



**Best practices
in engagement
of all health-care providers
in the management
of drug-resistant tuberculosis**

THE
END TB
STRATEGY



World Health
Organization

**Best practices
in engagement
of all health-care providers
in the management
of drug-resistant tuberculosis**

WHO Library Cataloguing-in-Publication Data

Best practices in engagement of all health care providers in the management of drug resistant tuberculosis.

1.Tuberculosis, Multidrug-Resistant – prevention and control. 2.Public Sector. 3.Private Sector. 4.Organizations. 5.Delivery of Health Care. I.World Health Organization.

ISBN 978 92 4 150954 1

(NLM classification: WF 200)

© World Health Organization 2015

All rights reserved. Publications of the World Health Organization are available on the WHO website (www.who.int) or can be purchased from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int).

Requests for permission to reproduce or translate WHO publications –whether for sale or for non-commercial distribution– should be addressed to WHO Press through the WHO website (www.who.int/about/licensing/copyright_form/en/index.html).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Printed by the WHO Document Production Services, Geneva, Switzerland

Editing and design by Cadman Editing Services

Cover illustration copyright I23RF Stock Photo

WHO/HTM/TB/2015.24

Contents

Abbreviations and acronyms	1
Acknowledgements	2
Introduction.....	3
1. Referral of patients for diagnosis and treatment of DR-TB.....	4
1.1 CAP-TB Project and the engagement of the Myanmar Medical Association in Myanmar.....	4
1.2 PPM initiative of the Philippine Coalition Against Tuberculosis.....	4
2. Provision of DOT based on patient-centred care approach, treatment follow-up, and social support.....	5
2.1 CAP-TB Project and the Myanmar Medical Association's approach in Myanmar.....	5
2.2 Engagement of local treatment partner in the Philippines.....	5
2.3 Engagement of family physicians in Turkey.....	5
2.4 Engagement of public hospitals in Viet Nam.....	6
3. Diagnosis and referral of DR-TB patients for treatment	7
3.1 Engagement of public and private laboratories in Turkey.....	7
3.2 Engagement of private laboratory in Mumbai, India.....	7
4. Diagnosis, initiation of treatment and selection of a provider for patient-centred DOT and case management	9
4.1 Engagement of referral hospital in Turkey.....	9
4.2 Engagement of public and private hospitals in Pakistan.....	9
4.3 Engagement of a private hospital in Nigeria.....	10
5. Diagnosis, treatment and management of DR-TB.....	11
5.1 Engagement of an NGO, Médecins Sans Frontières in Myanmar.....	11
5.2 Engagement of private medical centres and NGOs in the Philippines.....	11
6. Providing patient support.....	13
6.1 Anti-TB Associations providing social support in Turkey.....	13
6.2 Engagement of a non-health private corporation in providing social support in Pakistan.....	13
7. Engaging in coordination of PPM implementation.....	14
7.1 Myanmar Medical Association – an NGO as an intermediary entity coordinating implementation of PPM for TB care in Myanmar.....	14
7.2 NGOs – Green Star and Population Service international – as intermediary entities coordinating implementation of PPM for TB care in Pakistan and Myanmar.....	14
7.3 NTP, penitentiary medical services and civil society – a tripartite mix for control of TB/DR-TB among patients released from prisons in Azerbaijan.....	14
8. Engaging in infection control (Viet Nam).....	16
9. Advocacy, resource mobilization, prevention and management of stigma and discrimination, regulation or linkage with existing social protection mechanisms	18
9.1 NGO and professional associations involvement in advocacy, resource mobilization and communication in Turkey.....	18
9.2 NGO – Samahan ng Lusog Baga Association – a patient support group in the Philippines....	18
9.3 Engagement of the private sector in policy, legislation and technical support in Bolivia.....	19
10. Bibliography	20

Abbreviations and acronyms

ADR.....	adverse drug reaction
CAP-TB.....	Control and Prevention of Tuberculosis
DOH.....	department of health
DOT.....	directly observed treatment
DOTS.....	directly observed treatment short course
DR-TB.....	drug-resistant tuberculosis
DS-TB.....	drug-susceptible tuberculosis
DST.....	drug susceptibility test
FAST.....	finding TB and drug-resistant TB (DR-TB) cases actively, separating safely and treating effectively
FLD.....	first-line tuberculosis drug
Global Fund....	Global Fund to Fight AIDS, Tuberculosis and Malaria
GP.....	general practitioner
ICU.....	intensive care unit
MDR-TB.....	multidrug-resistant tuberculosis
MMA.....	Myanmar Medical Association
MMC.....	Makati Medical Centre
MMD/MOJ.....	Main Medical Department of the Ministry of Justice (Azerbaijan)
MOH.....	ministry of health
MOU.....	memorandum of understanding
MSF.....	Médecins Sans Frontières
NGO.....	nongovernmental organization
NTP.....	national tuberculosis programme
OPD.....	outpatient department
PhilCAT.....	The Philippine Coalition Against Tuberculosis
PMDT.....	programmatic management of drug-resistant tuberculosis
PPM.....	public–private mix (can also be public–public mix or private– private mix)
PPM DR-TB....	public–private mix for the management of drug-resistant tuberculosis
PPM TB.....	public–private mix for the management of drug-susceptible tuberculosis
PSI.....	Population Services International
R&R.....	recording and reporting
RR-TB.....	rifampicin-resistant tuberculosis
SLD.....	second-line tuberculosis drug
TB.....	tuberculosis
TDF.....	Tropical Disease Foundation
URC.....	University Research Co. Licensed Limited Company (Viet Nam)
USAID.....	United States Agency for International Development
WHO.....	World Health Organization

Acknowledgements

The compilation of best practices on engagement of care providers and partners for management of drug-resistant tuberculosis (DR-TB) was coordinated by Linh Nguyen, under the supervision of Ernesto Jaramillo, Fraser Wares and Karin Weyer of the WHO's Global TB Programme.

Several best practices were documented through the country assessment on public–private mix for DR-TB (PPM DR-TB) that was conducted by Ayyed Mohan Muneam Al-Dulaimi and Linh Nguyen in Pakistan, Vineet Bhatia in Nigeria, and Linh Nguyen in Myanmar and Turkey.

Others who provided support to the documentation of best practices in different countries include Tran Ngoc Buu, Pierpaolo De Colombani, Le Thu Hien, Asker Ismayilov, Pham Huyen Khanh, Refiloe Matji, Seref Özkara, Mamel I. Quelapio, Kwang-il Rim, Vivian Sanchez-Lofranco and Anna Volz.

Introduction

This publication documents best practices in engagement of health-care providers in the management of drug-resistant tuberculosis (DR-TB). The aim is to share experiences and approaches that are being implemented in countries and by various health-care providers and partners. Some of the case studies in this document are also presented in the WHO's Framework for engagement of all health-care providers in the management of drug-resistant tuberculosis. In the current document, case studies are presented by approach, for easier reference by readers who are interested in examples and experiences around the globe in implementation of public–private mix for DR-TB (PPM DR-TB). The WHO/Global TB Programme (GTB) team continues to document best practices for sharing in the public domain via the WHO/GTB website. National TB programmes and partners are encouraged to share their case studies with others via the website.

1. Referral of patients for diagnosis and treatment of DR-TB

1.1 CAP-TB Project and the engagement of the Myanmar Medical Association in Myanmar

The United States Agency for International Development (USAID)-supported Control and Prevention of TB (CAP-TB) project is managed by the Myanmar Medical Association (MMA). Under this project, private practitioners involved in PPM for TB in Myanmar are trained in the identification of patients with high risk of drug-resistant tuberculosis (DR-TB), and in their referral to a nearby programmatic management of drug-resistant tuberculosis (PMDT) site for diagnosis and treatment of DR-TB. The private practitioners are updated with the national diagnostic algorithms for diagnosis of DR-TB, and informed about the designated PMDT centres in their respective local setting for patient referral.

1.2 PPM initiative of the Philippine Coalition Against Tuberculosis in the Philippines

In the Philippines, the Philippine Coalition Against Tuberculosis (PhilCAT), a multisectoral organization, has had a long history of involvement in public–private mix for TB (PPM) activities. PhilCAT was established in 1994 by motivated private specialists, to serve as a “unifying force” to the strong division that existed between the private and public sectors, fostering sharing of resources and better communication. In 2003, the Philippines’ National TB Programme (NTP) formally adopted the PPM strategy. The aim was to address the finding of the second Nationwide TB Prevalence Survey that most people with TB symptoms prefer to seek care in the private sector, even if TB services are provided free of charge in the government facilities.

The NTP nominated PhilCAT to systematically engage private physicians and institutions through referral of TB patients and the establishment of PPM units, supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GF). PhilCAT has been involved in referral of patients with presumptive DR-TB disease – mainly previously treated TB cases – to the existing PMDT treatment centres, for proper diagnosis and management. PhilCAT has a mandate to expand the orientation and training to private practitioners and hospitals for proper identification of presumptive drug-susceptible TB (DS-TB) and DR-TB cases, proper referral (using the NTP referral form), recording and reporting (R&R) of cases, and subsequent referral to PMDT satellite treatment centres for quality assessment and management.

2. Provision of DOT based on patient-centred care approach, treatment follow-up, and social support

2.1 CAP-TB Project and the Myanmar Medical Association's approach in Myanmar

In the CAP-TB project implemented by MMA and four other nongovernmental organization (NGO) partners in Myanmar, community-based treatment supporter networks have been established to provide directly observed treatment (DOT) and social support to patients on multidrug-resistant TB (MDR-TB) treatment. The treatment supporters are trained by the MMA and the NTP on treatment supervision, infection control and health education. They work closely with the community health workers and the NTP's basic TB management units to supervise the patient's treatment; they also provide patient support and health education for DR-TB patients. These treatment supporters receive monetary incentives from the project.

2.2 Engagement of local treatment partner in the Philippines

In the Philippines, the NTP has established an initiative that engages local treatment partners in promoting treatment adherence of DR-TB patients. The regional TB coordinators, in collaboration with relevant local government units, identify committed local treatment partners for the supervision of the treatment of DR-TB patients at home. Such community-based health care is provided to patients who are weak and bedridden, and thus cannot make daily visits to a treatment centre. The initiative has been implemented in two regions of the Philippines, and is expected to be extended to other regions in the future, to improve treatment adherence more widely. It also supports the NTP's plan of decentralizing DR-TB treatment and care services, and bringing services closer to the patient's residence.

2.3 Engagement of family physicians in Turkey

In Turkey, family physicians collaborate with their local TB dispensary network to provide DOT, treatment follow-up and patient support to DR-TB patients. After being diagnosed and started on treatment in a chest diseases hospital, such patients are referred to a local TB dispensary or a family physician for DOT and treatment follow-up. The family physician or TB dispensary will refer DR-TB patients to the respective chest diseases hospital for regular assessment

of treatment progress or (in some cases) for management of adverse drug reactions (ADRs) or special events during the course of DR-TB treatment.

2.4 Engagement of public hospitals in Viet Nam

In Viet Nam, a PPM DR-TB approach has been implemented that involves two public hospitals: a military hospital (Hospital 175) and a hospital for TB-HIV patients (Nhân Ái Hospital) in Ho Chi Minh City. These two hospitals have no capacity for diagnosis of DR-TB or for initiation of treatment for DR-TB patients. However, the hospitals have the capacity for diagnosing and treating DS-TB patients, as well as supervising DR-TB treatment. Since 2014, a collaboration has been established between the NTP and the two hospitals for the management of DR-TB cases, in which presumptive DR-TB patients identified in these two hospitals are referred to a TB hospital – a PMDT site in Ho Chi Minh City – for diagnosis and initiation of MDR-TB treatment. Patients with confirmed DR-TB are then referred back to the referring hospital for continuation of treatment; this includes treatment supervision, patient support and palliative care. DR-TB patients are managed in hospital or on an ambulatory basis, depending on the condition of the patient and the capacity of each hospital. DR-TB patients receive non-financial support; for example, Hospital 175 provides all meals for inpatients. Second-line TB drugs (SLDs) are supplied free of charge by the NTP to both hospitals for the treatment of DR-TB patients.

3. Diagnosis and referral of DR-TB patients for treatment

3.1 Engagement of public and private laboratories in Turkey

Public and private health providers in Turkey have access to an extensive TB laboratory network that includes 75 public and private laboratories with drug susceptibility testing (DST) capacity for first-line TB drugs (FLDs), and 26 laboratories with rapid diagnostics for detection of DR-TB (as of February 2014). However, only chest diseases hospitals have the capacity for initiating treatment of DR-TB patients. Those health facilities that lack DR-TB treatment capacity must notify the provincial health directorate about DR-TB patients, to arrange for them to be treated. The provincial TB coordinator will then contact the patient, provide the patient with information, and refer the patient to the most convenient PMDT site (normally a chest diseases hospital in the local area) for initiation of DR-TB treatment. Patients are normally started on SLD treatment and hospitalized for a certain period of time before being referred to a local TB dispensary for ambulatory-based DOT.

The same arrangement is made for the stand-alone private laboratories that receive laboratory requests from, for example, hospitals, medical centres and corporate or migration health services. When a laboratory has diagnosed a DR-TB case, that laboratory is required by law to notify the diagnosed DR-TB patient to the provincial health directorate. The legal requirement for notification of TB in general and of DR-TB is well complied with in Turkey, and most of the diagnosed patients are reported to the provincial health directorates and the NTP. In a special “active surveillance” project implemented in five provinces, the registers and records of the health facilities (including laboratories and treatment departments) are reviewed on a monthly basis, to record any diagnosed TB patients who have not been notified to the national TB surveillance system. This active surveillance system ensures that almost 100% of DR-TB patients are notified and enrolled for treatment.

3.2 Engagement of private laboratory in Mumbai, India

PD Hinduja Hospital in Mumbai, India, has a large private laboratory that has been performing conventional culture and DST for TB for almost two decades. It is also the only laboratory in the city accredited by India's National Reference Laboratory for culture and DST for both FLDs and SLDs. The laboratory was approached by the NTP for the procurement of culture and DST services for TB patients in the public sector in Mumbai. A PPM scheme for culture and DST was formulated, and a memorandum of understanding (MOU) was signed

by the laboratory and the NTP in 2009. PD Hinduja Hospital laboratory has served as a TB referral laboratory for the city of Mumbai, with referrals from many private and public care providers across India. A sputum collection and transport scheme, supported by NGOs, serves the needs for culture and DST at the PD Hinduja Hospital's laboratory.

A network of more than 30 sputum collection centres has been established across the city, with twice-weekly collection and transportation of sputum samples to the laboratory within 6 hours of collection. The laboratory now receives more than 30 000 samples for culture per year, and over 20% of its workload is serving requests from NTP facilities. The laboratory has recently been certified for SLD DST, and is the only private laboratory in the country accredited for such testing. This will be a cornerstone for the rolling out of baseline SLD DST in Mumbai. The initiation of the PPM scheme with PD Hinduja Hospital's laboratory paved the way for other private laboratories to collaborate with the NTP, and three more private laboratories have now been certified by the NTP for FLD DST in Mumbai.

4. Diagnosis, initiation of treatment and selection of a provider for patient-centred DOT and case management

4.1 Engagement of referral hospital in Turkey

In Turkey, four chest diseases hospitals are referral centres for DR-TB. All the patients either suspected of having DR-TB or diagnosed as having DR-TB are referred to one of these chest hospitals for confirmation of the diagnosis and initiation of treatment with SLDs. The DR-TB patients are usually hospitalized for a certain period of time before being discharged and referred to a TB dispensary (i.e. a TB basic management unit) for DOT and case management. The chest physicians at the referral chest diseases hospitals review the DR-TB patients on a monthly basis to assess treatment progress. In addition, those hospitals receive patients referred by TB dispensaries for assessment and management of any special events during the treatment course, such as ADRs or complications. A web-based TB management system is implemented in all the referral centres and TB dispensaries, which allows for real-time updating of each patient's information throughout the course of treatment.

4.2 Engagement of public and private hospitals in Pakistan

In Pakistan, PMDT sites have been established in both public and private hospitals. By December 2013, 17 PMDT sites had been made functional at three private and 14 public tertiary hospitals. The DR-TB patients are referred to the community-based DOT provider network once they have been diagnosed and initiated on treatment by the PMDT sites. At Gulab Devi Chest Diseases Hospital in the city of Lahore in Punjab province (a PMDT site based at a non-profit private hospital), a community health worker who is a trained DOT provider is identified for each patient, based on the updated list and addresses of the DOT providers in the local region, before the patient is discharged from the hospital. The patient is then referred by the PMDT site to the local community health worker and the appropriate TB basic management unit for DOT case management.

Indus Hospital, Karachi, is another private hospital implementing PPM DR-TB activities, with all its DR-TB patients managed on an ambulatory basis, and DOT provided by community-based treatment supporters. In the PPM DR-TB model in Pakistan, the PMDT-site hospitals continue to provide referral services during the course of treatment (e.g. regular assessment of progress and management of ADRs or complications) for DR-TB patients. A number

of e-health innovative technologies have also been implemented at the PPM DR-TB sites for TB surveillance and treatment management. These include an electronic notification and reporting system, a system for mapping geographical distribution of patients and treatment supporters, electronic reimbursements for transport fees, and use of text messaging for reporting laboratory results or monitoring of treatment adherence.

4.3 Engagement of a private hospital in Nigeria

By the end of 2013, Nigeria had 10 PMDT centres, one of which had been established outside of the NTP facilities. PPM DR-TB efforts also focus on shifting from hospital-based care to ambulatory care for DR-TB patients. The private care provider had managed to reduce the duration of hospitalization to an average of 3 months for DR-TB patients.

5. Diagnosis, treatment and management of DR-TB

5.1 Engagement of an NGO, Médecins Sans Frontières, in Myanmar

In Myanmar, Médecins Sans Frontières (MSF) is involved in an NGO-based PPM model that offers a comprehensive package of diagnosis, treatment, case management and patient support for MDR-TB patients. As of December 2013, this PPM model for MDR-TB had been implemented in 12 MSF clinics, covering 38 townships in four regions. Although only a rapid diagnostic test (Xpert MTB/RIF) is provided at the MSF health-care facilities, with conventional DST being offered by the NTP laboratories, TB physicians working at the MSF facilities provide consultation services on diagnosis, and initiate treatment for DR-TB patients. The clinics, together with their DOT supporter network, provide DOT and patient support (including food packages and social support) to the MDR-TB patients. MSF clinics receive SLDs from the NTP, and have links with the local TB management units of the NTP for R&R.

5.2 Engagement of private medical centres and NGOs in the Philippines

In the Philippines, PMDT (DOTS-Plus) activities were first initiated by an NGO in a private medical centre, with support provided by the Department of Health (DOH) and professional organizations. In 1997, the NTP commissioned the NGO Tropical Disease Foundation (TDF) to conduct the second Nationwide TB Prevalence Survey, which provided strategic evidence that most people with TB symptoms prefer to seek care in the private sector, even if TB services are provided free of charge in government facilities. In response to the above finding, in 1999, through the support of friends and donors, the TDF set up a PPM TB clinic within the Makati Medical Center (MMC), a tertiary hospital in Metro Manila. During the MMC's first year of implementation, the failure rate among its previously treated patients was 43%. DST of these cases in TDF's TB laboratory confirmed that they were MDR-TB; it also revealed the scale of the drug resistance problem in the country. Through the efforts of TDF, in collaboration with the NTP, the MMC TB clinic became the first pilot DOTS-Plus project in the country, referring to the early piloting of MDR management, now termed the PMDT.

In 2003, the TDF's DOTS-Plus project was given support by the Global Fund. This support enabled TDF to expand the private-public pilot site to the entire Metro Manila; it also allowed for DOTS-Plus to subsequently be

scaled up nationwide. With technical assistance from WHO, the first training modules for PMDT were developed, and used in a training of trainers for the national and regional levels of the NTP. Both public and private diagnostic and treatment facilities were systematically engaged to become PMDT diagnostic and treatment centres. Eventually, all aspects of PMDT, including case and programme management, case-finding, training, SLD management, recording and reporting, were mainstreamed from TDF to the NTP. Currently, under NTP leadership, diagnostic and treatment services for PMDT have been put in place nationwide in the Philippines.

In 2014, eight of the 44 operational PMDT treatment facilities were NGO-based. Operation of these eight NGO-based PMDT sites complies with the NTP's policies and guidelines on DR-TB regarding diagnosis, treatment, case management and R&R. Compliance with the national policies is mandated by a government administrative order issued by the DOH. Diagnosis and treatment (including SLDs) for DR-TB patients in these NGO-based PMDT centres are free of charge, with support provided through Global Fund grants. The staff of the private clinics have the capacity to undertake advocacy activities, and work in close collaboration with the local NTP coordinators and local government officials to mobilize and provide additional support to the patients (e.g. providing transportation, food packages and monetary assistance during the course of treatment).

6. Providing patient support

6.1 Anti-TB Associations providing social support in Turkey

In Turkey, the Anti-TB Associations (NGOs with a long history of working on TB) provide patient support to TB patients, including those with DR-TB. The support provided includes food packages, transport fees, accommodation, monetary incentives and other services, depending on the patient's needs as assessed by the treating physician. The Anti-TB Associations in Turkey receive funding for patient support and other TB activities via the local provincial governments, from income generated from entertainment activities.

6.2 Engagement of a non-health private corporation in providing social support in Pakistan

In Pakistan, Supply Chain Utility, a private corporation, is working with the NTP under an MOU for the provision of food packages for all DR-TB patients who are enrolled for treatment. After diagnosis and enrolment for treatment of DR-TB, the treatment facility provides a voucher to the DR-TB patient for receiving a food package provided by Supply Chain Utility. The arrangement with Supply Chain Utility is convenient for the patients; also, as the provision of the food package is kept separate from the health-care facilities, it reduces the workload for health-care workers. Funding for the support is provided through grants from the Global Fund.

7. Engaging in coordination of PPM implementation

7.1 Myanmar Medical Association – an NGO as an intermediary entity coordinating implementation of PPM for TB care in Myanmar

The MMA is a professional association in Myanmar that works as an intermediary for the PPM model, coordinating private practitioners in TB care and prevention. MMA signs MOUs with selected private practitioners, provides training on TB diagnosis and treatment, coordinates with the NTP for provision of TB drugs and technical support on monitoring and evaluation (including R&R), and provides incentives (part time salary) for private practitioners for their TB work. The association also trains private practitioners on infection control, and on identifying and referring patients at high risk of DR-TB for the diagnosis and treatment of DR-TB.

7.2 NGOs – Green Star and Population Service international – as intermediary entities coordinating implementation of PPM for TB care in Pakistan and Myanmar

Green Star in Pakistan and Population Service International (PSI) in Myanmar, both NGOs, have established successful franchising mechanisms for PPM TB, working with private practitioners and private laboratories. Those practitioners and laboratories are granted the privileged brand names of Green Star or PSI in their clinics or laboratories. This is a win-win collaboration between NGOs and private health-care providers in a PPM model for TB care. Although the PPM model coordinated by PSI in Myanmar is mainly for care of DS-TB patients, the health-care providers in the Green Star's model have been trained in identification and referral for diagnosis and treatment of patients suspected of having DR-TB.

7.3 NTP, penitentiary medical services and civil society – a tripartite mix for control of TB/DR-TB among patients released from prisons in Azerbaijan

In Azerbaijan, a countrywide tripartite collaboration agreement has been signed between three entities – the Main Medical Department of the Ministry of Justice (MMD/MOJ), the NTP and Support to Health (an NGO) – to ensure continued treatment management for TB and MDR-TB patients following their release from prisons. This partnership has achieved TB treatment adherence

of almost 100% among the patients who have been released from prisons. It has set clear targets for health education and patient counselling, the exchange of clinical information between the health management systems and health facilities of MMD/MOJ and the NTP, and follow-up of patients after their release from prison.

MMD/MOJ and Support to Health work together on health education sessions in prisons, collect clinical and follow-up information through working closely with health personnel at DOT facilities, and manage and supply incentives to patients and health-care personnel (supported via Global Fund grants). Support to Health follows up closely with patients and their family members, providing psychosocial support, incentives and enablers, and juridical support. The support of this NGO is important in ensuring treatment adherence and patients' reintegration into civil society. As a result of the active involvement of Support to Health, the engagement of the various communities in the fight against TB has significantly increased.

This PPM approach has dramatically diminished the rate of loss to follow-up, and has contributed considerably to the increase of treatment success among MDR-TB patients, which has risen from 65% to 83% over recent years.

8. Engaging in infection control (Viet Nam)

In Viet Nam, University Research Co. Licensed Limited Company (URC), in collaboration with the NTP and Partners in Health, has coordinated a project called FAST. The FAST project focuses on TB infection control under the USAID TB CARE II Project, at Quang Nam Provincial Hospital for TB and Lung Diseases. FAST stands for finding TB and drug-resistant TB (DR-TB) cases actively, separating safely and treating effectively. TB is spread in hospitals by coughing patients with undiagnosed TB or DR-TB who are not on effective treatment. By shortening the duration from the initial visit to identification of presumptive cases, diagnosis and treatment initiation, FAST seeks to reduce TB transmission at the hospital.

The FAST project has implemented an algorithm of patient screening to quickly identify presumptive cases at the outpatient department (OPD) and intensive care unit (ICU) as the entry points of the hospital. Masks, a simple and cheap infection control measure, are provided to visiting patients, who do not wear their own masks, to reduce airborne transmission at the crowded OPD and ICU. Nurses at the OPD and ICU actively screen all visiting patients using a standardized questionnaire to capture the patient's history, symptoms and laboratory tests from referring facilities. Doctors review the questionnaires, conduct medical exams and ask additional questions to quickly identify presumptive cases to request appropriate tests.

Presumptive DR-TB cases are given priority to receive sputum smear, X-ray and Xpert testing, with the sputum smear and X-ray requested before an Xpert test. Limited Xpert testing capacity at the hospital required the prioritizing of Xpert testing of presumptive DR-TB cases and presumptive TB cases with negative smears. The FAST project also incorporated a simple MS Access database within the current data recording system using MS Excel sheets, to monitor the duration from the initial visit to diagnosis and treatment initiation, which were not previously measured.

With FAST implementation and Xpert testing available on site, the average number of days from receipt of Xpert specimens to DR-TB treatment initiation fell from 34 days in 2013, to 11 days over the period January–April 2014, and to 5 days over the period May–December 2014. The average number of days from the patient visit to DR-TB treatment initiation was 9 days over the period May–December 2014. Since the patient visit dates were not recorded before FAST implementation, it is not possible to calculate this time indicator for previous time periods for comparison. The number of positive pulmonary TB cases diagnosed increased from 345 over the period May–December 2013

to 426 over the same months in 2014. Similarly, the number of DR-TB cases diagnosed rose from 11 to 26 over the same time periods.

9. Advocacy, resource mobilization, prevention and management of stigma and discrimination, regulation or linkage with existing social protection mechanisms

9.1 NGO and professional associations involvement in advocacy, resource mobilization and communication in Turkey

In Turkey, TUDADER (an NGO working only for TB advocacy), the Anti-TB Associations of Turkey, and the Turkish Thoracic Society (a professional association) have a long history of working on advocacy for TB. These three bodies work actively and in collaboration with the NTP to organize several advocacy, communication and resource mobilization activities each year in support of Turkey's NTP. They contribute significantly to the Tuberculosis Education and Propaganda Week (the week following the first Sunday of January each year), with activities such as media releases, community awareness, symposia and training. They also assist with other advocacy activities throughout the year to raise awareness of and bring attention to TB control, and strongly support the NTP in advocating for government support for TB-related legislation, policy development and resource allocation.

9.2 NGO – Samahan ng Lusog Baga Association – a patient support group in the Philippines

In the Philippines, Samahan ng Lusog Baga Association, a non-profit NGO, actively works as a patient support group. The association is based at the Lung Center of the Philippines, and comprises former TB or MDR-TB patients who have been cured or have completed treatment. This group of former TB patients undertakes advocacy work and peer counselling among patients in the PMDT treatment centres. Representatives of the association also give testimonies during World TB Day activities, and at the annual or monthly professional lung association conventions. They also serve as resource speakers in promoting health and education on basic facts about TB and MDR-TB, and disease prevention and control during community outreach activities in deprived urban populations. The group works in close collaboration with the NTP and DOH on the development of national policy and strategic plans for TB. As a member of the Country Coordinating Mechanism, the patient support group is strongly involved in the development, assessment and submission of proposals for funding approval by the Global Fund and other stakeholders.

9.3 Engagement of the private sector in policy, legislation and technical support in Bolivia

In Cochabamba, a city of 2 million people in Bolivia, a local MDR-TB advisory committee has been established since 2005. The committee provides advisory and technical support to the local TB programme on the management of MDR-TB. The members from the private sector (comprising up to 50% of the committee members) – especially those from the Pneumology Society, a professional association – have been important actors in the committee since its inception. They contribute significantly to the committee's activities, together with the NTP and other public entities, and demonstrate their commitment by the voluntary contribution of their time. Face-to-face meetings are held on a monthly basis, and extraordinary meetings are requested for the review of severe cases of MDR-TB or those having ADRs. The MDR-TB committee members work as technical advisors to the local TB programme on policy and regulatory aspects, especially in relation to enforcement of the regulations on mandatory TB notification and dispensing of anti-TB drugs. Through these efforts, mandatory case notification and a ban on over-the-counter sales of FLDs have been enforced.

The Pneumology Society is also actively involved in promoting compliance with the national TB and MDR-TB policies among its members in both the public and private sectors. All SLDs and other costs related to MDR-TB treatment (e.g. hospitalization and drugs for ADRs) are covered by the government. Therefore, when a DR-TB patient is diagnosed in a private clinic, the NTP is contacted and coordination is established between the respective private clinic and the nearest health centre, to provide SLDs and laboratory services such as culture and DST. Once the patient is released home, the peripheral health centre takes responsibility for the person's care and treatment.

10. Bibliography

1. Engaging all health care providers in TB control. Guidance on implementing public–private mix approaches. Geneva, World Health Organization. 2006 (http://www.who.int/tb/publications/2006/who_htm_tb_2006_360/en/, accessed 17 April 2015).
2. Framework for engagement of all health-care providers in the management of drug-resistant tuberculosis (WHO/HTM/TB/2015.04). Geneva, World Health Organization. 2015.
3. Global strategy and targets for tuberculosis prevention, care and control after 2015. Geneva, World Health Organization. 2014 (http://www.who.int/tb/post2015_strategy/en/, accessed 17 April 2015).
4. Global tuberculosis report 014. Geneva, World Health Organization. 2014 (http://www.who.int/tb/publications/global_report/en/, accessed 14 April 2015).
5. Multidrug-resistant tuberculosis. Report of the fifth meeting of the Regional Advisory Committee (r-GLC SEAR) on MDR-TB. Mumbai, India, 29–31 May 2014. New Delhi, World Health Organization South-East Asia Region Office. 2014.
6. Public–private mix for drug-resistant tuberculosis: A situation assessment tool to engage all relevant care providers in drug-resistant tuberculosis (DR-TB) management at country level. Geneva, World Health Organization. 2015.
7. Quelapio MI, Mira NR, Orillaza-Chi RB, Belen V, Munez N, Belchez R et al. Responding to the multidrug-resistant tuberculosis crisis: mainstreaming programmatic management to the Philippine National Tuberculosis Programme. *Int J Tuberc Lung Dis.* 2010;14(6):751-757 (<http://www.ncbi.nlm.nih.gov/pubmed/20487615>, accessed 3 August 2015).
8. Tupasi TE, Radhakrishna S, Co VM, Villa ML, Quelapio MI, Mangubat NV et al. Bacillary disease and health seeking behavior among Filipinos with symptoms of tuberculosis: implications for control. *Int J Tuberc Lung Dis.* 2000;4(12):1126-1132 (<http://www.ncbi.nlm.nih.gov/pubmed/11144454>, accessed 3 August 2015).



**World Health
Organization**

For further information, please contact:
World Health Organization
20, Avenue Appia CH-1211 Geneva 27 Switzerland
Global TB Programme
E-mail: tbdocs@who.int
Web site: www.who.int/tb

ISBN 978 92 4 150954 1

