to NTP. Depending on setting, this may include medical colleges, general hospitals, health services under specific insurance schemes, prison health systems, army health services, NGO health facilities, corporate health facilities, private specialists and GPs, private pharmacies, and the informal private health care sector. While there is a potential role for all providers in delivering DOTS services, the NTP will need to retain and strengthen its stewardship functions, including regulation, financing and surveillance.

Evidence shows that PPM DOTS is a feasible and cost-effective strategy to increase case detection and cure rates, to reach the poor and to reduce the financial burden on patients. With the assistance of DEWG and the PPM DOTS Subgroup, several countries have piloted PPM DOTS initiatives, some have started to scale up, and a few countries have incorporated PPM DOTS fully into national TB control plans. However, PPM DOTS need to be implemented on a larger scale in many more countries, in order to have a real impact on TB control on regional and global level. Much efforts are needed to strengthen the technical capacity and coordination of PPM on country, regional and global level.

The PPM DOTS approach is particularly relevant in settings with large numbers of public and private health care providers not yet involved in DOTS. The South East Asia Region, the Western Pacific Region and parts of the Eastern Mediterranean

Region have huge private sectors as well as numerous public health care services not yet sufficiently linked to NTPs. Many countries in the European Regions have not yet fully involved public lung clinics, general hospitals, health centres, and prison health services in DOTS. In the American Region, large parts of the health systems are under social insurance schemes, which have not yet been sufficiently linked with DOTS programmes. In the African Region, health providers are scarce compared to other regions, particularly in rural areas. Nevertheless, there are large urban areas with a strong presence of private and public providers that need to be tapped. Furthermore, the NGO sector as well as the informal private sector play an important role in rural areas in Africa. Thus, with varied level of priority, PPM DOTS is a relevant strategy for all regions.

5.4. Community DOTS

Management of TB patients in many countries where the majority of the population resides in rural areas with poor geographical access to health facilities has often included mandatory hospital admission during the initial intensive phase of treatment as one way to ensure direct observation of drug taking until the patient is considered non infectious. However, a rapid and significant increase in the incidence of tuberculosis in most countries, especially those severely affected by the dual TB/HIV epidemic, has overstretched the capacity of most National TB Control Programmes (NTPs) to sustain this practice. Therefore, the NTPs operating in these settings face the challenge of raising the generally low TB case detection and treatment success rates mainly due to poor geographical access to TB services. There is an acute need to further decentralize the provision of TB services beyond health facilities to increase geographical access and to foster people's participation into patients' support, in order to increase the likelihood of successfully treating all registered patients.

Based on the evidence provided by a successful WHO cost-effective pilot study on Community DOTS initiatives from 1997-2000 in 6 African countries, WHO has so far supported 20 countries in various ways to develop plans and to implement the initiative within their NTPs.

Experiences to date show that, where implemented, Community DOTS has resulted in improved treatment success rates through decreased default and transfer out rates. A subsequent impact on case detection rates, related both to improved popular awareness and better access to care, has already been reported by some countries but it still needs to be properly documented.

The implementation of community TB care is relevant not only for its demonstrated impact on TB control, but also for the creation of more equitable ways to access quality health care and for its full synergistic effect with pro-poor policies.

5.5. Practical Approach to Lung health

The Practical Approach to Lung health (PAL) is a primary health care (PHC) strategy for the integrated management of respiratory conditions in patients aged five years and over. In PHC settings, respiratory conditions are very common. Symptoms presented by pulmonary TB cases are, in general, similar to those displayed by non-tuberculous respiratory patients. PAL is a comprehensive and symptom-based

approach to manage patients with respiratory symptoms within PHC system in order to improve the diagnosis of TB while taking into account the differential diagnoses of the other respiratory conditions. To this end, this strategy aims to improve: i) the quality of care for every respiratory patient and ii) the efficiency of PHC services for respiratory conditions, with focus on TB, acute respiratory infections (ARI) and chronic respiratory diseases (CRD).

PAL includes two major components: i) the standardization of clinical care procedures through the development and implementation of clinical practice guidelines and ii) the coordination between health care levels within the district health system as well as among various players of the health system such as health resource development, NTP, HIV/AIDS Programme, PHC services, Essential Drug Programme, health management information system, and others.

There are presently 16 countries throughout the world where there is some form of PAL activities. These countries include populations with various demographic, epidemiological and economic profiles as well as different TB and HIV burden levels. Experience in these countries have shown that PAL can significantly increase TB case detection among respiratory patients and the bacteriological confirmation of pulmonary TB cases. Furthermore, feasibility tests in various countries reported that PAL consistently reduces drug prescription, particularly the prescription of antibiotics and adjuvant drugs. Also, these tests reported that quality of drug prescription improved mainly in patients with CRDs.

PAL strategy should be considered in high HIV burden countries in order to improve the quality of the diagnosis of TB, particularly that of smear-negative. This will contribute to identifying HIV-positive respiratory patients and implementing anti-retroviral therapy. PAL should also be considered in country settings with satisfactory DOTS implementation in order to improve and/or strengthen TB case detection, the quality of TB diagnosis and the integration of TB control activities within the PHC services. In countries with intermediate or low TB prevalence or where TB is not considered as health priority in comparison to CRDs, PAL can raise the profile of TB since TB is a priority disease in PAL strategy.

5.6. Culture services and drug susceptibility testing

Although high quality sputum smear microscopy is the cornerstone of DOTS and remains the highest priority for case detection and the TB control, the strengthening of *M. tuberculosis* culturing and drug susceptibility testing (DST) services is necessary especially in high HIV and MDR-TB prevalence settings.

However, such improvements require the development of standardized training materials for culture and strengthening the technical capacity and performance. In addition, proper monitoring and evaluation tools need to be developed. Strengthening of laboratory capacity to perform culture will require a substantial increase in human and financial resources and the development of closer, more effective collaboration between national programmes and partner institutions. Recognizing the need for expansion activities, NTPs, national reference laboratories (NRLs), and key international organizations will continue to review the country/regional epidemiological data, organization, structure, and the role of the

laboratory networks in order to determine the resources needed for laboratory strengthening.

At the same time, it is necessary to develop country/regional policy to strengthen/build capacity to perform culture to enhance case finding, especially in areas experiencing a high burden of AFB smear-negative TB associated with HIV infection. It is also necessary to expand DST services in support of DOTS-Plus projects. These efforts should lead to implementation/scale up of culture and DST in settings where its use would enhance TB control and patient management.

In the teleconference with the DEWG core team it was decided that issues related to Childhood TB and TB poverty should be integrated into this section and throughout the document. This is yet to be finalised.

6. Global and regional support for DOTS expansion

The broad activity areas presented below were briefly discussed in the teleconference with the DEWG core team. Further discussion are planned in order to complete this section, in particular with regards to the work of the DEWG's subgroups.
TO BE COMPLETED AFTER ADDITIONAL INPUTS AND DISCUSSION IN CORE GROUP

In order to assist countries implement above activities, the DEWG will have the following main activities:

	Amount per year (preliminary)
Strategic and technical support to countries: strengthening DOTS and scaling up new approaches will need intense technical input to countries. This includes help in preparing plan to reach MDGs and preparation of proposals for funding TB control. The support is provided by different technical agencies through their network. Coordination organized at global and regional level.	20M
Capacity building at global and regional levels: lack of human resources is a main barriers for improving TB control. This activity will include HR development plans, training material, training of trainers and training of consultants The support is provided by different technical agencies through their network. Coordination organized at global and regional level.	30M
Operational research and policy development: this includes testing innovative approaches, facilitating assessment of new tools etc… The support is provided by different technical agencies through their network. Coordination organized at global and regional level.	3M
Monitoring progress and measuring MDGs : reinforcing monitoring and evaluation including design of and implementation support to special activities needed to measure MDGs (e.g. special surveys, data analysis etc..) The support is provided by different technical agencies through their network. Coordination organized at global level.	5M
Monitoring plans and report annually : annual DEWG meeting, other DEWG meetings, production of annual TB control report. This include reporting on progress in different approaches. Secretariat of DEWG undertake this activity	1M
Other activities of the DEWG (tentative, not complete) DEWG core team Laboratory strengthening subgroup Subgroup on Childhood TB PPM DOTS Subgroup TB and Poverty Subgroup Advocacy and communication	 0.1M 0.2M 0.1M 0.1M 0.2M 0.1M 0.5M

Monitoring and evaluation of progress
In order to monitor DOTS expansion progress in countries, new indicators and tools and methods to measure them are needed. DEWG will monitor countries efforts to develop, implement and scale up PPM DOTS, Community DOTS, PAL and the strengthening of capacity of culture and DST. For this, appropriate process indicators will be developed.

In addition new indicators are needed to monitor progress towards ensuring equitable access to quality TB services, for example:
Equity in access: This indicator should describe socioeconomic profile of patients started on treatment in DOTS programmes. It may be determined in a sample of patients registered for treatment in a DOTS programme and preferably compared to the socioeconomic profile of patients identified through prevalence surveys
Early diagnosis and treatment: Indicators are needed to monitor health seeking delay (Time from first symptom to first health care contact), health systems delay (Time from first health care contact to treatment initiation) and total delay (Time from first symptom of TB to treatment initiation). These indicators, too, may be measured in a sample of patients registered for treatment in DOTS programme

7. Scenario for DOTS expansion activities in countries 2006-2015

A scenario for DOTS expansion in regions over the next ten years has been developed. The methodology is described elsewhere. Table 1 indicates the relative importance and relevance of the different DOTS expansion activities for the different regions. More detailed descriptions of regional activity profiles, which cuts across all working groups, is provided in section XX *(The regional profiles will be written together with the other WGs)*.

Table 1. Overview of relevance of the different types of DEWG related activities.

	AFR	AMR	EMR	EUR	SEAR	WPR
Additional DOTS coverage	-	+	+	++	-	-
Additional DOTS quality	+++	++	+	+	+	+
PPM DOTS	++	++	++	++	+++	+++
PAL	+	++	++	++	+	++
Community DOTS	+++	++	+	-	++	++
Culture services	++	++	++	+++	++	++

Figure 1 shows the expected trends of population to be covered by the different activities. Population coverage is expressed in terms of population living in

administrative units where the activity has been introduced, equivalent to the common definition of "DOTS coverage". Table 2 summarises expected implementation status of activities at the 2010 and 1015 milestones.

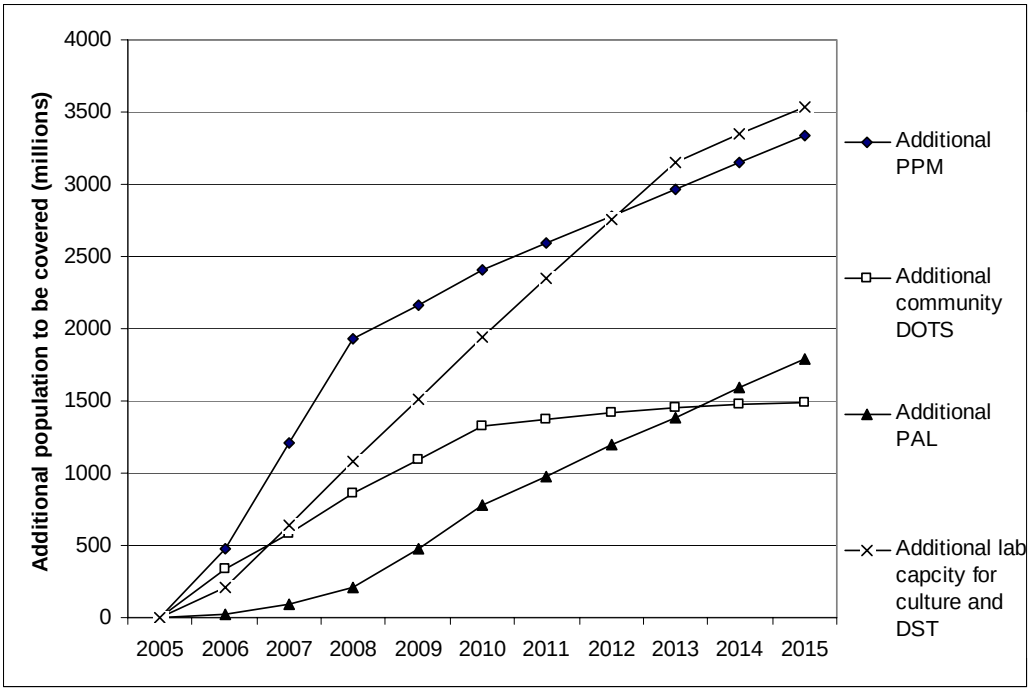

Figure 1. Trends in additional population to be covered by PPM DOTS, Community DOTS, PAL and strengthened laboratory capacity for culture and DST (Note: Values are zero at the 2005 baseline because estimates concern *additional* population.)

Table 2. DOTS expansion implementation status at 2005, 2010 and 2015 milestones

	2005	**2010**	**2015**
DOTS coverage	All HBCs covered except Brazil and Russia	Full coverage of all HBCs and other priority countries	→
DOTS quality improvement	Considerable investments and achievements, especially in SEAR and WPR	Completed in all countries in Africa, and priority countries in AMR, EMR and EUR	→
PPM DOTS	Piloted in most HBCs, limited scale up in a few HBCs and other countries	Scale up completed in key countries such as India and China, and started in most priority countries	Planned scale up completed in all relevant areas.
Community DOTS	Widely used in a number of countries in AFR, AMRO, SEAR and WPR	Full scale up completed to cover whole population in Africa.	Planned scale up completed in all relevant areas.
PAL	Few countries have pilot projects	Scale up started in selected countries, predominantly in EUR and AMR	Planned scale up completed in all relevant areas.
Culture and DST	Widely used in EUR but need quality improvement	Planned implementation completed in AMR and some key countries in SEAR and WPR	Planned scale up completed in all relevant areas.

8. Expected effects of DEWG activities

The expected combined impact of the different DEWG activities on case detection and treatment success trends are displayed in figure 2 and 3 respectively. A central assumption to the estimated impact is that the different activities are synergistic and dependent on each other. This includes also activities related to implementation of DOTS+ and TB/HIV collaborative activities (see section XX). Therefore the combined effect only has been estimated, without attempting to compare importance of the different activities.

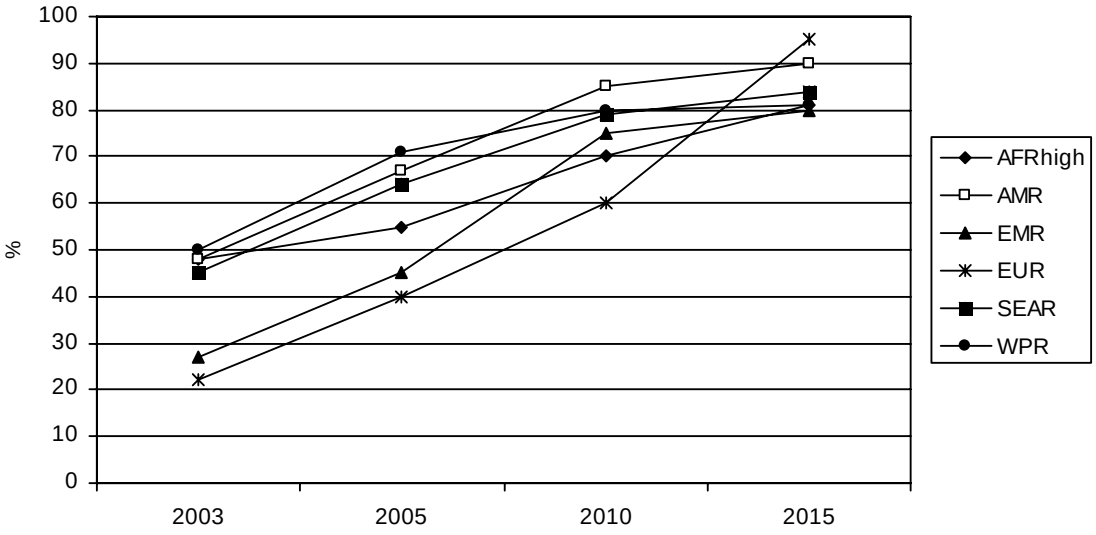

Figure 2. Estimated regional case detection trends of new smear positive cases, 2003 -2015

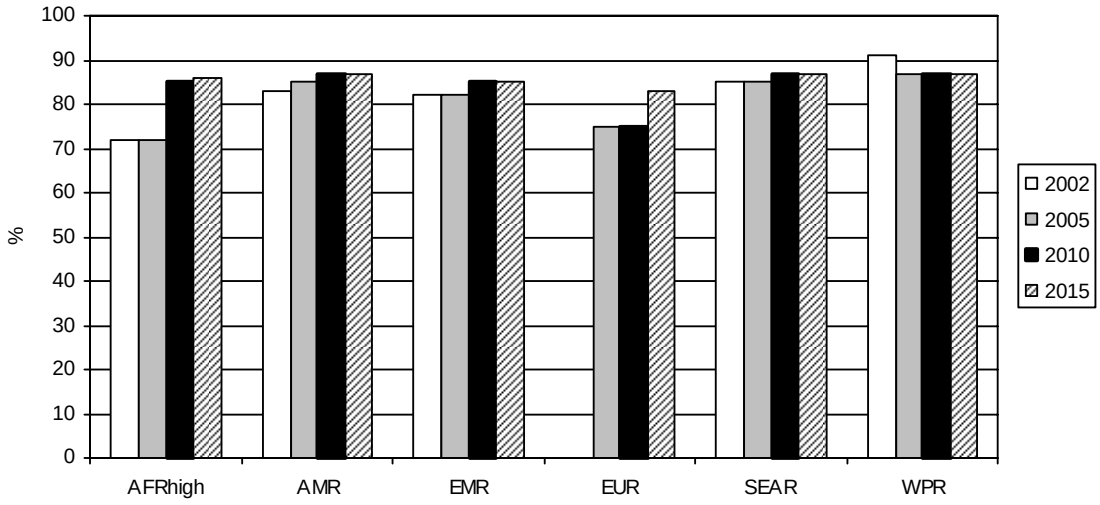

Figure 3. Estimated regional treatment success rates, new smear positive cases, 2002 - 2015

Diagnostic delay
Improved DOTS quality, PPM DOTS, Community DOTS, PAL and establishing culture services are all expected to reduce health seeking delay and providers' delay in diagnosing TB and initiating treatment. Continuously improving or sustaining case detection over the ten year period requires that diagnostic delay is gradually reduced. The reason is that the pool of currently undetected prevalent TB cases will gradually decrease as case detection activities improve. Therefore, in order to sustain and increase case detection rate, the focus of case detection will need to gradually shift from prevalent to incident cases, i.e. to diagnose cases as soon as possible after active TB has developed.

Epidemiological impact
This section will be written after TME has finalized the mathematical modelling of the epidemiological impact of the estimates changes in case detection and cure rate.

Equity in access
There is very little baseline data available concerning socioeconomic status among patients treated in DOTS programmes. Therefore, it is difficult to estimate the magnitude of improvement of equity in access. Indicators need to be developed. Baseline situation need to assessed as soon as possible and then follow up regularly.

Reduction in financial burden for patients
Available data from South East Asia suggest that shifting TB patients from out-of pocket financed non-DOTS to DOTS treatment reduces indirect and direct cost of care to patients with on average more than 100 $US during the course of treatment. This is more than the yearly income for many TB patients. It is estimated that about 17 million people with TB will be put on treatment under DOTS in South East Asia during 2006-2015. Assuming that about half of them would have to pay out-of-pocket for non-DOTS treatment had they not been treated under DOTS, the total reduction in financial burden for patients through subsidised treatment under DOTS would be about 850 million $ US in SEAR. This direct financial alleviation for mostly poor patients is equivalent to more than 20% of the total cost for DOTS implementation in SEAR. This reduction of financial burden does not include the long term financial benefits for patients and society at large related to the improved productivity resulting from curing TB.

9. Resource needs
This section will be completed after TME has completed the analyses of country/regional implementation costs and after costing has been done of DEWG activities in line with the continued discussions in the DEWG core team. The section will include:
A. Cost of implementation aggregated on regional level. This might also be presented in a joint section on regional costs, which cuts across all WGs
B. Cost of the planned activities of the DEWG's and subgroups