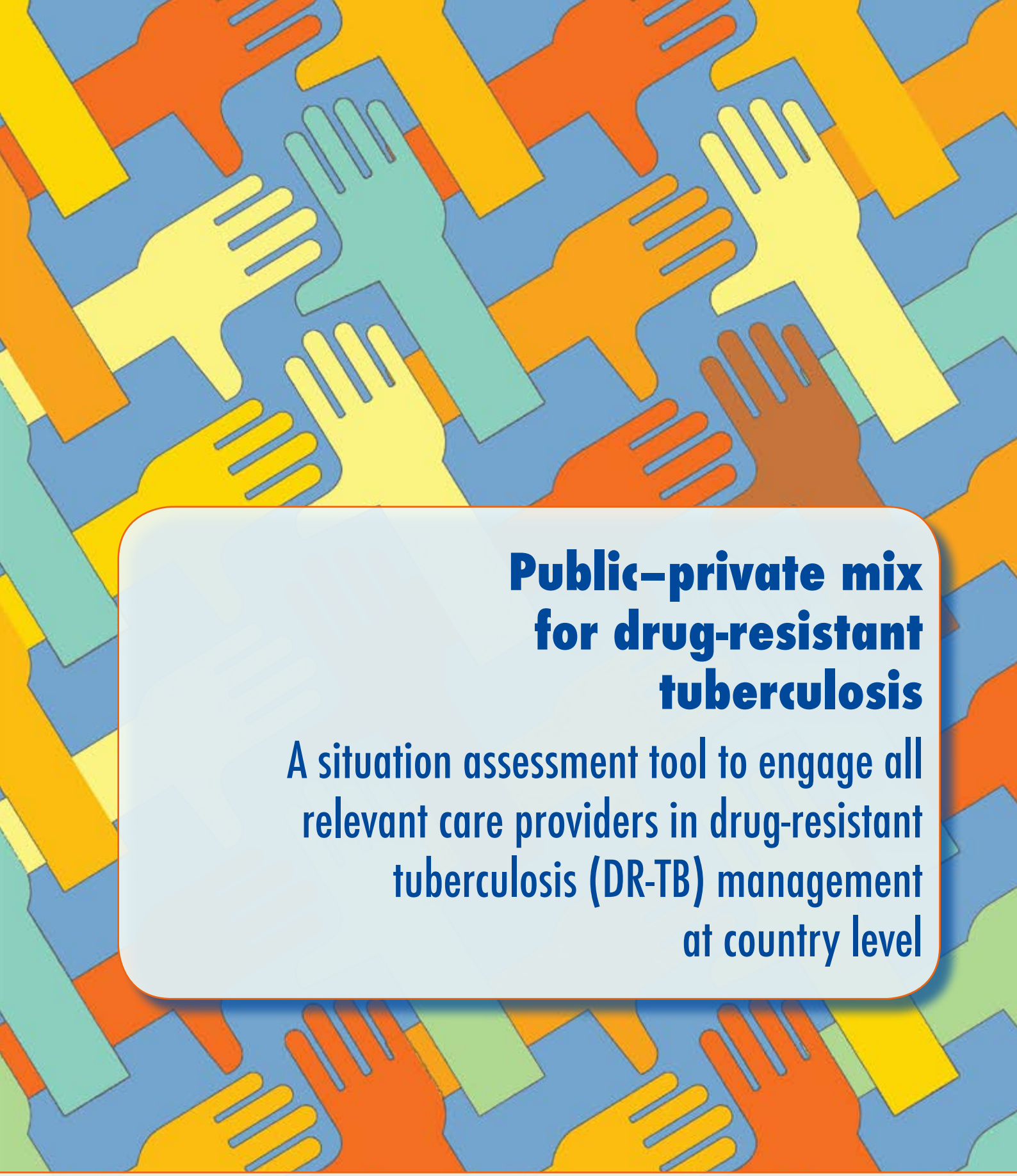

Public–private mix for drug-resistant tuberculosis

A situation assessment tool to engage all relevant care providers in drug-resistant tuberculosis (DR-TB) management at country level

THE END TB STRATEGY

World Health Organization

Public–private mix for drug-resistant tuberculosis

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Contents

Abbreviations and acronyms

ADR	adverse drug reaction
AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
DOH	department of health
DOT	directly observed treatment
DOTS	core approach underpinning the Stop TB strategy for TB control
DRS	drug resistance surveillance
DR-TB	drug-resistant tuberculosis
DS-TB	drug-susceptible tuberculosis
DST	drug susceptibility test
FDC	fixed-dose combination
FLD	first-line tuberculosis drug
GDF	Global Drug Facility
GP	general practitioner
HIV	human immunodeficiency virus
HRD	human resources development
ISTC	International Standard for Tuberculosis Care
MDR-TB	multidrug-resistant tuberculosis
M&E	monitoring and evaluation
MOH	ministry of health
MOU	memorandum of understanding
NGO	nongovernmental organization
NSP	national strategic plan
NTP	national tuberculosis programme
NTRL	national tuberculosis reference laboratory
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 DS-TB	public–private mix for the management of drug-susceptible tuberculosis
QA	quality assurance
R&R	recording and reporting
RR-TB	rifampicin-resistant tuberculosis
SLD	second-line tuberculosis drug
TB	tuberculosis
WHO	World Health Organization
XDR-TB	extensively drug-resistant tuberculosis

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Glossary

Public sector	Those governmental ministries, organizations or facilities that provide governmental services. It includes services provided by the armed forces, police, public academic institutions, and public ministries such as transport, education, health, justice and welfare.
Private sector	Organizations, businesses or individuals that are not part of the governmental services. It comprises individual formal and informal private practitioners, for-profit private hospitals and academic institutions, the corporate sector, and the voluntary or non-profit sector , which includes charitable or nongovernmental organizations (NGOs).
Public–private mix (PPM)	All partnership mixes between organizations, businesses or individuals that are part of the public sector or private sector. The partnership can hence be public–public, public–private or even private–private.
Non-national tuberculosis programme (non-NTP) health-care providers	Public or private health-care facilities or institutions that are not associated with the NTP. Such providers include clinics operated by formal and informal practitioners; health facilities or institutions (e.g. medical centres, and general or specialized hospitals) owned by the public, private or corporate health sectors; charitable organizations or NGOs; prison, military and railway health services; and health insurance organizations.
Non-NTP providers and partners	May include public or private organizations that operate outside the NTP, such as professional associations or societies, NGOs or public sector organizations, or ministries outside the ministry of health.
PPM for drug-susceptible TB (DS-TB) (PPM DS-TB or PPM-TB)	PPM activities that provide health and other related services on care and control of DS-TB to patients or populations. PPM DS-TB is an integral part of the overall national TB strategy in a country; it involves the engagement of the different partners and health-care providers in the public or private sectors of the country, under the stewardship of the NTP.
PPM for drug-resistant TB (DR-TB) (PPM DR-TB)	A component of PPM TB that refers to the provision of specific services for the management, care and prevention of DR-TB.

Introduction

This document is an annex to the Framework for engagement of all health-care providers in the management of drug-resistant tuberculosis (1), which was developed to support countries in the implementation of public–private mix (PPM) for drug-resistant tuberculosis (DR-TB). DR-TB includes multidrug-resistant TB (MDR-TB), a form of TB that is resistant to isoniazid and rifampicin, two key drugs in the treatment of TB; extremely drug-resistant TB (XDR-TB); rifampicin-resistant TB (RR-TB); and other forms of drug-resistant TB.

An electronic form is available on-line and can be accessed at:
http://www.who.int/tb/publications/public-private-mix-drug-resistant-tb/

Background

Globally, an estimated 3.5% of new TB cases and 20.5% of previously treated cases are MDR-TB. In 2013, an estimated 480 000 people developed MDR-TB and at least 210 000 deaths were caused by TB worldwide. There was a substantial increase in the number of RR-TB/MDR-TB detected cases officially reported to WHO between 2012 and 2013 (from about 110 000 in 2012 to 136 412 in 2013). These advancements in detection need to be matched with advances in treatment capacity. In 2013, only about 97 000 eligible patients were actually put on MDR-TB treatment. This means that a significant number of patients did not receive appropriate MDR-TB treatment provided by the national TB programmes (NTPs) in the same year that their diagnosis was made. Furthermore, the treatment success rate of MDR-TB remains low, at 48% globally, even when treatment with second-line TB drugs (SLDs) is provided.

The importance of universal access to DR-TB management is well known to NTPs and partners, but progress has been slow. Achieving universal access to treatment, as envisaged in the 2009 World Health Assembly Resolution WHA62.15, requires a bold and concerted drive on many fronts of TB care. This includes standardized monitoring using indicators that are consistent, and are acceptable to countries and implementing partners alike.

In many countries, health facilities and providers not linked to NTPs also treat TB patients. However, the extent and quality of the diagnosis and treatment for DR-TB by non-NTP providers and those not linked to the NTP is largely unknown. It is widely acknowledged that the NTPs need to involve the private sector and other non-NTP providers more in the management of DR-TB while maintaining their leadership role. The efforts to start and scale up DR-TB management should be guided by carefully collected data and information, leading to a strategic and efficient expansion of DR-TB management that includes all health-care providers. There is an urgent need to carefully consider how best to establish such collaborations for the management of DR-TB patients. As described in the ***Framework for engagement of all health-care providers in the management of drug-resistant tuberculosis***, a careful country-based analysis about the current status of the management of DR-TB patients, with a focus on all the various health-care providers, will show the way forward towards achieving the goal of universal access to quality diagnosis and treatment for all cases of TB, including DR-TB.

This situation assessment tool, as an annex of the above-mentioned framework, enables a country or other users to gather the needed data that will serve as a basis for designing a sound plan of expanding DR-TB management, by engaging all relevant care providers.

Objectives

The overall goal of this tool is to assist countries in moving towards engagement of all relevant health-care providers in DR-TB management, by facilitating a comprehensive assessment of a country's current situation in terms of public–private mix (PPM) for TB and DR-TB care. Specifically, the objectives are to:

- collect information regarding all current PPM TB activities and programmatic management of DR-TB (PMDT), with a focus on non-NTP health-care providers; and
- identify steps to initiate or expand PPM DR-TB, with the engagement of all appropriate health-care providers.

This assessment tool will help the user to:

- obtain an overview of the current PPM TB activities and management of DR-TB in a country;
- assess the capacity of existing and potential PPM for including DR-TB management; and
- suggest new approaches for public–private collaboration in DR-TB management.

Overview of the tool

The tool basically acts as a questionnaire to elicit the needed information. It comprises five parts:

Part A: Overview of the TB epidemiological situation and performance of the NTP

Part B: PPM for DS-TB

Part C: Programmatic management of drug-resistant TB (PMDT)

Part D: PPM for DR-TB

Part E: Summary and conclusions.

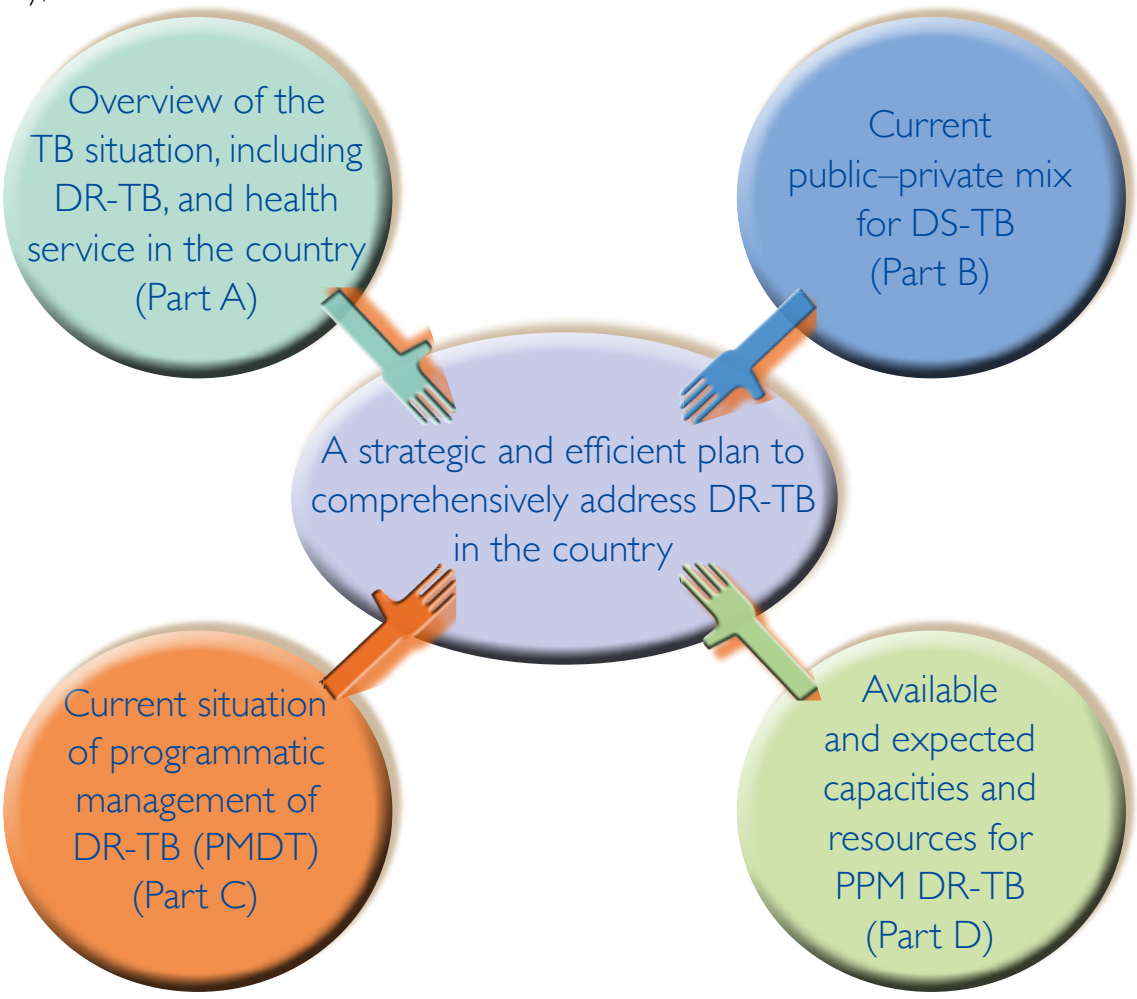

Fig. 1 Conceptual framework of the assessment tool

How to use this tool

This tool acts as a questionnaire that guides the user on what kind of data to collect.
The following data sources will be useful for obtaining the requested data:

- the latest Global TB Report of WHO and published performance reports of the NTP;
- the latest Global Report on Anti-tuberculosis Drug Resistance in the World and latest drug resistance surveillance reports from country;
- the latest edition of the NTP's manual or operational guidelines;
- reports on PPM TB and PMDT, gathered through technical partners, the principal recipient(s) of any Global Fund grants, and other stakeholders;
- recently published articles on TB and TB control in the country;
- internal reports of the major partners in TB control in the country;
- Global Drug Facility (GDF) reports; and
- latest evaluation reports of the country (e.g. national in-depth review mission/joint monitoring mission, Regional Green Light Committee (rGLC) or DR-TB monitoring and technical assistance mission, PPM mission).

Several sections end with a call to interpret the gathered data. The aim is to produce one or more clear messages that point to the process for establishing or expanding PPM DR-TB in the country.
Some questions are "qualitative". This means that quantitative data are unlikely to be available for this type of question, and that "expert opinion" or other sources of the information will be needed.

Information about the country assessment mission

Name of country:

Dates of the assessment:

Name(s) of person(s) conducting the assessment:

Part A: Overview of TB epidemiological situation and performance of the NTP

A1 The epidemiology of TB (include data for the most recent years)

A1.1 Incidence and notification of TB

	Year:	Year:	Year:
TB incidence rate (all new and relapse cases – per 100 000)			
TB case notification rate (all forms – per 100 000)			
Number of TB cases (all forms) notified			
Number of re-treatment TB cases notified (if data available)			

A1.1.1 Comments on the disease burden and epidemiological trends:

(Highlight key features of epidemiology of TB in the country, and explain what stage the fight against TB is at in the country)

A1.2 Burden of DR-TB

A1.2.1 Drug resistance surveys

Data source	Date of the survey	MDR-TB rate among new cases (indicate as proportion, e.g. 34/793)	MDR-TB rate among re-treatment cases (indicate as proportion, e.g. 51/393)	Rate of XDR-TB among MDR-TB cases: (e.g. 6/85)
Most recent national (or subnational) drug resistance survey				
Previous national (or subnational) drug resistance survey				

Other source(s):

A1.2.2 Estimated number of DR-TB cases, notifications and treatment enrolments in the past 3 years

	Year:	Year:	Year:
Estimated number of MDR-TB cases among notified pulmonary cases			
Proportion of new pulmonary TB cases tested for drug resistance			
Proportion of pulmonary TB re-treatment cases tested for drug resistance			
Number of MDR-TB cases notified			
Number of RR-TB cases notified			
Number of RR-TB/MDR-TB cases enrolled on MDR-TB treatment			
Number of XDR-TB cases notified			
Number of XDR-TB cases enrolled on treatment			

Is there a "waiting list" for MDR-TB treatment?

Yes ☐ No ☐

• If yes, how many patients are waiting for treatment (i.e. at the time of the assessment conducted)?

• What are the reasons for the "waiting list"?

A1.2.3 Comments on the burden of DR-TB

A2 Performance of the NTP in the past 3 years

A2.1 Directly observed treatment, short course (DOTS) coverage (%)

Year:	Year:	Year:

A2.2 Treatment outcomes

A2.2.1 New sputum smear positive

Performance indicators	Year:	Year:	Year:
Total number of patients in the cohort being evaluated (n)			
Treatment success (%)			
Death (%)			
Failure (%)			
Loss to follow-up (%)			
Not evaluated including transfer out (%)			

A2.2.2 Re-treatment (including relapse, treatment after default and treatment after failure)

Performance indicators	Year:	Year:	Year:
Total number of patients in the cohort being evaluated (n)			
Treatment success (%)			

Performance indicators	Year:	Year:	Year:
Death (%)			
Failure (%)			
Loss to follow-up (%)			
Not evaluated including transfer out (%)			

A2.3 Treatment regimens

Regimen(s)	The national policy/guidelines
New cases	
Re-treatment cases	
RR-TB/MDR-TB cases	

A2.4 Drug policy and practice

• What is the NTP's policy regarding use of first-line TB drugs (FLDs)?

Fixed-dose combination (FDCs) ☐ Single drugs ☐

• What is the availability of FLDs in the private sector?

Fixed-dose combination (FDCs) ☐ Single drugs ☐

• What is the policy and practice (reality) regarding availability of FLDs; that is, can they be bought in pharmacies and, if so, do they require a prescription?

a) Policy:

FLDs cannot be bought ☐ FLDs can be bought with a prescription ☐

b) Reality:

FLDs cannot be bought ☐ FLDs can be bought with a prescription ☐

• Were there any stocks out of FLDs over the past 5 years?

Yes ☐ No ☐

If so, when and for what reasons?

• Are TB drugs being produced by local manufacturers in the country?

Yes ☐ No ☐

If so:

o Which drugs are being produced?

o What quality assurance of these locally produced TB drugs is in place?

A2.5 TB-HIV collaborative activities

• What is the HIV testing policy for TB cases?

• What is the latest estimated % of HIV-infected persons among notified TB cases?	%

• What is the antiretroviral therapy (ART) policy for HIV-positive TB patients?

• What proportion of TB patients was tested for HIV in the previous year?	%
• What proportion of HIV-positive TB patients started on ART in the previous year?	%
• If possible, among HIV-positive TB patients who started on ART, state what proportion of patients received ART within 8 weeks after the start of TB treatment:	%

• Other comments on TB-HIV activities:

A3 Funding for TB control in the past 3 years

Health financial indicators (US$)	Year:	Year:	Year:
TB planned budget			
Committed funding / actual expenditure			
Contribution of the government to the TB budget			
Contribution of the Global Fund grant(s) to the TB budget			
Contribution of other donors to the TB budget			
Contribution of the Global Fund grant(s) to the TB budget outside the NTP			
Budget dedicated to DR-TB related activities			
Proportion of DR-TB budget contributed by the Global Fund grant(s) / other donors			
TB budget dedicated to PPM activities			
Proportion of PPM budget contributed by the Global Fund grant(s) / other donors			

Comments on financial situation for TB, DR-TB and PPM activities

Main achievements of TB control in the country in the past year

Main constraints on and problems of TB control in the country

Part B: PPM for drug-susceptible TB (PPM DS-TB)

B1 Overview of private sector in the country

B1.1 What is the extent and presence of the private health sector in the country in general?

B1.2 If known, please provide health expenditure per capita of the public or private sector

B1.3 Describe health insurance in the country, in terms of population coverage and in relation to TB

B1.4 What is the nature of the private health sector, and how does it vary across urban, rural and special (e.g. slum) populations?

B1.5 What is the presence of the private sector in geographical areas with low outreach of public services for TB (evidenced by low case notifications)?

B1.6 Describe the corporate health sector in the country, and its perceived role in DS-TB and DR-TB

B2 Utilization of public and private health services

B2.1 What is the estimated proportion of presumptive TB cases who first go to a private provider (as stated in the NTP documents or any results from studies regarding this proportion)?

B2.2 Are there findings (from records or studies) about the quantity of TB drugs bought in the private sector?

B2.3 TB patients treated outside the NTP

a) What percentage of all TB patients are treated in the non-NTP public sector?	%
b) What percentage of all TB patients are treated in the private sector?	%

c) What regimens are used by the providers outside the NTP?

B2.4 Treatment success rate by non-NTP providers

(if overall data are not available, please provide treatment success rate of the health facilities visited, or rates from any project or provider's cohort analyses)

a) What is the treatment success rate among TB patients treated by non-NTP public providers? %

b) What is the treatment success rate among TB patients treated by private providers? %

B2.5 Has PPM TB been assessed recently (e.g. in the past 3 years)?

Yes ☐ No ☐

If yes, collect the mission report and provide a brief summary of the key findings or recommendations:

B2.6 If possible, meet with one or two TB patients managed by the visited non-NTP facilities, and ask them about their satisfaction or difficulties related to TB treatment

B3 Composition and characteristics of the non-NTP care providers

a) Composition and involvement of non-NTP public providers in PPM TB – briefly describe the main players (e.g. what kind of facility or coordinating organization, number of TB patients, PPM arrangement).

b) Composition and involvement of private for-profit providers in PPM TB – briefly describe the main players (e.g. what kind of facility or coordinating organization, number of TB patients, PPM arrangement).

c) Composition and involvement of private non-profit providers in PPM TB – briefly describe the main players (e.g. what kind of facility or coordinating organization, number of TB patients, PPM arrangement).

d) Role of informal or traditional providers in TB control as stated in TB documents (e.g. of the NTP) or by key informants.

B4 Existing links between the NTP and private providers of TB care

Is there a policy or framework of PPM TB? Yes ☐ No ☐

If yes, does it include PPM DR-TB? Yes ☐ No ☐

- Describe the links between the NTP and each of the main private TB care providers that are in some kind of collaboration with the NTP.

- Write down the strengths, weaknesses, opportunities and threats (SWOT) of public–private collaboration for TB, mentioning specific PPM models or private providers when appropriate.

- Among private providers of TB services, list those that have the potential to soon become partners for DR-TB care (see Appendix A for a checklist to assess preparedness of a private provider to begin managing DR-TB), and summarize the main features for each of the key PPM TB providers.

Part C: Programmatic management of drug-resistant TB (PMDT)

C1 Overview of the DR-TB management

C1.1 DR-TB diagnosis services

C1.1.1 DR-TB diagnostic algorithms used by the NTP

List the DR-TB diagnostic algorithms used by the NTP (insert the diagnostic diagram if necessary).

C1.1.2 DR-TB diagnosis services offered by all health-care providers

	NTP	Non-NTP public sector	For-profit private sector	Non-profit private organizations (e.g. NGOs)
Number of laboratories providing:				
rapid tests for DR-TB				
Xpert MTB/RIF test				
line probe assay (LPA) test				
other rapid tests (please list)				

Number of laboratories doing:				
solid culture				
liquid culture				
DST for FLDs with solid culture isolates				
DST for FLDs with liquid culture isolates				
DST for SLDs				
What are the criteria for testing DR-TB (using rapid diagnostics or conventional DST)?				
What are procedures for managing a presumptive DR-TB?				

C1.1.3 National TB reference laboratory (NTRL) and NTP diagnostic services for DR-TB

a) Is the NTRL in the public sector or the private sector?

If it is in the public sector, what is the administrative control?

b) Describe the activities undertaken by the NTRL (e.g. types of laboratory tests, any quality assurance (QA) undertaken for other laboratories).

c) Is the NTRL connected to a supranational laboratory? Yes ☐ No ☐

If yes, which laboratory?

d) Are other laboratories carrying out DST linked to the NTRL? Yes ☐ No ☐

If yes, please describe their collaboration with the NTRL.

e) Culture and DST methods:

- What culture methods are used at the NTRL? Solid ☐ Liquid ☐

(if liquid, what kind?) _____

- What is the average turn-around time for the commonly used culture (i.e. time from sputum submission to receiving of culture results)? _____ days

- What DST methods are used?

☐ Conventional method (proportion method)

☐ Mycobacteria growth indicator tube (MGIT)

☐ Line probe assays (to detect resistance to rifampicin or rifampicin and isoniazid)

☐ Xpert MTB/RIF

☐ Other rapid methods

(namely) _____

- What is the average turn-around time for the commonly used DST (i.e. time from sputum submission to receiving of DST results)? _____ days

f) Which FLDs are being tested, and which ones have external QA?

g) Is SLD DST done by the NTRL? Yes ☐ No ☐

If yes, for what drugs?

If not, in which laboratory is SLD DST done?

h) Which laboratory is doing QA for culture and DST?

i) Describe the NTP's laboratory network.

j) Comment on the capacity of the NTRL to expand its activities (e.g. DST for SLD, and QA for other culture and DST labs).

C1.2 Availability, policy and use of SLDs

C1.2.1 Current availability and use of SLDs in different health sectors

Anti-TB agent	NTP	Non-NTP public sector	Private sector
Streptomycin			
Kanamycin			
Amikacin			
Capreomycin			
Levofloxacin			
Moxifloxacin			
Gatifloxacin			
Ofloxacin			
Ethionamide			
Prothionamide			
Cycloserine			
Terizidone			
p-aminosalicylic acid			
p-aminosalicylate sodium			
Bedaquiline			
Delamanid			
Linezolid			
Clofazimine			
Amoxicillin/clavulanate			

Anti-TB agent	NTP	Non-NTP public sector	Private sector
Imipenem/cilastatin			
Meropenem			
High-dose isoniazid			
Thioacetazone			
Clarithromycin			
Thioridazine			

a) Policy and practice (reality) regarding SLDs, in relation to whether they can be bought in pharmacies and whether a prescription is required:

Policy:

SLDs cannot be bought ☐

SLDs can be bought with a prescription ☐

SLDs can be bought with a prescription but only for certain indications ☐

(if so, which drug and for which indication:) _____

Reality:

SLDs cannot be bought ☐

SLDs can be bought with a prescription ☐

SLDs can be bought with a prescription but only for certain indications ☐

SLDs can be bought without a prescription ☐

(if so, which drug and for which indication:) _____

b) For major provider(s) of DR-TB care, comment on the drug management capacities regarding SLDs; consider ordering, procurement (including which SLDs can be bought locally), quality assurance, storage, distribution and data management system.

c) Were there any major SLD stock-outs over the past 5 years? Yes ☐ No ☐

If yes, state the reasons for the stock-outs and the lessons learnt.

C2 DR-TB management within the NTP

C2.1 Policy and guidelines

- Are national treatment guidelines or protocols for MDR-TB in use? Yes ☐ No ☐
- If yes, are these guidelines consistent with current WHO or international recommendations (2, 3)? Yes ☐ No ☐
- What is the current policy on hospitalization for MDR-TB patients?

- Other comments:

C2.2 Treatment approaches

- How are laboratory-confirmed RR-TB/MDR-TB patients linked with a treatment site for initiation of treatment and for later continuation of treatment (if this is at a different site)?

- Are SLDs available for all patients? Yes ☐ No ☐

- How is the treatment regimen being decided, and is it adequate?

- Is treatment standardized or individualized?

- Is empirical treatment being used? (if so, for whom, how often, etc.)

- What regimens are used?

- Is treatment from Monday to Saturday, or 7 days a week?

- Who acts as the treatment supporters during the intensive phase and during the continuation phase?

- Is surgical intervention available and used for treatment of MDR-TB? If so, is this in the public sector or the private sector, and how many patients received this treatment in the past year?

- Do MDR-TB patients receive hospital-based treatment or community-based treatment?

- Where and what facilities are available for hospitalized MDR-TB patients, and how many beds are available for such patients?

- If MDR-TB patients are treated in hospital, what infection control practices are used during the treatment?

- Are treatment outcomes evaluated, recorded and reported accurately, following the WHO guidelines, and is an electronic recording and reporting (R&R) system applied for DR-TB patients (or for all TB cases)?

C2.3 Management of side-effects, treatment adherence and patient support

- If patients are treated with SLDs:
  - o Are adverse drug reactions (ADRs) reported on the SLD treatment card? Yes ☐ No ☐
  - o Are drugs for management of adverse reactions to SLDs available? Yes ☐ No ☐
    - If yes, are they free of charge? Yes ☐ No ☐
  - o Are care providers trained on how to use drugs for management of ADRs to SLDs? Yes ☐ No ☐
- Are ADRs reported to the national centre responsible for pharmacovigilance? Yes ☐ No ☐
- Are follow-up cultures done on time (i.e. every month during the intensive and continuation phases) and recorded in the TB register?

- How is treatment adherence ensured?
  - o Describe the enablers and support that the patients receive (i.e. assistance offered apart from free SLDs and free diagnosis).

  - o Describe the protocol used to alleviate the physical and emotional suffering that MDR-TB patients experience due to the disease and its treatment.

C2.4 Treatment outcomes of the three most recent MDR-TB treatment cohorts

Outcome / Cohort	from to		from to		from to	
	n	%	n	%	n	%
Treatment success:						
• cured						
• completed treatment						
Died						
Failed						
Lost to follow-up						
Not evaluated						
Total number of MDR cases with treatment outcome						
In addition, write down the number of patients categorized as "failure to treat" (i.e. died or dropped out of treatment before or within the first month of treatment)						
(if available)						

C2.5 Are there any plans for piloting shorter treatment regimens or new drugs (e.g. bedaquiline, delamanid) for treatment of DR-TB?

Yes ☐ No ☐

If yes, please describe.

C2.6 Prospects for expansion of care

C2.6.1 What are the problems and planned solutions for expansion of care (as perceived by the public providers and NTP staff)?

C2.6.2 What are the strengths and weaknesses of expansion of care (as seen by you)?

C2.6.3 What is the capacity to expand MDR-TB treatment?

C2.6.4 Comment on the attitude and views regarding public–private collaboration

C2.6.5 What is the NTP's readiness for expansion of DR-TB care and facilitation of PPM DR-TB?

C3 DR-TB management outside the NTP (including non-NTP public sector, for-profit private sector and non-profit organizations such as NGOs and charity organizations)

C3.1 Provide an overview of DR-TB management outside the NTP

C3.2 Summarize the laboratory services and diagnostic capacity for DR-TB outside the NTP

C3.3 Provide an estimate of the number of MDR-TB patients treated outside the NTP in the past year

C3.4 Management of DR-TB in non-NTP public providers

- Describe the models of DR-TB management used in the non-NTP public sector (e.g. referring patients, directly observed treatment (DOT), patient support and health education for infection control).

- Describe how DR-TB is managed by non-NTP public providers (e.g. number of patients managed, treatment success rate, adherence to WHO or national guidelines, and handling of adverse drug reactions) – describe by provider or model of care if appropriate.

- Outline the prospects for expansion of DR-TB management by non-NTP public providers (e.g. strengths, weaknesses, perceived problems, planned solutions, attitude and views regarding collaboration with NTP on DR-TB care) – describe by provider if appropriate.

• What are the commonly used regimens for MDR-TB in the visited non-NTP public sector?

• What does the patient have to pay in relation to both diagnosis and treatment?

• Describe the supply and management procedures for SLDs for DR-TB patients.

• What infection control measures are implemented in the health facilities managing DR-TB patients?

• Ask one or two MDR-TB patients managed by the visited facilities about their satisfaction or difficulties related to their treatment, and summarize their responses.

- Interpret these findings to give, for example, the degree of readiness of the non-NTP public provider for expansion of DR-TB care and for embarking on PPM DR-TB.

C3.5 DR-TB management by the private sector (including for-profit and non-profit)

- Describe the models of DR-TB management used in the private sector (e.g. referring patients, DOT, patient support, health education for infection control).

- Describe how DR-TB is managed by private providers (e.g. number of patients managed, treatment success rate, adherence to WHO or national guidelines, and handling of adverse drug reactions) – describe by provider or model of care if appropriate.

- What are the commonly used regimens in the visited private sector?

- Describe the supply and management procedures for SLDs for DR-TB patients.

- What infection control measures are implemented for the management of DR-TB?

• To explain who bears the costs for DR-TB management services in the for-profit private sector, please fill in the following table.

Service	Cost (approx.)	Borne by		
		Patient	National programme	Private sector
Travel for diagnosis				
Diagnostic services				
Admission fee				
Baseline investigations				
Follow-up investigations				
Social support				

• Ask one or two MDR-TB patients managed by the visited facilities about their satisfaction or difficulties related to their treatment, and summarize their responses.

- Outline the prospects for expansion of DR-TB care by private providers (e.g. strengths, weaknesses, perceived problems, planned solutions, and attitude or views regarding collaboration with NTP on DR-TB care) – describe by provider or model of care if appropriate.

Part D: Public–private mix for DR-TB (PPM DR-TB)

D1 The NTP preparedness and PPM DR-TB (training and capacity)

In some countries, a private entity may be an important partner of the NTP regarding training and capacity building. If this is the case, describe here the setting and collaboration.

D1.1 Current capacity of the staff of the NTP and non-NTP partners regarding DR-TB

	Number of staff trained in DR-TB	Type of training undertaken	Number of staff now involved in DR-TB management
NTP level			
• Central			
• Provincial (or equivalent)			
• District (or equivalent)			
Other levels (name)			
Non-NTP providers			
• Non-NTP public			
• Non-NTP private			

D1.2 Plans for enhancing capacity of the NTP staff regarding DR-TB

- Is a human resources development (HRD) plan available? Yes ☐ No ☐
- If yes, does the plan already have funds? Yes ☐ No ☐

D1.3 Plans for enhancing capacity of non-NTP staff regarding DR-TB

- Is there a HRD plan available that includes capacity-building activities for non-NTP staff? Yes ☐ No ☐
- If yes, does the plan already have funds? Yes ☐ No ☐

D1.4 Qualitative questions about capacity of the NTP to implement and scale up PPM DR-TB

- Does the NTP have the capacity to coordinate the engagement of other health-care providers for scale-up of PPM DR-TB? Yes ☐ No ☐
- Does the NTP have capacity to train PPM DR-TB providers? Yes ☐ No ☐
- Are PMDT training materials available? Yes ☐ No ☐
- Does the NTP have the capacity to ensure a sufficient and timely drug supply to the trained PPM DR-TB providers for the treatment of notified DR-TB patients? Yes ☐ No ☐
- Does the NTP have capacity to supervise or monitor the trained PPM DR-TB providers? Yes ☐ No ☐

D1.5 Interpret these findings to give, for example, the degree of readiness of the NTP for embarking on PPM DR-TB

D2 Existing links between the NTP and the non-NTP providers for DR-TB care

- Describe the links or models of collaboration between the NTP and each of the main public or private DR-TB care providers.

- Write down the strengths, weaknesses, opportunities and threats (SWOT) regarding each of these non-NTP providers or models of public–private collaboration for DR-TB care.

- Among the public or private providers managing DR-TB patients but not yet collaborating with the NTP, please list those that have the potential to soon become partners for PPM DR-TB (see Appendix A for a checklist to assess preparedness of a private provider to begin managing DR-TB), and summarize the main features for each of the providers.

D3 Other partners in DR-TB management

Since DR-TB management is complex, and most patients are financially and emotionally severely strained when DR-TB treatment begins, it is important to provide comprehensive care. Therefore, public–private collaboration and public–public collaboration should go beyond the clinical and managerial concerns of DR-TB management; it should reach out to a wide range of partners.

D3.1 Supporting DR-TB management

Write down names of NGOs or foundations that can give support in relation to:

- training

- drug supply and management, and rational use of anti-TB drugs

- treatment supervision

- social support for patients (e.g. psychological support, material support)

- palliative care

- disease or treatment education for DR-TB patients

D3.2 Facilitating PPM DR-TB management

Discuss with key informants the option of involving an organization that will act as the main facilitator of PPM in DR-TB and, if appropriate, enumerate organizations that have the potential to perform this intermediary role in relation to:

- advocacy and resource mobilization

- legislation

- addressing stigma and discrimination

- promotion and implementation of infection control

Part E: Summary and conclusions

E1 Identified bottlenecks or challenges

E1.1 Identify the main bottlenecks or constraints regarding TB management in general, and in relation to nationwide scale-up of universal access for TB care

E1.2 Identify the main bottlenecks or constraints regarding scale-up of PMDT and PPM DR-TB, and suggest underlying causes for these challenges

E2 Readiness of the NTP and non-NTP providers/partners for scale-up of PPM DR-TB

E2.1 Summarize the capacity of the NTP in terms of DR-TB management and PPM DR-TB

E2.2 Summarize the capacity of key non-NTP providers in terms of PPM DR-TB

E3 Describe the approaches or next steps to be taken to scale up PMDT and PPM DR-TB

PART E

Appendix A: Preparedness of a non-NTP TB care provider for PPM DR-TB – a checklist

Part A: TB services offered by the provider

A1 How important is TB care to the provider?

A1.1 The proportion of the provider's patients who are TB patients _____ %

A1.2 The provider's commitment Yes ☐ No ☐

A2 The provider's attitude towards the public basic TB services

A2.1 The provider's attitude towards the public TB services is (e.g. positive): _____

A2.2 The provider sees the recent progress of the public TB programme as (e.g. substantial): _____

A3 Diagnosis of TB

A3.1 The main diagnostic approach for a pulmonary TB suspect is: (e.g. AFB, AFB & CXR) _____

A3.2 Antibiotic trial treatment used for diagnosis purpose? Yes ☐ No ☐

Treatment trial with FQs? Yes ☐ No ☐

A3.3 Culture: when is culture recommended? _____

Where is it done? _____

A3.4 DST: when is DST or rapid test recommended for diagnosis of drug-resistant TB? _____

Where is it done? _____

A3.5 Quality assurance: knowledge and practice _____

A4 Monitoring of treatment while the patient is under TB treatment

A4.1 Number of follow-up sputum examinations and at which months of treatment (for sputum smear positive, sputum smear negative) _____

A4.2 Other follow-up investigations _____

A5 Treatment

A5.1 Regimens commonly used (for new ss+, other new patients, re-treatment patients) _____

A5.2 Treatment supervision – overview: what is the usual mode of treatment supervision/DOT? _____

A5.3 Defaulter tracing: describe what is being done _____

A5.4 Treatment outcome:

- For the latest 1-year cohort of new TB patients

Treatment success rate		Default rate	
Failure rate		Death rate	

- For the latest 1-year cohort of re-treatment patients

Treatment success rate		Default rate	
Failure rate		Death rate	

A5.5 Health education and what materials exist: describe

A5.6 What kind of support is offered to the patients while on treatment?

A5.7 Supply of drugs:

a) TB drugs (free, subsidized, full price?) _____

b) Other drugs (what are prescribed, free?) _____

A6 Recording and reporting system

A6.1 Recording: describe

A6.2 Reporting: who receives reports, what is being reported?

A7 Experience of the provider regarding TB-HIV, public health, research and training

A7.1 TB-HIV: has provider treated HIV/AIDS patient? Yes ☐ No ☐

and TB-HIV patient? Yes ☐ No ☐

A7.2 International Standard for TB Care (ISTC): does provider know it and its main purpose? Yes ☐ No ☐

and did ISTC have effect on provider? Yes ☐ No ☐

A7.3 Experience in other areas: public health, research, training on TB? _____

A8 PPM experience

A8.1 Does provider have any TB PPM experience? Yes ☐ No ☐

If yes, outline _____

A8.2 Provider's views on strengths and weaknesses of PPM in TB control? _____

A8.3 Provider's non-TB PPM experience Yes ☐ No ☐

If yes, _____

Part B: Management of DR-TB

B1 DR-TB

B1.1 Does provider know a) the definition of MDR-TB? Yes ☐ No ☐

and b) that culture and DST is needed? Yes ☐ No ☐

B1.2 Provider to mention places where DST or rapid test for diagnosis of drug-resistant TB is done Yes ☐ No ☐

B1.3 Provider's treatment for a patient resistant to isoniazid and rifampicin (drugs and length of intensive phase and continuation phase) _____

B1.4 Provider's view on the need of daily supervision or DOT for DR-TB patients _____

B2 Feasibility of DR-TB diagnosis or treatment by the provider

B2.1 Is there a strong contact to a laboratory providing rapid test for DR-TB or culture and DST ? Yes ☐ No ☐

B2.2 Is daily close treatment supervision for the provider's patients feasible? Yes ☐ No ☐

B2.3 Is the provider willing to receive training for DR-TB management? Yes ☐ No ☐

B2.4 What are the financial implications for the DR-TB patient if their treatment is undertaken by the provider? _____

B.2.5. Is provider able and willing to undertake the following DR-TB task(s)

a) Identify and refer presumptive DR-TB patients	Yes ☐	No ☐
c) Diagnose DR-TB	Yes ☐	No ☐
b) Initiate DR-TB treatment	Yes ☐	No ☐
c) Identify and supervise treatment supporters	Yes ☐	No ☐
d) Supervise DR-TB patient's treatment	Yes ☐	No ☐

B3 Feasibility of other DR-TB tasks by the provider

B3.1 Is provider able and willing to undertake the following task(s) on patient-centred care and social support?

e) Provide social support: informational or educational, psychological, and material support (which may include cash, economic support and income protection)	Yes ☐	No ☐
f) Prevent and manage stigma and discrimination	Yes ☐	No ☐
g) Palliative or end-of-life care	Yes ☐	No ☐

B3.2 Is provider able and willing to undertake the following public health task(s)?

h) Coordinate, monitor and evaluate PPM DR-TB activities	Yes ☐	No ☐
i) Ensure effective drug supply and management	Yes ☐	No ☐
j) Carry out quality assurance for laboratories	Yes ☐	No ☐
k) Notify, record and report DR-TB cases	Yes ☐	No ☐
l) Train health-care providers on DR-TB	Yes ☐	No ☐
m) Carry out policy development and advisory tasks	Yes ☐	No ☐
n) Promote infection control practices	Yes ☐	No ☐

B3.3 Is provider able and willing to undertake the following public health task(s)?

o) Advocacy	Yes ☐	No ☐
p) Funding mobilization	Yes ☐	No ☐
q) Regulation	Yes ☐	No ☐
r) Social protection	Yes ☐	No ☐
s) Health promotion	Yes ☐	No ☐

References

1 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 (http://www.who.int/tb/publications/public-private-mix-drug-resistant-tb/)

2 Companion handbook to the WHO guidelines for the programmatic management of drug-resistant tuberculosis. Geneva, World Health Organization. 2014 (http://www.who.int/tb/publications/pmdt_companionhandbook/en/, accessed 04 May 2015).

3 Guidelines for programmatic management of drug-resistant tuberculosis. Geneva, World Health Organization. 2011 (http://whqlibdoc.who.int/publications/2011/9789241501583_eng.pdf?ua=1, accessed 14 April 2015).

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