rGLC COUNTRY SUPPORT MISSION REPORT

Country: Sri Lanka

Inclusive dates of mission: 22-28 April 2018

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Some of the graphs and flowcharts in this report are adapted from the NPTCCD documents/ presentations

The programme has agreed with open sharing of this report ☒

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Abbreviations and acronyms

AFB	acid-fast bacilli
AIDS	acquired immunodeficiency syndrome
CBO	community-based organizations
CPT	co-trimoxazole preventive therapy
DCC	district chest clinic
DCCL	district chest clinic laboratory
DDG-PHS	Deputy Director General of Public Health Services
DGHS	Director General of Health Services
DOTS	directly observed therapy – short course
DRS	drug resistance survey/surveillance
DR-TB	drug-resistant tuberculosis
DST	drug susceptibility testing
DTCO	district TB control officer
EQA	external quality assurance
FDC	fixed-dose combination
FLD	First-line (anti-TB) drugs
GDF	Global (TB) Drug Facility
GF	Global Fund (Global Fund to Fight AIDS, Tuberculosis and Malaria)
HRD	human resource development
IC	infection control
IPT	isoniazid preventive therapy
IC	infection control
MDR-TB	multidrug-resistant tuberculosis
M&E	monitoring and evaluation
NGO	nongovernmental organization
NHRD	National Hospital for Respiratory Diseases
NPTCCD	National Programme for Tuberculosis Control and Chest Diseases
NTRL	national TB reference laboratory
PHC	primary health care
PLHIV	persons living with HIV/AIDS
PMDT	programmatic management of drug-resistant tuberculosis
PPM	public-private mix
RDHS	Regional Director of Health Services
RR	rifampicin-resistant
SDG	Sustainable Development Goals
SEAR	South-East Asia Region (of WHO)
SLD	Second-line anti-TB drugs
SOPs	standard operating procedures
TA	technical assistance
TB	Tuberculosis
TWG-TB	Technical Working Group on TB
WHO	World Health Organization
XDR-TB	extensively drug-resistant TB

Executive summary

i. TORs of the mission

a. To review progress in expansion of PMDT services since last mission, specifically with regard to recommendations made
b. To discuss:
    - Gene Xpert expansion plan
    - Expansion of MDR TB shorter regimen
    - Updated algorithm
c. To discuss progress made on implementing ICF in pilot districts

ii. Overall implementation status of PMDT compared to targets in NSP. Status of implementation of GF supported activities

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Target	14	14	14	10	14	15	20	28	30
RR /MDR TB patients detected	8	12	5	4	13	13	17	25	4 (Q1)
Enrolled in the same year	4	5	4	4	11	13	17	22	
Enrolled in the next year	1	4	1	-	-	-	-	-	
Total no. and % put on treatment	**5 63%**	**9 75%**	**5 100%**	**4 100%**	**11 85%**	**13 100%**	**17 100%**	**22 88%**	

iii. Significant achievements since last visit

- Rapid expansion of GeneXpert, with GOSL and GF contribution. 14 machines in place now
- Improving utilization of available machines at several sites (though not optimum yet)
- Increasing number RR/MDR-TB patients being enrolled on second line treatment
- Printing of SOPs for shorter regimen and 2 patients initiated on treatment, 5 more short courses ordered
- Digital X-ray for screening procured and expected to be operationalized soon
- Additional resource (GF next cycle) mobilized

iv. Key challenges identified in this mission in relation to the ToRs

a. Declining total case notifications. In 2017, total TB cases notified were 8511 (provisional) showing steady decline since all-time high of more than 10,000 cases in 2011
b. Low screening for drug resistance – less than 40% of all cases notified
c. Delay in uptake of GeneXpert in some of the centres. Coordination between District Chest Clinics and respective hospitals needs to be improved for utilization rates

d. Delays in diagnosis of DR-TB as evidenced by document review, increasing number of deaths patient interview and records review
e. Centralised services for treatment initiation – still limited to NHRD
f. Psychosocial support mechanisms still not fully in place

v. Priority recommendations of the mission:

Recommendation	Responsible persons/agency	Timeline	Support required to 5fulfil the recommendation
Learnings from Intensified Case Finding pilot districts should be replicated soon in other districts to improve case notifications	MoH, NPTCCD	Starting 2019	Ongoing external TA may be used for the purpose
Universal DST for all TB cases can be achieved	NPTCCD and NTRL	by end 2018.	Plan has been developed by NTRL
Start initiating at least 80% of all eligible cases on shorter regimen with strict drug safety monitoring and management practices	NPTCCD	by 2019	External TA may be needed for drug quantification (through GDF)
Expand DR-TB treatment initiation to at least two more centres – Kandy and in/around Jaffna	NPTCCD	by 4th quarter 2018	
Patient centred care is important for all patients including provision of psycho-social-economic support	NPTCCD	Ongoing – expansion to all by end 2018	
Engaging with private hospital association for dissemination of key messages	NPTCCD	Ongoing	
Organize a national consultation on ending TB (and AIDS) with multi stakeholder engagement including other government departments, private sector, NGOs, community representatives and international partners like WHO	MoH, NPTCCD,	By end 2018	WHO CO could support MoH in organising this consultation

vi. Status of priority recommendations of previous mission:

Recommendations	Status
• Monitor referrals from large hospitals specifically teaching hospitals	• NHSL & LRH – GXP machines installed in National Hospital and Children's Hospital in Colombo. • North Colombo teaching Hospital – Place identified to construct microscopy centre. • MC started & functioning in one more teaching hospital.

• Purchase sputum transportation boxes and strengthen sputum transportation	• Cold Boxes 200 distributed to all DCCs. Started functioning collecting centers in all Divisional Hospitals in Pilot Districts.
• Monitor the use of available Gene Xpert machines and optimize their use	• Monthly return is received to NTRL. Quarterly return is sent from NTRL to NPTCCD
• Prepare guidelines and SOPs for introduction of shorter regimen	• Prepared & staff trained. Awaiting printing. Shorter regimen started for two patients. Will be started for five patients in 2018
• Set up all elements of a DSM	• Prepared and format is attached to the BHTs. Format is being used for patients on SLD.
• Prepare a PMDT monitoring framework for monitoring MDR-TB services including the use of shorter regimen and newer drugs in future	• Regularly discussed at the PMDT NHRD Site Committee & inform the PMDT Central Committee on quarterly basis. PMDT Coordinator review at district level activities
• Establish model centers for infection control and replicate	• Ward 15 NHRD (MDR TB Ward) is the model center. All DCCs are having IPC committees monthly reviewed. Annual IPC review is done by NTRL during the onsite evaluation

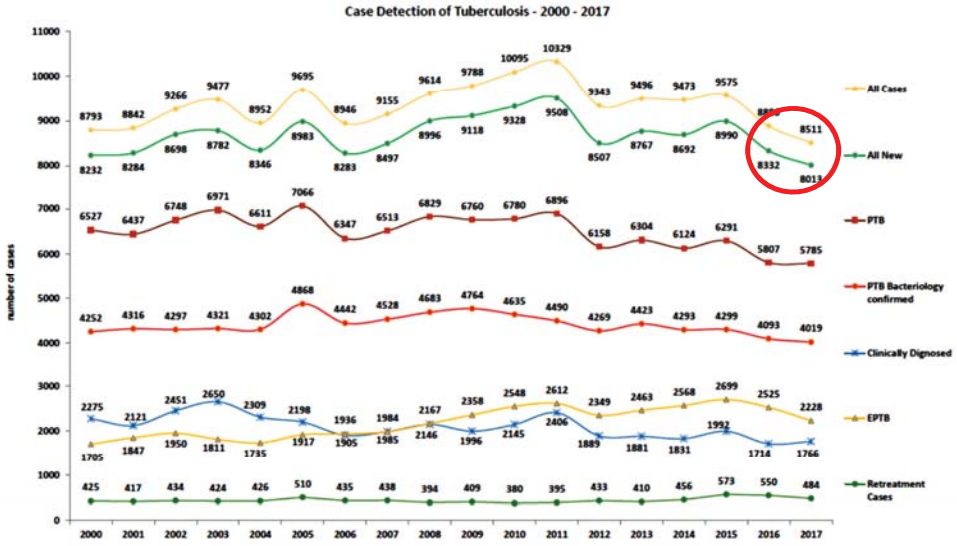
Achieved	
Some progress/ ongoing	
No change	

Detailed report

A. Introduction/Background

The National Programme for Tuberculosis Control and Chest Diseases (NPTCCD), Sri Lanka, is primarily responsible for the control of tuberculosis in the country. The work of the NPTCCD is under the supervision and guidance of the Director General of Health Services (DGHS) and the Deputy Director General of Public Health Services (DDG-PHS)[1]. The NPTCCD is assisted by a technical National Advisory Committee under chairmanship of the DGHS and consists of representatives from the Directorates of Health Services, , Consultant Respiratory Physicians, Consultant Microbiologists, representatives from Professional Colleges, representatives from Prison and Social Service Department, other senior administrators, public health professionals, university academia, private practitioners and non-governmental organizations.

Figure 1: Case notification rates[2]



Sri Lanka is considered is a relatively low TB burden country with an estimated incidence of 65/100,000 cases of all forms of TB. In 2017 the country notified 8,511 [2] (down from 9,575 in previous year) all forms of TB. Out of this 484 cases (5.6%) were retreatment cases. The treatment success rate among new and relapse cases registered in 2015 was 85%.

The overall case notification rate has been declining since 2012. The proportion of retreatment cases remains low. This should also be viewed against the fact that proportions of unfavourable outcomes like treatment failure and loss to follow-up are much higher than those who are enrolled for retreatment indicating that a significant proportion of previously treated patients are either not getting enrolled or being enrolled as new cases thereby missing the chance for screening for drug resistance.

[1] Source: Presentations made by the country programme
[2] Source: Presentations made by the country programme

Table 1: TB-HIV collaboration[3]

Patients with known HIV-status who are HIV-positive (2016)	12	<1%
- on antiretroviral therapy (out of the above)	7	58%
Treatment success among HIV-positive TB cases, all types, (registered in 2015)	25	76%

Recommendations for intensified case finding:

- Multi-stakeholder national consultation that would lead to collective commitment and contribution towards ending TB. This should be aimed at intensifying case finding in community and various sectors (and hospitals), supporting those on treatment for ensuring adherence, reducing stigma, organising patient rehabilitation services, preventive treatment, operational research and increasing investments commensurate with needs
- Learnings from Intensified Case Finding pilot districts should be replicated soon in other districts to improve case notifications
- Urgent workload assessment of PHLTs, radiologist and other staff and redistribution, as necessary
- Operationalization of digital X-ray for planned screening among diabetics and other high risk groups
- Innovative means to approach migrants to ensure coverage
    - NGOs and CBOs engagement
    - Private sector engagement
    - Innovative insurance plans that cover TB treatment

B. Overall DR-TB programme performance

There has been an improvement noticed in case notification in 2017 (against the published 2016 report as below).

Table 2: DR-TB burden estimates and notifications in 2016[3]

Drug-resistant TB care, 2016	New cases	Previously treated cases	Total number***
Estimated MDR/RR-TB cases among notified pulmonary TB cases			47 (1–93)
Estimated % of TB cases with MDR/RR-TB	0.54% (0–1.3)	3.1% (1.6–5.4)	
% notified tested for rifampicin resistance	15%	47%	1 511
MDR/RR-TB cases tested for resistance to second-line drugs			11
Laboratory-confirmed cases		MDR/RR-TB: 23, XDR-TB: 0	
Patients started on treatment ****		MDR/RR-TB: 17, XDR-TB: 0	

Some of the additional enrolment could be ascribed to the drug resistance surveillance that led to finding of additional cases. Sri Lanka had undertaken a drug resistance surveillance in 2017 on 1421 new patients and 98 retreatment cases. As per the surveillance, 0.56% of new cases and 5.1% of retreatment patients were found to be having RR/MDR-TB strains largely because of high Rifampicin mono-resistance.

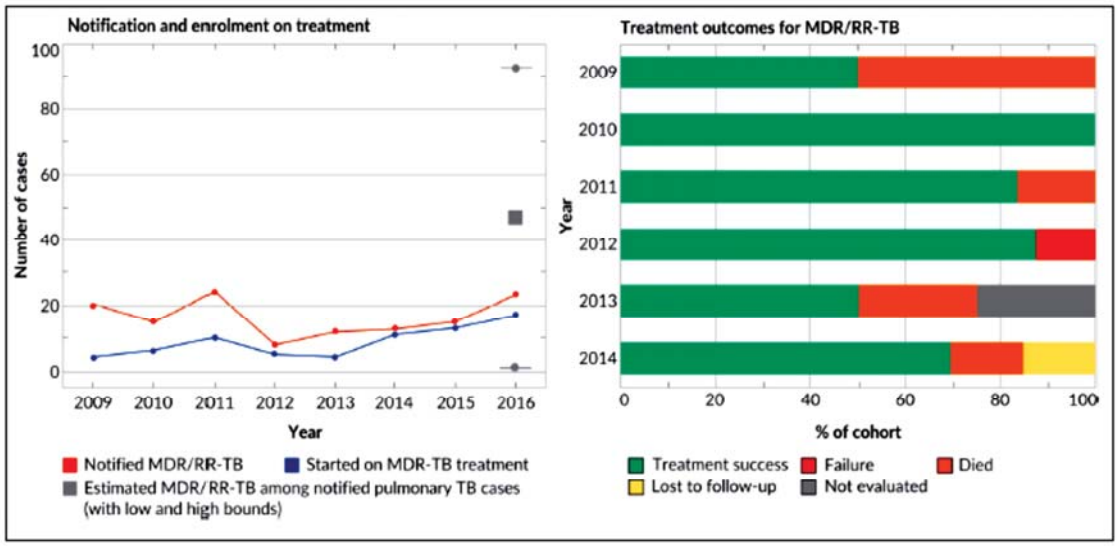
[3] Source: WHO Global TB report 2016

Table 3: DR surveillance results

		n	%	95% CI
RR TB	New	1421	0.49	0.20 – 1.01
	Retreatment	98	4.08	1.12 – 10.12
MDR TB	New	1421	0.07	0.05 – 0.39
	Retreatment	98	1.02	0.03 – 5.55
RR/MDR	**New**		**0.56%**	
	Retreatment		**5.1%**	

Although increasing trends in DR-TB case notification have been observed in past years, treatment success rates have been variable as is seen in graph below:

Figure 2: Trends of case notifications and treatment outcome among DR-TB patients[4]



C. Role of partners in delivery of TB and MDR-TB care

All private health care providers and institutions are supposed to be identifying TB symptomatics and diagnose TB or refer them to appropriate public health facility However there is very little activity related to diagnosis and treatment of MDR TB directly. Private sector mainly includes:

- Private hospitals
- Corporate health services in particular tea estates,
- Private chest physicians and GPs. Most of the chest physicians working in private also work in the government hospitals during the day time and practice during the evening.
- Non-allopathic care providers and
- Pharmacies

In discussions with one private sector hospitals, it appeared that participation of private hospitals is variable which could be because of low awareness among practicing physicians and partly be attributed to inability to record all referrals.

[4] Source: www.who.int/tbdata

It was informed that private hospitals generally have corporate agreements with various businesses and institutions but TB screening is not always part of the agreement. It was also noticed that GPs are particularly not always aware of screening for TB and DR-TB. This is further elaborated later in the report while discussing about patient history

Recommendations:

- Engaging with private hospitals association for dissemination of key messages
- Encouraging private hospitals to include TB screening in corporate agreements
- Continuous sensitization of GPs

D. Case finding strategy

While there has been substantial improvement in use of GeneXpert machines at several centres, continued low utilization has been observed at several centres, some of them being new.

So far the programme has been screening only high risk cases for drug-resistance. The classification being used for screening with GeneXpert is as follows.

Category A: High risk cases for drug resistance

Category B: Patients with moderate or low risk of drug resistance but in whom the risk of mortality or chance of spread of resistant bacillus to contacts is high

A GeneXpert test is also used in Smear negative patients (including paediatric cases) and extra-pulmonary cases except pleural fluid which is considered sub-optimal sample.

During the mission it was discussed that the country has now sufficient GeneXpert machines that could be used for:

- Early identification of RR-TB among cases being put on treatment
- Early detection of TB and RR-TB among symptomatics – Close contacts, Elderly, children, comorbidities like HIV and DM, other immunocompromised conditions
- As part of active screening for TB among high risk groups and vulnerable populations to prevent transmissions – prisons, migrants, congregate settings like slums, barracks

Depending on country policy adopted on use of GeneXpert, an example of calculations for expected use is placed below

- Screening all TB cases: 6,000 (new bacteriologically confirmed cases, retreatment cases, non-converters, treatment failures)
- Close contacts of RR/ MDR-TB cases (3 per patient): 150
- HIV +ve, DM: 5,000
- Prisoners: 2,500
- Health Care Workers: 1,000
- Migrant labourers and immigrants – 1,000
- Other screening activities: 1,000

TOTAL: 16,650/ year

It was informed to mission team that Universal DST was started from January 2018 in Pilot Districts - Gampaha, Kegalle & Kaluthara

A plan for universal DST has been prepared by the NTRL and needs to be implemented

It was also brought to the notice of mission team that LPA at NTRL has been out of order for some time hampering the ongoing work.

Recommendations:

- Universal DST must be achieved by end 2018. The current and planned capacity of GeneXpert machines is sufficient to achieve this target
- Workload analysis at GeneXpert sites should be undertaken to review the needs for laboratory staff for conducting tests. As an example, there could be 3 categories of such laboratories:
    - Very high load – 12 tests/ day - A person exclusively for conducting GeneXpert tests
    - Moderate load – 4 tests/day – A person for both GeneXpert and microscopy
    - Low case load – less than 4 tests/ day – Shared technician among 2 low case load laboratories
- Improve coordination for use of GeneXpert machines is needed between DCC and hospitals, as also recommended in previous report
- Sputum collection centre should be established at all hospitals where a diagnostic (microscopy) centre is not available along with strengthening of sputum transportation networks
- SL LPA needs to be made functional – urgently. Apparently the costs involved are not much and it is only the process that needs to be expedited

E. Laboratory services and expansion plan

Microscopy centres (MCs) are located in District Chest Clinic laboratories (26) and peripheral health institutions-primary health care centres and base/district General hospitals (214). The EQA for smear microscopy services using the Lot Quality Assurance system is in place and is covering the entire nation. The National Tuberculosis Reference Laboratory (NTRL) at Welisara is currently providing culture and DST in the country, in public sector.

To undertake rifampicin sensitivity testing, the programme has procured 14 GeneXpert machines out of which 4 have been ordered through GoSL funds and 12 through GF grants. Two out of the 14 are yet to be installed. It is planned that eventually all 26 reporting units will get 1 machine. There will be additional machine at NTRL and also one will be provided to high load hospitals in Colombo

Table 4: Utilization of available GeneXpert machines:

	2017	2018 Q1

NTRL	**8,423**	**2,161**
Kandy	**914**	**336**
Rathnapura	**334 (06/2017)**	**195**
Galle (Karapitiya)	**358 (05/2017)**	**304**
Jaffna		**66 (02/2018)**
NHSL	**333**	**177**
LRH		**04/2018**
Prison Welikada		**04/2018**
Kurunegala	**296**	**197**
Kaluthara		**Not yet started**
Kegalle		**Not yet started**
Anuradhapura	**289**	**189**
Badulla	**349**	**204**
Baticaloa	**54**	**45**

NTRL is already performing second line DST with Line Probe Assay and the validation of this method of SL DST will be completed in 2018. In 2017 EQA for both first line and second line LPA was performed from SRL Belgium.

It is expected that second line DST with MGIT will be introduced in 2018

Culture Laboratories. A total of 9 laboratories with capacity to perform cultures are planned in the country. As of now there are 4 Regional laboratories functioning in Kandy, Rathnapura, Galle & Jaffna. The latter two have started recently. Anuradhapura & Batticaloa labortaories are yet to be constructed. It has also been decided by MoH to construct new labs in Badulla & Kurunegala

Table 5: Laboratory expansion plan

		Baseline (2014)	2015	2016	2017	2018	2019
No of Intermediate culture labs*		2	4 (2)	5 (2)	6 (4)	6 (4)	6
No of Xpert machines in place*		1	7 (1)	7 (1) +1	7 (9)+1	7 (14)+1	7
No of Bact/Alert machines in place		1	1	1	1	1	1
No of MGIT systems in place		0	1	1	1	1	1
Line Probe Assay	FLD	1	1	1	1	1	1
	SLD	0	1	1	1	1	1

*targets in black. Actual achievement in blue

It is understood that a draft plan for universal DST implementation in the country is available that needs to be finalised and put to practice

Recommendations:

- Operationalise all available GeneXpert machines at the earliest.
- Some of the new culture labs have been pending for long. The process needs to be expedited

F. Treatment strategy

The longer regimen continues to be used for most patients second line treatment as reported in previous missions:

Intensive phase	At least 8	Km + Lfx + Eto + Cs + Z +/- E
Continuation phase	At least 12	Lfx + Eto + Cs +Z / +-E

Km-Kanamycin; Cs- Cycloserine; E-Ethambutol; Lfx- Levofloxacin; Eto- Ethionamide; Z-Pyrazinamide

It was informed to mission team that daily DOT has been arranged in peripheral hospitals, when some MDR TB patients are unable to stay long term at MDR TB ward, NHRD.

Table 6: Hospitals with decentralized DOT facilities

Hospital	District
BH. Chetticulum	Vavuniya
DH. Kariyamadittha	Hambanthota
DH. Eheliyagoda	Rathnapura
DH. Dompe	Kegalle (stay in Pugoda)
DH. Athurugiriya	Colombo
DH. Koswattha	Colombo
BH. Maligawattha	Colombo
CSTH - Kalubowila	Colombo
BH. Horana	Kaluthara
DH. Kamburupitiya	Matara
BH. Gampola	Kandy
BH. Wariyapola	Kurunegala

An isolation room has also been constructed for patients needing isolation at ward 15 of NHRD.

The programme has now introduced shorter regimen in alignment with WHO recommendations.

4-6(Km-Mfx-Pto-Cfz-Z-H high dose-E) / 5(Mfx-Cfz-Z-E)

Some of the observations from field visit include:

- In general treatment guidelines for MDR-TB being followed
- Pyrazinamide was often found to be omitted from longer regimen
- There is continued wide use of Lfx for respiratory conditions without ruling out TB
- Biochemistry tests were being done regularly but no monitoring of adverse events through verbal screening for them, despite availability of checklist in the patient file

A few questions that came up during clinical discussions and responses provided are placed below for records and future reference:

1. The role of Z & E adding in longer regimen.
2. Use of H high dose in longer regimen in RR pts (not MDR)

3. IP of patients on shorter regimen is currently being decided on the basis of culture conversion that occurs in 3rd or 4th month and hence the tendency to extend IP.

Responses

1. Z is particularly important for longer regimen. E is optional but may add strength to the longer regimen
2. High dose H can be given to RR-TB patients if risk of resistance to H is considered minimal or proven susceptibility or considered low level resistance for H or the patient is not at risk of adverse events from high dosage of H
3. IP may be extended beyond 4 months if needed, for a maximum of 6 months, when using the shorter regimen. There is no need to prolong to 6 months systematically if the patient is positive at 3 months: repeat smear at month 4 and if the smear is negative, stop IP.

Treatment delivery (DOT), adherence and social support

The government approved monthly financial support of upto Rs 5000/- for MDR-TB patients for first six months has been a welcome step. However the implementation has not been uniform because this needs to be approved by Provincial Administration. Counselling services are available for patients once they are admitted for treatment. This was also observed in discussions with MDR-TB patients who were interviewed by the mission team.

Some of the observations from the detailed interview of a patient whose home was visited were:

- The patient completed first-line treatment in 2012 and also has uncontrolled diabetes
- The patients again developed symptoms of TB in August 2017. However it took >1 ½ mth to start appropriate treatment – GP had 3 rounds of different treatment after which the patient was started with Cat II regime at the concerned chest clinic
- The person interviewed used to earn LKR 65-70,000 per month, but now earns very little in comparison because he had to quit the job for treatment. His son had to stop studies of diploma course and start doing job to support family. There was also financial dependence on relatives for some time
- The patient was well aware of the disease and duration of treatment
- Another observation from treatment card was that Cs was replaced with PAS because of associated adverse events but Eto was also stopped (probably mistakenly)

Recommendations:

- At least 80% of all eligible patients to be initiated on STR from 2019 onwards under strict aDSM
- Hr-TB guidelines need to be adopted by the country for appropriate management of patients
- Psycho-social support for all patients on second line treatment is must and should be uniformly provided.
- Policy on restricted use of Levofloxacin should be enforced
- Decentralization of MDR-TB treatment initiation services – Kandy is a possibility. Another centre in or around Jaffna could be a possibility considering distance from Colombo.

G. Pharmacovigilance/ aDSM

Regular laboratory tests are done in most cases on treatment. A check-list is available to monitor adverse effects early. However the check-list is not always found to be filled and response to adverse events takes time in certain instances.

Ancillary drugs for side effects management are generally available in hospitals.

Recommendations:

- Establishment of a national database for formalizing the process of aDSM and making the process robust has been recommended in previous mission as well.
- Active adverse events monitoring is must and needs to be emphasized to all attending the patients
- Active adverse events monitoring is must and needs to be emphasized to all attending the patients

H. Drug management

Overall the drug management system was found to be working well. There were sufficient stocks of drugs for existing longer MDR-TB regimen being used in the country and orders for next tranche have been placed. Orders for five short regimens have also been placed. (Details of available second-line drug stocks are available in Annexure)

Recommendations:

- Since it is being recommended that the programme switches from longer to shorter regimen for maximum possible patients by 2019, various scenarios should be worked now for drug utilisation in this year and potential usage worked out to ensure minimum expiry.

I. Recording and reporting, and data management

Paper based reporting is being used in the country. As in previous visit, Colombo DCC exhibited good examples of electronic case based management system with GIS mapping of patients. Another good example of e-hospital management was observed in Dompe Regional Hospital where all relevant data regarding each patient could be traced along with history of previous treatment. This kind of electronic data management could be very useful for TB programme as well where history of previous TB treatment is important to rule out possibilities of drug resistance. An interesting example was of an old lady who was being treated for respiratory infections and cough since 2015 but screened and found to be a TB case only a couple of months back

Recommendations:

- E-hospital project to be expanded to other centres. E-hospital project, DHIS2, LIMS, EPI should be planned for appropriate linkage and interface for usability of data from beginning itself

J. Infection control

A general national infection control guideline has been developed and provides general instructions for infection control measures for health care workers in different settings like out-patient departments, hospital ward settings, laboratory, intensive care units and medico-legal units. In alignment with global guidelines, the national guidelines incorporate infection control measures at three levels –administrative, environmental and personal. The NPTCCD follows these general guidelines.

As in previous review missions, infection control does not appear to be a priority in most settings and only minimum I/C practices observed. Following issues were noted:

- Overcrowding in OPD waiting areas
- Even in drug dispensing areas for TB patients, no masks were being used by patients
- Little use of respirators by health staff in OPDs
- In-patient facilities were better with adequate ventilation and personal protection being used by health staff

Recommendations:

- Identify a few centres and create models for IC to start with. This was a recommendation in previous mission. To elaborate, it further, the recommendation was for both in-patient and out-patient services. While a model for in-patient is available, this does not appear to be the case for out-patient services and hence the need. This can be done through all or at least a combination of activities like
    - Triaging of patients – prioritizing symptomatics for screening
    - Free availability of masks for those with cough
    - Other administrative measures as feasible
        - Establishing waiting areas for patients in open spaces or at least with good natural ventilation
        - Establishing and clearly marking cough OPD (for all symptomatics)
        - Establish separate entrance and exit for any chest symptomatic (without stigmatizing)

K. Human resource, training and technical support strategy

PMDT Modular training materials development needs to be started. MDR-TB lecture was incorporated to DTCO / MO Modular training and DTCD training.

Two MDR TB training sessions were conducted in 2017 one for Nurses/PHIs and another for DTCOs/MOs in November.

It was also learnt that there are expected to be changes in key staff positions in coming months including possibly PMDT coordinator. However the team could not find plans for replacement or interact with proposed replacement

Recommendation

- NPTCCD may prepare a plan for transition of staff in key staff positions and build capacity of expected replacements.

L. Supervision of the programme

Regular PMDT field visit & supervision of DCCs are done by PMDT Coordinator, where there are RR/MDR TB patients are managed. Four districts were visited in 2017 – Rathnapura, Vavuniya, Badulla & Hambanthota. One visit to Kalutara & Matara was done in April 2018, before the mission.

Supervision continues to suffers due to

- Non availability of transportation/ vehicles to carry out the supervisory duties
- Multiple duties of certain staff which makes it difficult for them to leave the duty station for supervisory work

M. PMDT plan including funding source

Country PMDT plan is available as a separate document and the targets include:

Table 7: PMDT plan has following targets for detection and enrolment:

	2018	2019
Number of MDR TB cases expected	50	51
No of Xpert testing for MDR TB case detection	536	699
Number of MDR TB Cases to be detected	40	41
Percentage of MDR TB Cases to be enrolled for treatment	100	100
Percentage of MDR TB Cases to be treated successfully	75	75

Table 8: Budget available for MDR-TB under the GF current funding cycle

	Year 1	Year 2	Year 3	Total
MDR-TB	173,446	183,731	189,522	546,699

Recommendations:

- Potential savings in allocated budget should be identified and if needed, reprogrammed for other priority activities

Annexure 1: Second line Drugs Stock Balance at CDS & DCCs

As on date of visit – 26 April 2018:

	Products	Stock on hand at CDC	Expiry date (indicate all batches per product, if shelf life is different
1.	Cap. Cycloserine 250mg	1015	03/1/2019
		8100	31/1/2020
		8000	30/11/2019
2.	Tab. Ethionamide 250mg	7810	29/2/2020
		15600	29/2/2020
3	Tab. Levofloxacin 250mg	8895	31/7/2021
		3750	31/12/2019
		19300	30/6/2020
4	Inj. Kanamycin 1g	730	31/08/2019
		1600	31/08/2019
5.	PAS Sodium Sachets	350	31/5/2018
		450	30/11/2018
		250	31/03/2020
		235	31/3/2020
6.	Pyrazinamide 500mg	2016	30/10/2020
		12768	31/05/2020
		12768	31/10/2020
		8736	30/11/2020
		8064	31/05/2020
7.	Moxifloxacin	500	31/7/2020
8.	Prothionamide	400	30/4/2020
9.	Amx+Clv	1575	31/12/2019
		1725	31/12/2019
10.	Bedaquiline	188	31/12/2019
11.	Delamanid	1272	17/7/2021
12.	Clofazimine	300	31/3/2021
		300	31/8/2021
		300	31/2/2022
13.	Ethambutol	1344	31/12/2020
		672	31/12/2020
14.	Linezolid	320	28/2/2019
		340	28/2/2020
15.	Capreomycin	190	24/01/2020
		480	20/8/2020

Annexure 2: Agenda of the mission

Day	Date	Time	Places to be visited / Discussion	Participants	Venue
	22/04 2018		Arrival		
1	23/04/ 2018	09.00am - 12.00pm.	Visit to CCC – Colombo & Discussion.	CRPs, DTCOs, MOO, Nurses, PHIs, Pharmacist / CCC - Colombo, D,DD/NPTCCD, CCP/NPTCCD, PMDT Coordinator,	CCC Colombo
		12.00pm – 01.00pm.	Lunch		
		01.30pm – 02.30pm.	Briefing to WR at WHO Country Office.	WR, D, DD or CCP/NPTCCD, PMDT Coordinator. WHO CR,	WHO Country Office
		03.00pm - 04.30pm.	Briefing at NPTCCD. 1. Presentation on situation of RR/MDR TB by Dr. Gamini Rathnayake, PMDT Coordinator. 2. Objective of the PMDT (r-GLC) Mission, briefing by Dr. Vineet Bhatia, WHO Consultant.	D/NPTCCD, DD/ NPTCCD, CCPs/ NPTCCD, MOO/ NPTCCD, Consultant Microbiologist /NTRL, DTCOs – Colombo/ Gampaha/ Kaluthara/ Kegalle. PMDT Coordinator, CP/ CDS, GFATM Officials – 4, M&E Officials – 2.	Auditorium NPTCCD
2	24/04/ 2018	08.00am - 09.00am.	Briefing to DGHS & DDG PHS I – Health Ministry.	DGHS, DDG PHS I. D,DD or CCP/NPTCCD, PMDT Coordinator	DGHS Office Ministry of Health
		09.30am – 12.30pm.	Visit of NHSL	DDG, DD, MOIC - OPD, MO Planning, Consultant Microbiologist & SMLT/NHSL, PMDT Coordinator, DTCOs & MOO/CCC, CP/CDS, CCP & MO-M&E/NPTCCD,	NHSL
		12.30pm – 01.30pm.	Lunch		

		02.00pm – 04.30pm.	MDR Home Visit of 17/RR/03, who lives in Korathota, Kaduwela and Visit of DOTS center DH Athurugiriya.	PMDT Coordinator, DTCO/ CCC Colombo. DMO/DH Athurugiriya. MO,NO, Dispenser/ DH Athurugiriya.	DH Athurugiriya & Home Visit of RR patient.
3	25/04/ 2018	09.00am – 01.00pm.	Technical Discussion on; • Gene Xpert expansion plan • Expansion of MDR TB shorter regimen • Updated algorithm • TRP recommendations – way forward and agreed timelines	D, CCP, MO M&E/NPTCCD. D/NHRD, All CRPs. DTCOs/ Gampaha, Colombo, Kegalle, Kandy, Badulla, Kalutara, Matara. Kurunegala. Jaffna, Baticaloa, Vavuniya, Rathnapura. MOO/NHRD, Consultant Microbiologist/NTRL, CP/CDS, PMDT Coordinator,	Auditorium/ DCC Gampaha
		01.00pm – 02.00pm	Lunch		
		02.00pm – 04.30pm	Visit NHRD, NTRL, DCC Gampaha.	D/NHRD, CRPs/NHRD, Consultant Microbiologist/NTRL, DTCO & MOOs/CCG, CP/CDS, PMDT Coordinator, CCP/NPTCCD	NHRD
4	26/04/ 2018	09.00am - 01.00pm.	Visit of DH Dompe, BH Wathupitiwela & DGH Gampaha, Discussion at each point.	DTCO/Gampaha, PMDT Coordinator. D, DD or CCP NPTCCD, MO –Coordinator/NPTCCD, Staff of DH Dompe, Staff of BH Wathupitiwela, Staff of DGH Gampaha.	DH Dompe BH Wathpitiwela DGH Gampaha
		01.00pm – 02.00pm.	Lunch		
		02.30 pm – 04.00 pm.	Hemas' Hospital Wattala.	Staff of Hemas' Hospital – Wattala PMDT Coordinator	Hemas Hospital Wattala
5	27/04/ 2018	9.00am – 10.00am	Discussion at CNAPT	CNAPT Officials & PMDT Coordinator	CNAPT
		10.30am – 01.00pm.	Joint Debriefing by Dr. Bhatia and GF	DDG (PHS I). D, DD/NPTCCD, CCPs/NPTCCD, MOO/NPTCCD. DTCOs/ Gampaha, Colombo, Kalutara, Kegalle. Consultant Microbiologist/NTRL, CP/CDS, PMDT Coordinator, GFATM Officials & M&E Officials.	Auditorium NPTCCD

		01.00pm – 02.00pm.	Lunch		
		02.30pm – 03.30pm	Debriefing by Dr. Bhatia to WR.	WR,D, DD, CCP /NPTCCD, WHO CR, PMDT Coordinator.	WHO Country Office
		04.00pm – 05.00pm	Debriefing to DGHS	DGHS, D, DD, CCP/NPTCCD, PMDT Coordinator.	DGHS Office / Ministry of Health
	28/04 /2018		Departure.		