



PPM  
PMDT  
LINKAGE

A TOOLKIT

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### DISCLAIMER

This guide draws from the existing PPM Toolkit and adaptations made by WPRO and tested in the Philippines.



**TB CARE I**

## ABBREVIATIONS

C/DST	Culture and Drug Susceptibility Testing
DOTS	Directly Observed Treatment with Short Course
EQA	External Quality Assurance
ISTC	International Standards of Tuberculosis Care
KNCV	KNCV Tuberculosis Foundation
LPA	Line Probe Assay
(M)DR-TB	(Multi) Drug-Resistant TB
MoH	Ministry of Health
TST	Mantoux/Tuberculin Skin Test
MoU	Memorandum of Understanding
NGO	Non-Governmental Organization
NRL	National TB Reference Laboratory
NTP	National Tuberculosis Program
PMDT	Programmatic Management of Drug Resistant Tuberculosis
PPM	Public Private Mix
SLD	Second line drugs
SoP	Standard operating procedure
TB	Tuberculosis
WHO	World Health Organization

## BACKGROUND AND RATIONALE

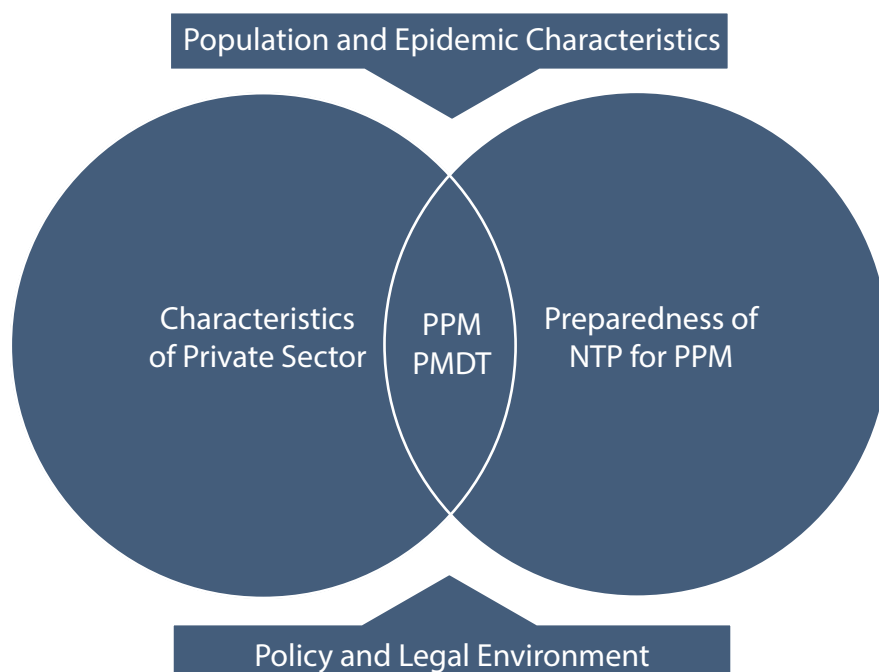
One of the obstacles in scale up of Programmatic Management of Drug Resistant Tuberculosis (PMDT) is the poor linkage of PMDT with hospitals and private practitioners. Health care providers in hospitals and private sector are often diagnosing and treating complicated TB cases, including drug resistant TB (DR-TB) and patients with adverse drug reactions. Multi drug resistant TB (MDR-TB) patients are usually not diagnosed or treated according to the International Standards of Tuberculosis care (ISTC) as described in standards 11 and 12, nor notified to the National TB Program (NTP). As a consequence, drug resistance will be created and amplified, and financial barriers to patients sometimes cause catastrophic health expenditures by the patient's family, resulting in poor treatment compliance and default, thereby amplifying the (M)DR-TB problem.

Public Private Mix (PPM) for (M)DR-TB can increase detection and management of (M)DR-TB by establishing effective referral links and/or building the capacity of providers and institutions outside NTPs to adequately presume, diagnose, treat and report MDR-TB patients, in the same way as PPM has been shown to do for drug susceptible TB.

A reason for poor linkage could be that hospitals and private doctors assume that the regular DOTS is a public health concern managed by health center staff, whereas the management of (M)DR-TB case is more the domain of specialists. However, in PMDT clinical and programmatic issues are equally important. In some countries strong regulations for infectious disease control sets the limits for private sector involvement in TB control including PMDT, however in several high burden countries regulations are weak and private sector operates independently from the NTP.

NTPs scaling up PMDT under PPM will have to be supportive to private sector and responsive to issues faced by the private doctors, including the need for support for all aspects of programmatic and clinical management of (M)DR-TB patients, such as incentives and enablers and a functioning referral system. PPM PMDT implementation also depends on the (M)DR-TB epidemic in the region as well country's or province's policy and legal environment.

Figure 1. Factors influencing PPM PMDT implementation



Through the development of a practical tool on how best to link PMDT with hospitals and private practitioners, better collaboration can be established whereby both NTP and private providers feel comfortable. The PPM MDR-TB Taskforce has developed a situational analysis tool to assess engagement of private sector in control of (M)DR-TB. This tool/checklist needed to be revised for the purpose of this core project. This tool is an addendum to the existing toolkit as developed by WHO and adapted by the WHO's Western Pacific Regional Office in the Philippines. It is based on analysis of responses to written questionnaires and oral interviews, and on discussions with private providers: general practitioners, specialists, hospital managers and laboratory staff during workshops.

We field tested the draft tool in a number of key countries (Indonesia, Kenya and Nepal) with existing Hospital DOTS Linkage projects and PPM, each with their own specific issues. Indonesia has a long experience with Hospital DOTS Linkage and well established PMDT in a mix of public and private facilities, although not yet on a country-wide scale. Kenya has a well established DOTS programme and PMDT with an increasing role of the private sector, both non-governmental organisations (NGOs) and private for profit. Nepal has well established links with non-governmental providers, including a Culture and Drug Susceptibility Testing (C/DST) laboratory and almost half of the (M)DR-TB treatment centres are managed by non governmental provider partners. The lessons learned in these countries were used to produce a practical guide which can be used globally.

The KNCV/WHO approach in these countries has been as follows:

- Review and update the "Situation Assessment Tool to Engage All Relevant Care Providers in (M)DR-TB management/Scale Up" that has been developed by the PPM-MDR-TB taskforce.
- Conduct participatory in-country assessment of achievements and challenges by written and oral questionnaires for NTP Manager, private doctors, hospital managers, staff of private laboratories and pharmacies
- Conduct a workshop involving all relevant stakeholders to review the findings of the assessments. The results of these efforts have been used to "fine tune" the tool as well as to assist countries to develop plans for implementation and technical assistance (setting priorities for approaches and technical assistance).
- Develop a practical guide/toolkit, based on best practices and lessons learnt from the experiences in the 3 participating countries, including inputs for improvement and use of PPM PMDT linkage assessment and planning.
- Present the results of this core project during international forums (for instance in symposia during The Union World Conference) to promote use of this tool for application in countries with a large private sector.

The scope and task-mix for different providers in PMDT are outlined below:

1. Referring suspected MDR-TB cases for diagnosis
2. Patient support, disease education, provision of DOT for MDR-TB cases and default tracing
3. Diagnosis and treatment of MDR-TB
4. Drug supply and drug management
5. Promotion and implementation of infection control measures in all settings
6. Advocacy at all levels for resource mobilization, rational use of anti-TB drugs, addressing stigma, and legislation that reflects political commitment of government

PPM for susceptible TB care and control concerns the possible task-mix earlier recognized, as presented in the table below<sup>1</sup>.

	Tasks	National TB Program	Public or Private Institution	Individual Private Provider	Private/ Public Laboratory	Non Physician/ Pharmacy
Clinical Tasks	Identify TB Symptomatics					
	Collect Sputum Samples					
	Refer TB Suspects					
	Notify/Record Cases					
	Supervise Treatment					
	Do Smear Microscopy					
	Diagnose TB					
	Prescribe Treatment					
	Inform Patients About TB					
Public Health Tasks	Identify and Supervise Treatment Supporters					
	Follow up on Defaulters					
	Training Care Providers					
	Supervision					
	Quality Assurance for Laboratories					
	Monitoring and Evaluation					
	Drug Supplies and Management					
	Provide Stewardship: Financing and Regulation					

\* Shaded cells correspond to tasks that can be taken up by respective provider type.

The PPM PMDT Linkage toolkit to help the NTP managers/staff to establish, expand and improve linkage of PPM and PMDT consists of:

1. Inventory (checklist) of possible issues and challenges for PPM PMDT linkage
2. Assessment of PPM PMDT linkage for the NTP manager
3. Questionnaire for private providers
4. Questionnaire for managers of (private) hospitals
5. Questionnaire for staff of private laboratories
6. Questionnaire for staff of private X-ray diagnostic centers

## 1. Inventory (checklist) of Possible Issues and Challenges for Linkage

From written questionnaires, oral interviews and Focus Group Discussions (FGD) with private providers, hospital managers and laboratory staff of the three countries, a number of challenges and issues for PPM PMDT linkage were identified and are presented in Annex 1. These issues and challenges should be regarded both from the NTP perspective as from the viewpoint of the private providers. They are grouped according to commitment for dealing with (M)DR-TB, clinical management of (M)DR-TB patients, linkage with NTP, financial aspects and human resources implications. The checklist can assist

1 Public-private mix for TB care and control: a toolkit. ISBN 978 92 4 150048 7. WHO/HTM/TB/2010.12.

NTP managers to map the prevailing issues for specific groups of private providers. Using this tool in countries may elicit other, not yet mentioned, important issues to be addressed when linking private providers with the NTP. Although most are specific for (M)DR-TB, these are also applicable to susceptible TB.

## 2. Assessment PPM PMDT Linkage for NTP Manager

Purpose of this questionnaire of the tool is to help NTP manager to map the situation in the country from the NTP/MOH perspective. It includes considerations about (M)DR-TB prevalence, financing mechanisms (e.g. health insurance schemes, etc.), strategies to deal with moderate, low and extremely low exposure of providers/hospitals to (M)DR-TB, optimal level of decentralisation of (M)DR-TB diagnostic and treatment services and treatment modalities, etc.

Structure:

1. **Mapping** of existing private (profit and not for profit) and public TB care providers
2. Existing arrangements for **PPM/PMDT linkage**, and prospects for expansion of PPM/PMDT linkage, from NTP managerial perspective
3. Linkage of **PRIVATE LABORATORIES** with the National TB Reference Laboratory (NRL), and prospects for expansion of Laboratory services in PMDT/PPM linkage
4. **DRUG MANAGEMENT** of second line drugs (SLD), and prospects for expansion of SLD management in PMDT/PPM linkage

## 3. Questionnaire for Private Providers (Medical Doctors, Specialists)

Purpose of this questionnaire is to get insight in the **contacts with** presumed and confirmed (M)DR-TB patients, **knowledge** of (M)DR-TB risk categories as defined by the NTP (such as retreatment cases, contacts of known (M)DR-TB cases, etc.), diagnosis and treatment, **experience** with management of (M)DR-TB patients, and **preparedness** for linkage with NTP regarding PMDT.

Structure:

1. Personal profile
2. Exposure to presumed (M)DR-TB patients and knowledge of risk factors of (M)DR-TB
3. Clinical management of (M)DR-TB patients
4. Management of SLD
5. Opinion about and preparedness for PPM PMDT linkage with NTP

## 4. Questionnaire for Managers of (Private) Hospitals

Purpose of this questionnaire is to get insight in the hospital profile, opinion about linkage with NTP, including monitoring and evaluation (M&E) and supervision, clinical management of (M)DR-TB patients, and management and quality of SLDs.

Structure:

1. Profile of the hospital
2. M&E and supervision of (M)DR-TB care and control activities
3. Management of (M)DR-TB patients
4. Management of SLDs
5. Opinion on the Linkage with NTP in general
6. Prospects for expansion

## 5. Questionnaire for Managers of Private Laboratories

Purpose of this questionnaire is to get insight in the laboratory profile, procedures such as smear microscopy, culture and drug susceptibility testing (C/DST) and molecular techniques, laboratory activities including quality assurance systems, standard operating procedures (SoPs), opinion about linkage with NTP, recording and reporting, workload and prospects for expansion under PPM PMDT linkage.



Structure:

1. Profile of the laboratory
2. SoPs for TB
3. Laboratory activities
4. Workload
5. Prospects for expansion

## **6. Questionnaire for Managers of Private X-ray Units**

Purpose of this questionnaire is to get insight in the profile of the X-ray diagnostic centre, the activities and prospects for expansion under PPM PMDT linkage.

Structure:

1. Profile of the X-ray unit
2. Activities
3. Existing referral practices for TB diagnosis and treatment
4. Workload
5. Prospects for expansion

## HOW TO APPLY AND USE RESULTS

### Step 1. Use the questionnaires for baseline situational analysis, and regularly for monitoring purposes

1. Adjust the tool to the specific country needs, but ensure that the tool is as “lean and mean” as possible, specially for time constrained of private providers
2. Include as heterogeneous group as possible of private providers
3. Consider to administer the questionnaire through the internet, or create a web-based version
4. Consider provision of incentives to participate in the mapping (for instance a draw for a free coffee/tea)
5. Use essential questions in any existing Hospital DOTS Linkage of PPM tool used in the country
6. Make the tool part of any existing DOTS accreditation process for hospitals and individual providers

### Step 2. Use the Results of the Data from Baseline and monitoring to Increase linkage Between PMDT (NTP) and Private Providers Caring for (M)DR-TB

1. Involve all relevant professional associations. The role of professional association for awareness, preparedness and quality of care or (M)DR-TB is key and adaptation and implementation of the ISTC, in particular the standards concerning (M)DR-TB, are important tools in the linkage of PMDT and private (non-NTP) providers
2. Explore possibilities to make notification of (M)DR-TB cases compulsory by law
3. Arrange a regular dialogue between private providers and NTP
4. Use existing Accreditation and Certification schemes to address PPM/PMDT linkage
5. Arrange payments for PMDT services through health insurance and financial enablers of (M)DR-TB patients in the private sector, linked to quality assurance mechanisms (as under item 4)
6. Ensure availability of quality assured SLD only, through proper regulations or initiating the process of quality assurance for SLD (imported and locally produced)
7. Consider the development of an app for mobile phone or tablet to give private providers access to the NTP’s web based tools for notification of TB patients, their regimens and treatment outcomes.
8. Enable a referral system to the national referral centre (Centre of Excellence) for management of (M)DR-TB in the country, including uninterrupted information exchange and up-to-date training
9. Promote and implement TB infection control measures in health care settings (wards and outpatient departments) and at home of (M)DR-TB patients
10. Enable access to international and web- based resources on clinical management of (M)DR-TB

### Step 3. Develop a Planning Matrix for PPM PMDT Linkage Activities, Based on the Challenges Identified

Here is an example of a table highlighting relevant areas and activities to implement PPM PMDT linkage. Such a table could be adapted by the NTP in the country.

Activity Area	Activity (Examples)
PPM implementation	Presume
	Refer
	Diagnose
	Treat
	SLD side effect management

Advocacy	Reduce stigma
	Increase funding
	Adapt legislation
PPM Training	Trainings for those involved in PPM PMDT
SLD Supply and Management	Arrange supply and management of quality assured SLDs in private sector
Patient Support	Provide psycho-social support
	Engage communities
M&E and Supervision	Define indicators (see below under step 4)
	Job descriptions
	Visits
Recording and Reporting	Adapt forms
Financing	Budget for PPM PMDT linkage activities

#### Step 4. Define Key Indicators to Measure PPM PMDT Linkage

Define and develop key indicators to monitor and evaluate PPM/PMDD linkage, such as

- Proportion of private providers involved in PMDD and linked with NTP
- Proportion of presumed (MODR-TB referred by private providers
- Proportion of (M)DR-TB patients diagnosed by private providers
- Proportion of (M)DR-TB patients receiving treatment by private providers
- Proportion favorable (interim) outcomes (Cured and Treatment Completed) of (M)DR-TB patients treated by private providers

#### In Summary

Integrate PPM in already developed national strategy and operational guidelines on PMDD and vice versa, based on the assessment of capacity of the NTP and appropriate task mix of providers.

## 1. Inventory (Checklist) of Issues of Private Providers

The following is an inventory (checklist) of points raised by private providers (medical doctors, hospital managers and laboratory staff) in the countries visited.

The list consists of challenges which NTP managers should address, or is already addressing, to assist private providers, or vice versa, in order to establish or improve PPM PMDT linkage.

<b>INVENTORY (CHECKLIST) of ISSUES PPM PMDT LINKAGE</b>	
<b>Commitment</b>	Raising public awareness of (M)DR-TB problem Stigma/fear (for other patients in the clinic, for staff) Attitude of health professionals Level of decentralization of (M)DR-TB centres Workload (too few, too many (M)DR-TB patients) Support from Director/Management
<b>Clinical Management</b>	Complexity of (M)DR-TB management, SLD side effects management, co-morbidities management Freedom for professional proficiency in diagnosis and treatment Need for awareness of and following standards as in ISTC Need for awareness of and following NTP Guidelines and standards Diagnostic delays High patients' drop-out rate Very sick and difficult to treat ("hopeless") patients No C/DST facilities in all hospitals, need for referral Possibility for consultation with other experts/(M)DR-TB working group Quality and availability of SLD Patient options for modalities of treatment (in/out-patient treatment)
<b>Linkage Between NTP and Private Sector</b>	Engagement and communication among private doctors and NTP Training on (M)DR-TB of providers by NTP Feedback after referral Recording and reporting format time consuming Formal accreditation as (M)DR-TB treatment centre or Memorandum of Understanding (MoU) between (private) hospital and NTP Public health actions by NTP: e.g. defaulter tracing, contact investigation
<b>Finances</b>	Investments in upgrading of infrastructure (e.g. infection control in waiting room and consultation room, (M)DR-TB hostels or (M)DR-TB in-between-care units) Treatment costs by patients Psycho-social support (e.g. transportation, also for referral) Income for private doctors Adequate incentives for private providers Health insurance systems
<b>Human Resources</b>	Training courses/workshops Supervision and mentoring Proper attitude of NTP supervising staff Level of expertise needed at all levels, including home care providers and supervisors
<b>Other</b>	

## 2. Self-Assessment of PPM PMDT Linkage for NTP manager

Purpose of this self-assessment is to map the situation regarding PPM and PMDT and the linkage from the NTP/MOH perspective.

### 1. Mapping of existing private (profit and not for profit) and public providers

<b>Has PPM mapping being done? (circle yes or no)</b>	<b>Yes</b>	<b>No</b>
How many public facilities, and how many involved in DOTS*		
How many private profit hospitals, and how many involved in DOTS*		
How many private not for profit hospitals, and how many involved in DOTS*		
How many private providers, and how many involved in DOTS*		
<b>Has PPM and PMDT linkage mapping being done? (circle yes or no)</b>	<b>Yes</b>	<b>No</b>
How many public facilities, and how many involved in PMDT*		
How many private profit hospitals, and how many involved in PMDT*		
How many private not for profit hospitals, and how many involved in PMDT*		
How many private providers, and how many involved in PMDT*		
Number of (M)DR-TB patients enrolled on treatment in public sector last year (estimate)		
Number of (M)DR-TB patients enrolled on treatment in private sector last year (estimate)		

\* Indicate the numbers in the first and respectively in the second boxes

### 2. Existing arrangements for PPM PMDT linkage

<p>Describe existing arrangements for PPM PMDT linkage:</p> <p>Training:</p> <p>Supervision:</p> <p>Second Line drugs management (SLD):</p> <p>Suspect and referral system:</p> <p>Diagnosis and refer (laboratory details):</p> <p>Diagnosis and treatment (laboratory details, regimen):</p> <p>Follow up of patients:</p> <p>Psycho-social support for (M)DR-TB patients (e.g. counseling, food, legal advice, livelihood projects):</p> <p>Infection control measures:</p> <p>Legal framework:</p> <p>Financing (M)DR-TB care and control:</p> <p>Reporting (separate or integrated in existing systems, electronically):</p>
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### 3. Prospects for Expansion of PPM PMDT Linkage, From NTP Managerial Perspective at Different Levels

	Strengths/Opportunities	Challenges
Commitment (Attitudes/views)		
Clinical management		
Linkage between NTP and private sector		
Funding		
Human Resources		
Other		

### 4. Linkage of PRIVATE LABORATORIES with the National TB Reference Laboratory

How many private laboratories are doing C/DST?

Are private laboratories linked to the National TB Reference laboratory (NRL)?

Describe the collaboration between the NRL and the private laboratories (supplies, laboratory techniques, EQA, training, reporting)

Comment on the capacity of the NRL to expand its activities (new technologies, link with private laboratories)

### 5. Prospects for expansion of Laboratory services in PMDT PPM Linkage at different levels

	Strengths/Opportunities	Challenges
Commitment (Attitudes/views)		
Clinical management		
Linkage between NTP and private sector		
Funding		
Human Resources		
Other		

## 6. Drug Management of SLD

Is there a National Drug Regulatory Authority? (Yes/No)

Are all SLDs available in the country quality assured (GDF)?

If not, list which the SLD and suppliers?

Policy and practice (reality) regarding availability of fluoroquinolones: can they be bought in pharmacies? With or without prescription? Are they provided by NTP to private sector?

Policy:

- cannot be bought
- can be bought with prescription
- provided by NTP to private sector

Reality:

- cannot be bought
- can be bought with prescription
- can be bought without prescription
- provided by NTP to private sector

Policy and practice (reality) regarding availability of other SLDs: can they be bought in pharmacies? With or without prescription? Are they provided by NTP to private sector?

Policy:

- cannot be bought
- can be bought with prescription
- provided by NTP to private sector

Reality:

- cannot be bought
- can be bought with prescription
- can be bought without prescription
- provided by NTP to private sector

Any other practice?

Are there any pharmaceutical companies in the country who produce SLD? Please list them and mention the quality assurance policy of those SLDs?

Cost of the SLDs in the private sector versus capacity of the patients to buy?

**7. Prospects for Expansion of SLD Management in PMDT PPM Linkage at Different levels**

	Strengths/Opportunities	Challenges
Commitment (Attitudes/views)		
Clinical management		
Linkage between NTP and private sector		
Funding		
Human Resources		
Other		

**End of the questionnaire**

### 3. Questionnaire for Private Practitioners

#### QUESTIONNAIRE FOR PRIVATE PRACTITIONERS

Thank you very much for taking the time to participate in the assessment of (Multi) Drug Resistant TB (M)DR-TB management and linkage with the National TB Program (NTP).

(M)DR-TB continues to be a public health concern globally. As you may know, the NTP has a program to manage (M)DR-TB patients (PMDT), and has established diagnostic and treatment facilities for (M)DR-TB patients. However, there is a need to engage all health care providers, particularly the private sector, to potentially open the door for the rapid expansion of (M)DR-TB services in the country.

The objective of this questionnaire is to collect strategic information on the diagnostic and treatment practices of (M)DR-TB patients by private providers and to have an inventory of the available TB and (M)DR-TB services in private hospitals and private laboratories.

Your participation is very valuable. Please be assured that any information we gather will be considered highly confidential and will not be shared without your permission. Results will be submitted to the Ministry of Health and donors, and will be shared with relevant partners including yourself.

Answering the questions may take 20 minutes of your time.

Please send the questionnaire back to ..... , by.....

**Please fill out the answers or put a tick in the appropriate places**

1. PROVIDER'S PROFILE			
1.	Name		
2.	Name of hospital(s) or clinic(s) you work with	1.	
		2.	
		3.	
3.	Mobile number		
4.	Email address		
5.	No. of years of experience in TB control	.....years	
6.	Specialty-subspecialty	Family Medicine/general practice	
		Paediatrics	
		Internal Medicine	
		Surgery	
		Obstetrics-Gynaecology	
		Pulmonology	
		Infectious Diseases	
	Other		
7.	In what year did you have your last DOTS workshop or training?		
8.	In what year did you have your last (M) DR-TB workshop or training?		

2. PRESUMED (M)DR-TB		
9.	Within the past 12 months, how many (M) DR-TB (presumed or confirmed) did you encounter?	
10.	What are your indicators to presume a person has (M)DR-TB?	1. 2. 3. 4. 5.
11.	What is your usual course of action when a presumed (M)DR-TB person consults you?	1, Refer for diagnosis and further management
		2. Request for diagnostic exams myself
12.	If you refer for diagnosis, please indicate 2 reasons why?	1. 2.
13.	If you diagnose (M)DR-TB yourself, please indicate 2 reasons why?	1. 2.
14.	What examinations for (M)DR-TB do you request?	Direct Smear Sputum Microscopy
		Culture
		Drug Susceptibility Testing (DST)
		GeneXpert
		LPA/HAIN test
		Mantoux/Tuberculin Skin Test (TST)
		Chest x-ray
Other:		

3. (M)DR-TB PATIENTS		
15.	What is your usual course of action when a (M) DR-TB patient consults you? (Tick for "Yes")	1. Refer (M)DR- TB patient for treatment
		2. Start empiric treatment myself
16.	In case you refer (M)DR-TB patients for treatment, please indicate 2 reasons why?	1. 2.
17.	In case you start (M)DR-TB treatment yourself, please indicate 2 reasons why?	1. 2.
18.	What drugs do you usually prescribe (even once) for (M)DR-TB patients?	1.
		2.
		3.
		4.
		5.
		6.
		7.
		8.
19.	How long do you give treatment to your (M) DR-TB patients?	Injectables .....months
		Oral drugs .....months
20.	Who gives the drugs under Direct Observation (DOT) to your (M)DR-TB patients?	Injectables: Oral drugs:
21.	How do you support (M)DR-TB patients (financially, socially)?	

22.	What is the frequency of sputum microscopy and culture during the treatment of your (M)DR-TB patients?	1. Sputum: 2. Culture:	
23.	How do you manage drug side effects?		
24.	In the past 12 months what number and % of your (M)DR-TB patients successfully finished their treatment?	No.	%
25.	What do you consider successful (M)DR-TB treatment?	1. 2. 3.	
26.	When do you consider your (M)DR-TB patient not successfully treated?	1. 2. 3.	
27.	Do you keep a record of each (M)DR-TB patient? ("Yes" or "No")		
28.	Do you report your (M)DR-TB patients to the NTP? ("Yes" or "No")		

<b>4. SECOND LINE DRUG (SLD) MANAGEMENT</b>			
29.	Are all SLDs available quality assured (GDF)? (Please state "Yes", "No", or "Unknown")		
30.	If not, which SLDs are not quality assured and who are the suppliers?		
31.	Can fluoroquinolones be bought in pharmacies? ("Yes" or "No")		
32.	With or without prescription?		

<b>5. PMDT PPM LINKAGE</b>			
33.	What challenges do you encounter as you deal with (M)DR-TB?		
34.	In what way does the NTP assist you to address the challenges you just mentioned?		
35.	What (more) should NTP do to address these challenges?		
36.	What (more) could you do to address your challenges in dealing with (M)DR-TB?		

**End of the questionnaire**

## 4. Questionnaire for Managers of (Private, or Non-linked) Hospitals

### QUESTIONNAIRE FOR MANAGERS OF (private, or non linked) HOSPITALS

Thank you very much for your time to participate in the assessment of (Multi) Drug Resistant TB (M) DR-TB management and linkage with the National TB Program (NTP).

The objective of this questionnaire is to collect strategic information on the diagnostic and treatment practices of (M)DR-TB by private doctors and hospitals, and to have an inventory of available TB and (M)DR-TB services in private hospitals and private laboratories.

Your participation is very valuable. Please be assured that any information we gather will be considered highly confidential and will not be shared without your permission. Results will be submitted to the Ministry of Health and donors, and will be shared with relevant partners including you.

Answering the questions may take 20 minutes of your time. For some questions you may need to consult with colleagues of the relevant departments.

Please send the questionnaire back to ..... , by.....

**Please fill out the answers or put a tick in the appropriate places**

1. PROFILE OF HOSPITAL			
1.	Name of Hospital		
2.	Affiliation of hospital (profit, NGO)		
3.	Name of respondent		
4.	Function if respondent		
5.	E-mail address		
6.	What type and level of hospital (please tick)	General	
		Specialized	
		National	
		District	
7.	Scale of the hospital	No of beds	
		No of admissions last year	
		No of patients treated at Out Patient Department (OPD) last year	
		No of doctors	
		No of nurses	
		No of laboratory technicians	
		No of pharmacists	

<b>2. LINKAGE WITH NTP</b>			
8.	Do you know the NTP staff	Tasks and Responsibilities	
		Contact person	
9.	For what reason do you collaborate with the NTP	Training	
		Reporting	
		Guidelines	
		Technical advice	
		Drugs	
		Action on failures	
		Action on defaulters	
		Supervision	
10.	What are the key challenges in the collaboration with the NTP?		
11.	What improvements do you suggest in collaboration with the NTP?		

<b>3. M&amp;E and SUPERVISION</b>			
12.	Records of (M)DR-TB patients	No of (M)DR-TB patients treated last year	
		No of (M)DR-TB patients hospitalized last year	
		(M)DR-TB reports present (tick for "yes")	
		(M)DR-TB reports sent to NTP or MoH (tick for "yes")	
		Year of latest cohort analysis of (M)DR-TB patients	
13.	Treatment outcomes of latest (M)DR-TB cohort analysis	Result	Number
		Cured	
		Completed	
		Failed	
		Defaulted	
		Died	
		Transferred out	
		Total	
14.	Please give a brief conclusion of these findings		

<b>4. (M)DR-TB DIAGNOSIS AND TREATMENT</b>			
15.	Infrastructure for TB treatment	DOTS clinic for out-patients (tick for "yes")	
		No of TB beds	
		(M)DR-TB ward (tick for "yes" )	
		Isolation rooms available (tick for "yes")	
		DOTS corner available (tick for "yes")	
16.	Infrastructure for TB and (M) DR-TB diagnosis (If yes: tick)	Smear microscopy (tick for "yes" )	
		Culture (tick for "yes" )	
		DST (tick for "yes" )	
		GeneXpert (tick for "yes" )	
		Other	
17.	What is the funding source of the DOTS clinic	<b>Item</b>	<b>Funding sources</b>
		Space	
		Drugs	
		Human resources	
		Reagents	
		Enablers (specify)	
		Office supplies	
		Medical supplies (sputum cups, etc.)	
18.	Specialized TB staff available	No of specialized TB doctors	
		No of specialized TB nurses	
		Doctors and nurses work on rotation in TB control (tick for "yes")	
19.	What are the hospital's guidelines for management of (M)DR-TB	ISTC	
		National Guidelines	
		Other, specify	
20.	What are the patient costs in your hospital for	Diagnostic tests	
		Drugs for TB	
		Drugs for (M)DR-TB	
21.	What are the infection control measures taken in your hospital	Administrative (specify please)	
		Engineering (specify please)	
		Individual protection (specify please)	

**5. TB DRUGS MANAGEMENT**

Show the list of anti-TB drugs to the Hospital pharmacist and ask if these are in their procurement list.

Drug	On the list tick if "yes"	If yes, source of the drugs	Stock outs last 12 months? Tick if "yes"	Costs per tablet/ injection
Ethionamide/ protionamide				
Cycloserine				
Para-aminosalicylic acid (PAS)				
Clofazimine				
Isoniazid (H)				
Rifampicin (R)				
Pyrazinamide (Z)				
Ethambutol (E)				
Streptomycin (S)				
Kanamycin				
Amikacin				
Capreomycin				
Ofloxacin (Ofx)				
Levofloxain (Lfx)				
Ciprofloxacin				
Moxifloxacin				
Clarithromycin				
Amoxi/Clav				
Linezolid				
Imipenem/meropenem				
HRZE				
HRE				
HRZ				
HR				

**End of the questionnaire**

## 5. Questionnaire for managers of Private Laboratories

### QUESTIONNAIRE FOR PRIVATE LABORATORIES

First of all, thank you very much for agreeing to participate in this assessment.

**(M)DR-TB** continues to be a public health concern globally. The National TB Program (NTP) as you may know has a program to manage (M)DR-TB patients (PMDT), and has established diagnostic and treatment facilities for (M)DR-TB patients. However, there is a need to engage all health care providers, particularly the private sector, to potentially open the door for the rapid expansion of (M)DR-TB services in the country.

The objective of this questionnaire is to collect strategic information on the diagnostic and treatment practices of (M)DR-TB by private physicians, and to have an inventory of available TB and (M)DR-TB services in private hospitals, private laboratories and private diagnostic centres.

Your participation is very valuable. Please be assured that any information we gather will be considered highly confidential and will not be shared without your permission. Results will be submitted to the Ministry of Health and donors, and will be shared with relevant partners including yourself.

Answering the questions may take 20 minutes of your time.

Please send the questionnaire back to ..... , by.....

**Please fill out the answers or put a tick in the appropriate places**

<b>1. LABORATORY PROFILE</b>			
1.	Name laboratory		
2.	Type	Public	
		Private	
3.	Respondent's name		
4.	Telephone number		
5.	Email address		
6.	Designation in the laboratory		

2. PROCEDURES FOR TB				
		Ave. tests/month	Cost per test	Additional information
8.	<input type="checkbox"/> Smear Microscopy <input type="checkbox"/> Ziehl-Neelsen <input type="checkbox"/> Fluorescence microscopy			Source of samples/referral <input type="checkbox"/> Private facilities and physicians <input type="checkbox"/> Public facilities and physicians
9.	<input type="checkbox"/> Culture <input type="checkbox"/> Solid media <input type="checkbox"/> Liquid media			
10.	<input type="checkbox"/> Drug susceptibility test (DST) <input type="checkbox"/> First-line drugs <input type="checkbox"/> Second-line drugs  <input type="checkbox"/> Solid media <input type="checkbox"/> MGIT <input type="checkbox"/> Line Probe Assays  <input type="checkbox"/> Other .....			Drugs being tested for DST: Isoniazid (H) <input type="checkbox"/> Rifampicin (R) <input type="checkbox"/> Ethambutol (E) <input type="checkbox"/> Pyrazinamide (Z) <input type="checkbox"/> Ofloxacin (Ofx) <input type="checkbox"/> Kanamycin (Km) <input type="checkbox"/> Capreomycin (Cm) <input type="checkbox"/> Streptomycin (S) <input type="checkbox"/> Other. Specify <input type="checkbox"/> .....
11.	<input type="checkbox"/> Molecular Techniques <input type="checkbox"/> Line probe assay <input type="checkbox"/> GeneXpert			No. and % of invalid results/errors .....  No. and % of invalid results/errors .....

3. LABORATORY ACTIVITIES										
12.	How are specimen brought to the laboratory									
13.	Quality Assurance mechanisms	(Supra)national laboratory .....								
		Last result (year.....)								
			H	R	E	S	Ofx	Km	Cm	Other
		Sensitivity								
	Specificity									
14.	Training (which trainings/ for which staff)									
15.	How do you record the TB lab results (lab register/ electronic system/no recording)									
16.	Reporting (frequency, to whom?)									
17.	Challenges microscopy and C/DST?									
18.	What infection control measures are taken	Administrative (specify please)								
		Engineering (specify please)								
		Individual protection (specify please)								

<b>4. WORKLOAD</b>		
	<b>No. of patients tested monthly (average in the previous year)</b>	<b>No. of patients who have positive results monthly (average in the previous year)</b>
Culture		For Mycobacterium tuberculosis
DST		For (M)DR-TB
LPA		For (M)DR-TB
GeneXpert		For Rifampicin-resistance

<b>5. Prospects for expansion of Laboratory services in PMDT/PPM Linkage at different levels</b>		
	<b>Strengths/Opportunities</b>	<b>Challenges</b>
Commitment (Attitudes/views)		
Managerial		
Linkage between NTP and private sector		
Funding		
Human Resources		
Other		

**End of the questionnaire**

## 6. Questionnaire for Managers of X-ray Diagnostic Centres

### QUESTIONNAIRE FOR MANAGERS OF PRIVATE X-RAY DIAGNOSTIC CENTRES

First of all, thank you very much for agreeing to participate in this assessment.

**(M)DR-TB** continues to be a public health concern globally. The National TB Program (NTP) as you may know has a program to manage (M)DR-TB patients (PMDT), and has established diagnostic and treatment facilities for (M)DR-TB patients. However, there is a need to engage all health care providers, particularly the private sector, to potentially open the door for the rapid expansion of (M)DR-TB services in the country.

The objective of this questionnaire is to collect strategic information on the diagnostic and treatment practices of (M)DR-TB by private providers, and to have an inventory of available TB and (M)DR-TB services in private hospitals, private laboratories and private diagnostic centres.

Your participation is very valuable. Please be assured that any information we gather will be considered highly confidential and will not be shared without your permission. Results will be submitted to the Ministry of Health and donors, and will be shared with relevant partners including yourself.

Answering the questions may take 20 minutes of your time.

Please send the questionnaire back to ..... , by.....

**Please fill out the answers or put a tick in the appropriate places**

1. X-RAY CENTRE PROFILE		
1.	Name Centre	
2.	Type	Public
		Private
3.	Respondent's name	
4.	Telephone number	
5.	Email address	
6.	Designation in the Centre	

2. X-RAY CENTRE ACTIVITIES	
7.	How are (presumed) TB patients attending the centre? (Referred? Self reporting?)
8.	Training (which trainings/ for which staff)
9.	Who is reading the X-ray?
10.	How do you record the X-ray results (register/electronic system / no recording)
11.	Reporting (how, to whom?)
12.	How many X-rays from presumed TB patients were taken last year?
13.	Challenges X-ray taking or reading?
14.	What infection control measures are taken

<b>3. WORKLOAD</b>		
	<b>No. of patients X-rayed monthly (average in the previous year)</b>	<b>No. of patients with X-ray suggestive of TB (average in the previous year)</b>

<b>4. Prospects for expansion of Laboratory services in PMDT/PPM Linkage</b>		
	<b>Strengths/Opportunities</b>	<b>Challenges</b>
Commitment (Attitudes/Views)		
Managerial		
Linkage between NTP and private sector		
Funding		
Human Resources		
Other		

End of the questionnaire

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