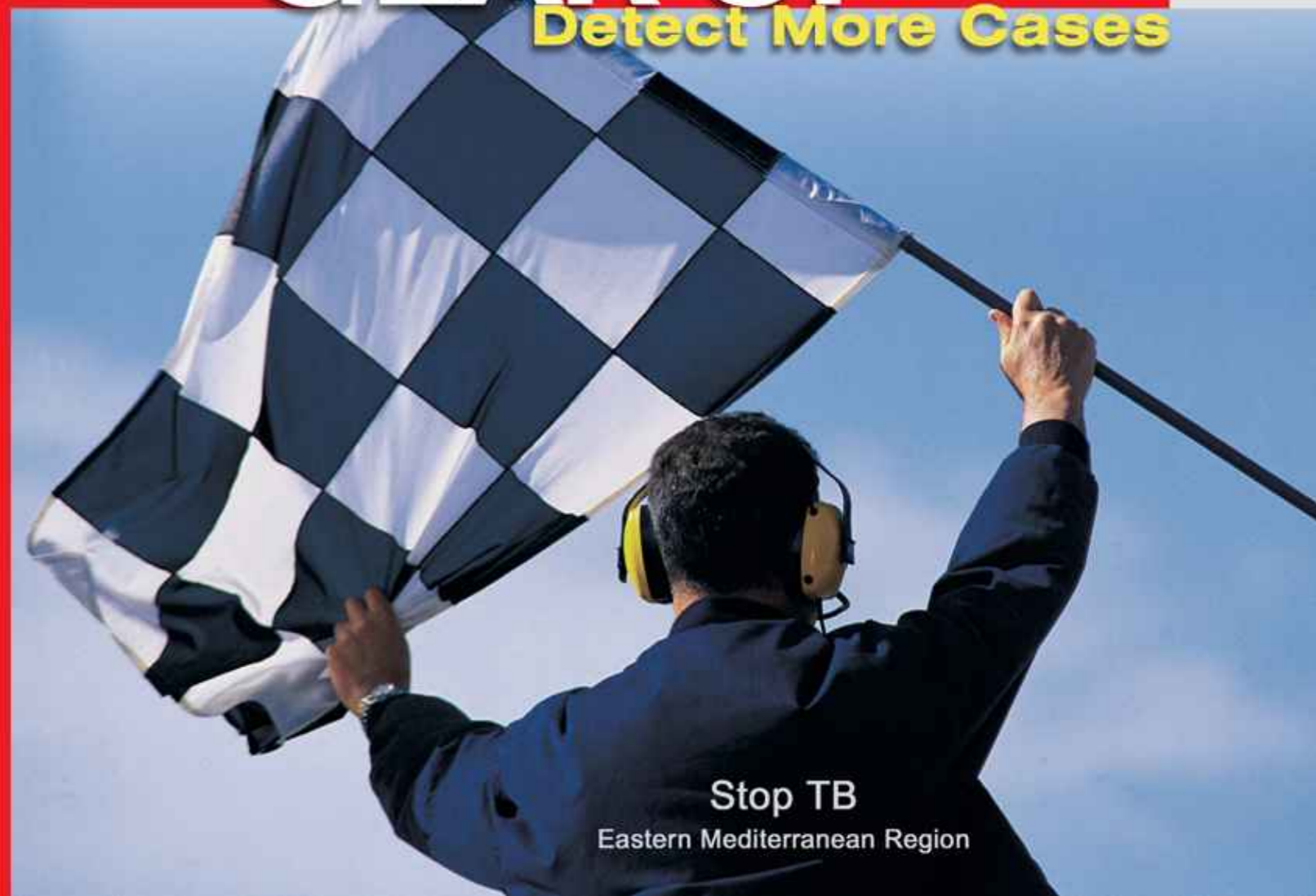




GEAR UP

Detect More Cases



Stop TB
Eastern Mediterranean Region



WORLD HEALTH ORGANIZATION
Regional Office for the Eastern Mediterranean

For inquiries please contact:
StopTB Unit
Division of Communicable Disease Control
World Health Organization
Regional Office for the Eastern Mediterranean
P.O. Box 7608 Nasr city
Cairo 11371, Egypt

e-mail: stb@emro.who.int
internet: <http://www.emro.who.int/stb/>



STOP TB
WHO Eastern Mediterranean Region



Good work has been done

with DOTS expansion in the Region
DOTS cured 250 000 people in the Region already

Big challenges still remain

regarding increasing case detection rate

The fact still remains that the regional
case detection rate is 25%

yes only 25%

while the global target is to raise it to 70% by 2005

Take action NOW . . .
Detect more cases



People with TB . . . where are they?



WORLD HEALTH ORGANIZATION
Regional Office for the Eastern Mediterranean

Contents

Message from the Regional Director	4
Good work has been done	8
Big challenges still remain	10
Addressing the low case detection rate	12
Expanding DOTS coverage throughout the Region	14
Improving the quality of DOTS activities	16
Widening the comprehensiveness of DOTS activities	18
Revisiting the estimated incidence	20
Addressing obstacles through operational research	21
Monitoring multidrug resistance	22
Country profiles	23

*DOTS saved the lives of at least 250 000 people
in the Region between 1997 and 2001*





DOTS cured me . . . it will cure you too

Message from the Regional Director



In the Name of God, the Compassionate, the Merciful

DR HUSSEIN A. GEZAIRY
REGIONAL DIRECTOR
WHO EASTERN MEDITERRANEAN REGION

Dear colleagues and friends,

2003 marks the 10th anniversary of tuberculosis being declared a global emergency by the World Health Organization. During these 10 years, countries in the Eastern Mediterranean Region, led by the ministries of health and supported by national and international partners, have worked hard to introduce the WHO tuberculosis control strategy, widely known as DOTS. The progress has been remarkable. By the end of 2002, 19 countries had achieved DOTS ALL OVER, namely implementing DOTS throughout the services of the ministries of health. Two more countries are on the way to accomplishing this. This means 21 out of 23 countries in the Region are using DOTS widely. Through the DOTS strategy around half a million people with tuberculosis were detected in the Region between 1997 and 2001. DOTS is one of the few health interventions that has been expanded so widely in such a short period of time.

More importantly, DOTS has ensured the cure of tuberculosis patients. Before the use of DOTS, only 40% to 50% of the cases detected were cured in general. This was indeed very serious as many of those who were not cured would have remained a source of infection in the community. The situation has completely changed since the introduction of DOTS. More than 80% of patients are successfully treated. Many countries in reality have already achieved the global target of 85% treatment success rate. As a result, DOTS saved the lives of at least 250 000 people in the Region between 1997 and 2001. In addition, DOTS has given benefit to more than 1 million people who are family members of tuberculosis patients. DOTS has proved one of the best public health interventions, saving such a large number of lives in such a short time.





For this reason, the theme for World Tuberculosis Day 2003 is People with TB, and the slogan is DOTS cured me – it will cure you too!

Tuberculosis has long been considered incurable and associated with social stigma. Today, the situation is different. We have an effective public health intervention, namely DOTS, that can give cure to tuberculosis patients. We need to deliver this good news to the entire community, so as to put an end to unnecessary suffering and stigmatization. We also need to acknowledge and congratulate those who have been cured by DOTS, as they are the living proof that tuberculosis is curable and that DOTS works.

At the same time, we should ensure that more and more people with tuberculosis can benefit from DOTS and are cured from tuberculosis. This is actually very important because many people with tuberculosis have yet to benefit from DOTS in the Region. The global target is to detect and treat at least 70% of the existing cases of tuberculosis by 2005. However, only one quarter of people with tuberculosis in the Region benefit from DOTS at present. This rate varies among the countries, but many of them still have less than a 50% case detection rate. Countries may not achieve the global target of 70% case detection rate by 2005, unless we drastically improve the activities relating to case detection.

WHO, together with the countries in the Region, has started working to address this problem. Technically, two areas are important. These are: making DOTS of the highest possible level of quality, and making DOTS comprehensively accessible throughout different health sectors. Revision of the estimated incidence of tuberculosis may be relevant to some countries.

In order to make DOTS of the highest level of quality, countries have started activities to ensure the key components of DOTS are implemented very accurately. Laboratory services will be strengthened and expanded, as the diagnosis of tuberculosis is first made by sputum examination with microscope. Treatment services will be made available as close to patients' homes as possible, and directly observed treatment will always be ensured. Surveillance will be strengthened to ensure activities are appropriately monitored and reported. Supervision is also important. All in all, these activities aim at ensuring people with tuberculosis are satisfied with the quality of DOTS.

In order to make DOTS comprehensively accessible, collaboration with different health sectors has started in many countries. This is particularly important nowadays as many

countries have a variety of sectors involved in health care. These sectors include the private sector, social insurance organizations, and ministries of defense, interior and higher education, as well as the ministry of health. Involvement of these sectors is essential to improve the case detection rate.

Expansion of DOTS in Afghanistan and Pakistan is also important. These two countries account for 55% of the regional burden of tuberculosis in total, but their DOTS coverage is not as high as some other countries, primarily because they started DOTS expansion late. In 2002, the two countries made good progress. Rapid DOTS expansion is taking place in Pakistan, while Afghanistan has finalized its preparation for DOTS expansion. 2003 should become a year of rapid DOTS expansion for them also.

To facilitate all these activities, I have established a Strategic and Technical Advisory Group for Tuberculosis Control in the Region in early 2002. The Advisory Group is composed of a group of international experts on tuberculosis control from inside and outside the Region. They extensively reviewed the situation of tuberculosis control in the Region during the regional meeting of national tuberculosis managers in September 2002. The Group then developed a set of comprehensive recommendations that defined the activities that should be carried out and the outcome expected in 2003. We have translated the recommendations into plans of action, and have started implementation with the countries.

Dear Colleagues,

World Tuberculosis Day is an excellent opportunity to address the fact that we have now an effective public health intervention, namely DOTS, which can cure people with tuberculosis. At the same time, this is a day to remind ourselves that many people with tuberculosis have yet to benefit from DOTS. The regional case detection rate is only 25%, while the global target is to raise it to 70% by 2005. We have only 3 years to achieve the target, and naturally we have a lot of work to do. I sincerely hope that World Tuberculosis Day will help the Region to move forward to achieve the global target.

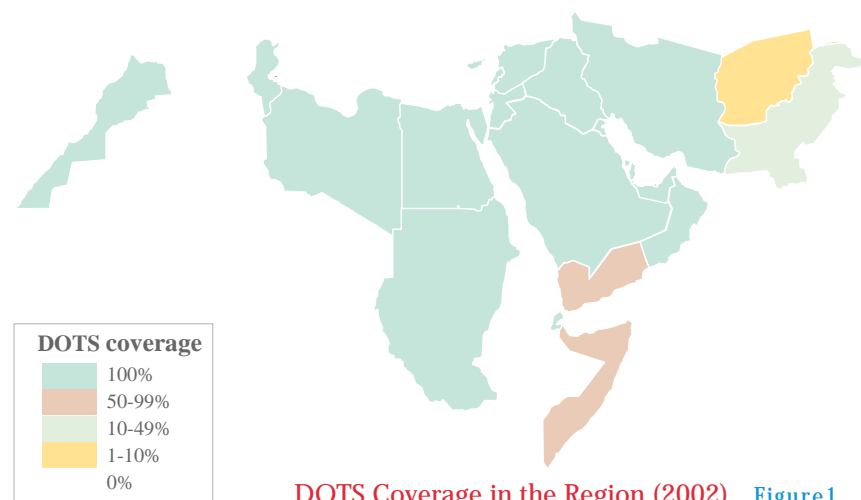
Thank you.





Good work has been done

There is no doubt that good work has been done in the field of tuberculosis control in the Eastern Mediterranean Region. In 1996, when the World Health Organization started promoting the DOTS strategy (Directly Observed Treatment, Short-course), only one country was using it widely. By the end of 2002, 19 countries of the Region had introduced the DOTS strategy throughout the health services of their ministries of health, thereby achieving DOTS ALL OVER. One country is in the final stage of accomplishing DOTS ALL OVER, and another one is using DOTS on a wider scale. Only two countries have low (<50%) coverage of DOTS (Figure 1). Through the expansion of DOTS activities, large numbers of tuberculosis patients have been detected and cured. In total, 475 454 tuberculosis patients were detected from 1997 to 2001 Global tuberculosis control. WHO reports 1997–2001¹ (Table 1). The treatment success rate in DOTS areas is as high as 81%, and the global target of 85% has almost been achieved. This means that the DOTS strategy has saved the precious lives of at least 250 000 people, and benefited at least 1 million family members during the period from 1997 to 2001. This is the reason why the slogan of World TB Day 2003 is “DOTS cured me—it will cure you too!”



DOTS Coverage in the Region (2002) Figure 1

The treatment success rate in DOTS areas is as high as 81%, and the global target of 85% has almost been achieved.

Number of tuberculosis cases detected in DOTS areas in the Region, by year

Year	1997	1998	1999	2000	2001	Total
Smear positive	25 379	41 298	47 859	55 769	62 775	233 080
All forms	25 379	79 133	88 881	121 849	13 5881	475 454

Table 1

¹Global tuberculosis control. WHO reports 1997–2002



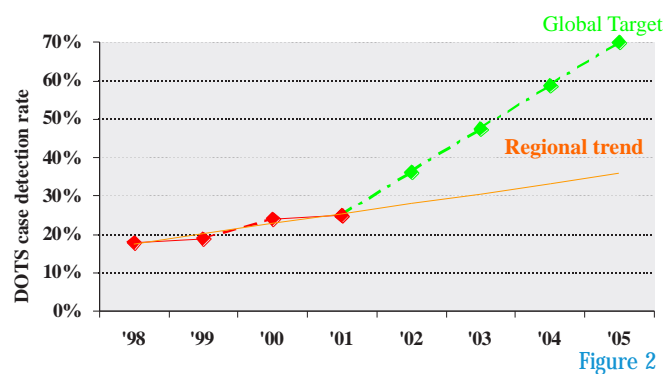
Big challenges still remain

Despite expanding coverage of DOTS activities, the DOTS case detection rate in the Region is low. The DOTS case detection rate is calculated by dividing the number of notified smear positive cases of tuberculosis in DOTS areas in each country by the estimated incidence of smear positive tuberculosis in the country. The global target is to achieve a DOTS case detection rate of 70% by 2005. At present, the regional DOTS case detection rate is only 24%. According to data from the past several years, the Region may reach a DOTS case detection rate of only 35% by 2005, which is merely half the global target (Figure 2). Quite simply, we are not detecting enough tuberculosis patients.

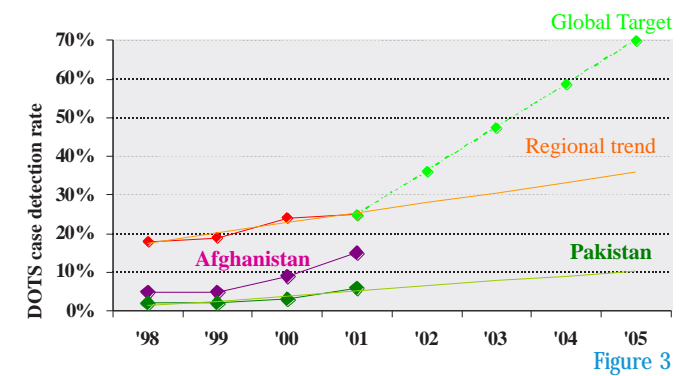
The global target is to achieve a DOTS case detection rate of 70% by 2005

Slow expansion of DOTS coverage in two countries with a high burden of tuberculosis, Afghanistan and Pakistan, is the main reason for the low DOTS case detection rate in the Region. Afghanistan and Pakistan together account for 55% of the regional burden of tuberculosis, and had achieved only 15% and 26% DOTS coverage, respectively, by the end 2001. Consequently, they had very low DOTS case detection rates: 9% and 6%, respectively (Figure 3). However, the two countries made good progress in 2002, are expected to expand DOTS rapidly in 2003, which is essential for the improvement of DOTS case detection rate in the Region.

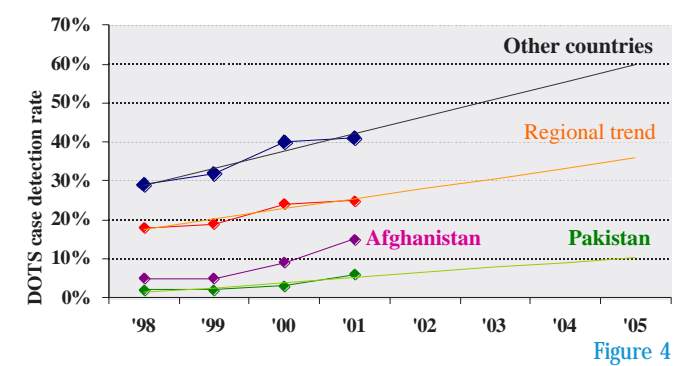
Regional trend in DOTS case detection rate



DOTS case detection rate in Afghanistan and Pakistan



DOTS case detection rate in other countries of the Region



DOTS case detection rate (2002)

- **High (>70%)**
 - Libyan Arab jamahiriya (116%), Morocco(82%), Oman (110%), Qatar (112%)
- **Intermediate (40%-70%)**
 - Tunisia (70%), Kuwait (63%), Djibouti(64%), Cyprus (59%), Bahrain (58%), Lebanon (50%), Republic of Yemen (46%), Jordan(43%), Saudi Arabia (41%)
- **Low (<40%)**
 - Egypt (38%), Sudan (35%), Islamic Republic of Iran (33%), Somalia (33%), United Arab Emirates (28%), Syrian Arab Republic (26%), Iraq (26%), Palestine (12%)
- **Low DOTS coverage**
 - Afghanistan (14%), Pakistan (6%)

The DOTS case detection rate in other countries of the Region is also not high. These countries on average had achieved only a 40% DOTS case detection rate by 2001. According to data from past several years, it is projected that these countries will increase their DOTS case detection rate to only 60% by 2005 (Figure 4). It is important to note that as almost all of these countries have achieved DOTS ALL OVER, the sharp increase in the DOTS case detection rate that was observed in the past is not expected to continue in the coming years. More work is needed for these countries.

The latest information on DOTS case detection rate by country is in Table 2.



Table 2

Addressing the low case detection rate

The challenge in tuberculosis control is very clear: improving the DOTS case detection rate while maintaining a high treatment success rate. After expanding DOTS coverage widely, improving the low detection rate is the remaining challenge. As explained above, the DOTS case detection rate is calculated by dividing the number of notified cases in DOTS areas by the estimated incidence of tuberculosis in the country (Figure 5). Therefore, in order to address the low case detection rate, it is necessary to address issues relating to notified cases and estimated cases.

It is of the paramount importance for all countries to implement all the recommendations on time.

There are three directions for action with regard to improving case notification. One is to expand DOTS coverage in Afghanistan and Pakistan, where DOTS coverage is still low. The second is to improve the quality of DOTS activities, namely to improve case detection activities in DOTS areas. This implies improvement of the laboratory network and its activities, and improvement of surveillance activities for tuberculosis control. The third is to widen the comprehensiveness of DOTS activities, namely to involve different health care providers in DOTS activities. At present, DOTS is in place throughout the services of ministries of health in many countries. However, other health care providers such as ministries of higher education, interior and defence and the social insurance and private health sectors are not fully involved in DOTS activities.

DOTS Case Detection Rate

$$= \frac{\text{Number of notified cases in DOTS areas}}{\text{Estimated incidence in the country}}$$

Figure 5

Estimations of tuberculosis incidence may need revision in some countries. However, this should take place only when DOTS activities are of higher quality and of wider comprehensiveness in countries. Other important areas are operational research activities and anti-tuberculosis drug resistance surveillance. Operational research is needed to address obstacles in improving the low case detection rate and eventually to strengthen the implementation of tuberculosis services. Anti-tuberculosis drug resistance surveillance is an important tool for understanding and monitoring the level of multidrug-resistant tuberculosis.

All of these matters were discussed extensively during 2002, particularly in the

Inter-country Meeting of National Managers of Tuberculosis Control Programmes in the Region, held in Damascus, Syrian Arab Republic on 15–17 September 2002. The Strategic and Technical Advisory Group for Tuberculosis Control in the Region (STAG), comprising distinguished experts on tuberculosis control, developed a set of comprehensive recommendations to address the above matters during the meeting in September 2002 (Table 3 and Annex: STAG recommendations). It is of the paramount importance for all countries to implement all the recommendations on time.

Summary of STAG recommendations (2002)

- Improving DOTS expansion
- Addressing disparity between estimated and notified cases
 - Strengthening mycobacteriology laboratory services
 - Strengthening collaboration in the health sector
 - Reporting by nationality
 - Validity of the estimates
- Strengthening the implementation of tuberculosis services through operational research
- Facilitating the implementation of anti-tuberculosis drug resistance surveillance

Table 3



Expanding DOTS coverage throughout the Region

Afghanistan and Pakistan, with the largest burden of tuberculosis in the Region, need to expand DOTS coverage rapidly in order to achieve DOTS ALL OVER by 2005. Although expansion of the DOTS strategy was slow in 2001, good progress was made in these countries in 2002.

In Afghanistan, preparations were made to expand DOTS coverage after more than two decades of war. Preparations included strengthening national capacity, developing national and international partnerships and identifying DOTS implementation models. An interagency coordination committee for tuberculosis control was established and a multi-year strategic plan was developed. Financial support was also made available. In Pakistan, expansion of the DOTS strategy was accelerated. DOTS coverage was increased from 24% in 2001 to 45% in 2002. The interagency coordination committee is functional, and according to the multi-year strategic plan, an increasing number of national and international partners are supporting DOTS expansion.

Good progress was made in Afghanistan & Pakistan in 2002

Accordingly, in this area, the STAG made the following recommendations.

Actions and timeline

For the regional office:

- Give priority to supporting Afghanistan and Pakistan

For countries:

Afghanistan

- By October 2002, develop a national strategic plan
- From November 2002, start implementation of the strategic plan

Pakistan

- Continue to implement the national strategic plan

Outcome

- Progress report on Afghanistan and Pakistan
- Report on resource investment in Afghanistan and Pakistan

An interagency coordination committee for tuberculosis control was established and a multi-year strategic plan was developed



Improving the quality of DOTS activities

Strengthening mycobacteriology laboratory services is critical for improving case detection activities in DOTS areas. There should be a good network of microscopy laboratories within the network of general laboratories. The services should be supported by a system for quality assurance and with sufficient human and financial resources. However such systems are not always in place. It is therefore needed to review mycobacteriology laboratory services with regard to standardization of work, quality and access, and, based on the review, to develop a plan and guidelines for strengthening mycobacteriology laboratory services.

Strengthening mycobacteriology laboratory services is critical for improving case detection activities in DOTS areas.

Strengthening of surveillance for tuberculosis control is also important. There should be a surveillance system that would ensure the collection, analysis and feedback of accurate, complete and timely information on case detection and treatment outcome at all levels of national tuberculosis programmes. This system should also be part of general surveillance for communicable diseases. Innovative approaches such as nominal case reporting and reporting of cases by nationality, wherever appropriate and needed, must also be implemented.

Accordingly, in this area, the STAG made the following recommendations.

Actions and timeline	Outcome
<p>Strengthening mycobacteriology laboratory services</p> <p>For the Regional Office:</p> <ul style="list-style-type: none"> • By April 2003, carry out situation analysis of laboratory services • By June 2003, develop a plan to strengthen laboratory capacity in the Region • By June 2003, develop guidelines for minimal requirements for laboratory services <p>For countries:</p> <ul style="list-style-type: none"> • By March 2003, review laboratory services (standardization, quality, access) • By June 2003, develop a plan to address the discovered gaps <p>Reporting by nationality For the Regional Office:</p> <ul style="list-style-type: none"> • By November 2002, develop a standard method of reporting based on patient nationality 	<ul style="list-style-type: none"> • Report on mycobacteriology laboratory survey (network, services, human resource, quality assurance, needs) • Report on the plan for laboratory strengthening including plans for regional reference laboratory • Regional guidelines on mycobacteriology laboratory services • Report on case finding by nationality in those communities with a large foreign sector

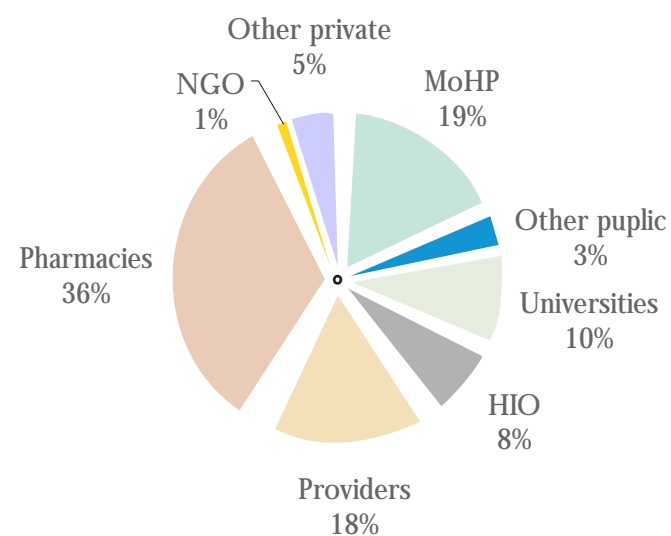
It is therefore needed to review mycobacteriology laboratory services



Widening the comprehensiveness of DOTS activities

General health services are provided by many different health sectors these days. These include, in addition to the traditional services from ministries of health, government, semi-governmental and nongovernmental health sectors. The government sector includes the Ministry of Higher Education, which is responsible for university hospitals; Ministry of Defence, for army health services; and Ministry of Interior, for prison health services and others. The semi-governmental sector includes social insurance, which is booming in many countries. The nongovernmental sector includes private for-profit organizations (private health sector) and nongovernmental organizations (NGOs). In a 1997 national health account study on health care expenditure by provider in Egypt, the services of the Ministry of Health and Population accounted only for 19% of the total health care expenditure, while the private health sector in total accounted for 54% of health care expenditure (Figure 6).

Health care expenditure by provider in Egypt



National Health Account, Egypt, 1997
Figure 6

DOTS activities in the past were rightly focused on expansion within the health services run by ministries of health, and have resulted in wider DOTS coverage in this sector. It is now important to expand DOTS activities to other health sectors. This could be done through different mechanisms, such as asking other sectors to refer tuberculosis suspects and cases to the national programme for treatment, asking other sectors to treat tuberculosis cases and notify them to the programme and/or controlling the use of anti-tuberculosis drugs in other sectors. This mix of sectors, whether public–public or public–private, is known as PPM and is an instrument to address the low case detection rate.

Purpose	practical tools for PPM
Training	- Sensitization and orientation of private providers - Sensitization and orientation of NTP staff
Diagnosis	- Referral form for sputum microscopy - Case notification form - Feedback / back-referral forms
Treatment	- Form of referral for diagnosed cases - Adaptation of NTP treatment card for use in private practice - Transfer form for patients started on treatment - Form requesting supply of drugs - Form for retrieval of defaulter tracing
Monitoring	- Quality-monitoring forms - Minor adaptations of NTP laboratory and treatment registers - Adaptation of quarterly report forms - Evaluation indicators for DOTS PPM
Agreements	- Format of a Memorandum of Understanding - Format of a Letter of Agreement

Dr. M Uplekar, STB/HQ/WHO (Table 4)

WHO has identified practical tools for PPM (Table 4). The STAG also made the following recommendations.

Actions and timeline	Outcomes
<p>Strengthening collaboration in the health sector</p> <p>For the Regional Office:</p> <ul style="list-style-type: none"> By December 2002, identify tuberculosis care providers by country By December 2002, facilitate countries in developing protocol to improve private sector services for tuberculosis care By January 2003, develop survey framework to investigate the extent of private sector involvement in tuberculosis care By April 2003, summarize the information from countries on private sector involvement in tuberculosis care <p>For countries:</p> <ul style="list-style-type: none"> By December 2002, develop a protocol to determine methods for improving private sector services for tuberculosis patients By March 2003, conduct survey on public sector involvement in tuberculosis care 	<ul style="list-style-type: none"> Report on extent of health sector involvement in tuberculosis services in the Region Report on status of country surveys on private sector involvement Report on intervention studies for improving private sector services Report on case finding stratified by sectors, identifying how information was generated



Revisiting the estimated incidence

Incidence was estimated in each country by using epidemiological modelling and all available epidemiological information. The estimated incidences are generally reliable. However, in several countries the validity of estimations may be doubtful because there are good DOTS activities and coverage, but very low case detection rates. In these countries, revalidating the estimated incidence may be needed, but only when DOTS activities are of higher quality and wider comprehensiveness. WHO has started a review exercise in a limited number of countries that meet these conditions. Accordingly, in this area, the STAG made the following recommendations.

Actions and timeline

Reviewing validity of estimates

For the Regional Office:

- By December 2002, commence a process to re-examine the estimates in countries where they are thought to be excessive

Outcomes

- Report on the result of revision of estimates

in several countries the validity of estimations may be doubtful because there are good DOTS activities and coverage



Addressing obstacles through operational research

The Regional Office has promoted operational research activities for addressing obstacles to DOTS expansion and strengthening implementation of tuberculosis services. This has been done primarily through the WHO/TDR/RBM Small Grants Scheme for communicable disease control at the Regional Office. In the last three years, 25 operational research projects on tuberculosis control have been funded through the Scheme. It is important to continue and further strengthen the use of operational research to address the issues relating to low case detection rates. Accordingly, in this area, the STAG made the following recommendations.

Actions and timeline

Strengthening operational research

For the regional office:

- By April 2003, Develop an operational research agenda to address key challenges for DOTS implementation
- Promote HIV sero-prevalence surveys among tuberculosis patients in the 2003 Small Grants Scheme
- By June 2003, improve dissemination of research results
- Continue to monitor the implementation of the operational research results

For countries:

- By April 2003, develop a plan to strengthening operational research capacity
- Continue to monitor operational research results in international meetings, etc.

Outcomes

- Report on plan and priorities on operational research
- Report on country plans to strengthen research capacity
- Report on inventory on operational research activities



Monitoring multidrug resistance

Multidrug-resistant tuberculosis caused by humans, as a result of poor management of tuberculosis cases. Care for patients suffering from multidrug-resistant tuberculosis is extremely difficult and costly. The best way to prevent multidrug resistance is to ensure appropriate care for tuberculosis patients through DOTS activities.

The best way to prevent multidrug resistance is to ensure appropriate care for tuberculosis patients through DOTS activities.

National anti-tuberculosis drug resistance surveillance has taken place only in the Islamic Republic of Iran, Oman and Morocco. Several other countries such as Egypt, Jordan, Kuwait, Lebanon, Qatar, Syrian Arab Republic, Sudan and Republic of Yemen have started surveillance. It is important to promote the surveys further to closely monitor the level of multidrug resistance. Accordingly, in this area, the STAG made the following recommendations.

Actions and timeline	Outcomes
For countries: <ul style="list-style-type: none"> Utilize the country regular budget (through the Joint Programme Review Mission exercise) to start/facilitate drug resistance surveillance 	<ul style="list-style-type: none"> Report on the progress in drug resistance surveillance



Country profiles



Gear up . . . Detect more cases