WEEKLY EPIDEMIOLOGICAL REPORT

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Multidrug Resistant Tuberculosis Where we are at present?

Multidrug Resistant Tuberculosis (MDRTB) is defined as resistance to two important anti TB drugs, rifampicin and isoniazid. Rifampicin Resistant Tuberculosis (RRTB) is defined as resistance to rifampicin with or without resistance to other anti TB drugs. Patients with MDRTB &RR TB are eligible for MDRTB treatment. Multidrug resistant TB or other forms of drug resistance is mainly a manmade condition. It indicates the poor management of TB patients. Most people with TB are completely cured with proper treatment.

The occurrence of drug resistance can be attributed to both service and patient factors. Some of the important service factors include prescribing Incorrect treatment (wrong combinations, dosage and duration), Use of ineffective formulations of drugs (poor quality drugs or poor storage), Failure to ensure uninterrupted drug supply, inadequate monitoring of treatment, inability to ensure treatment compliance, Failure to educate/ counsel patients and family members, inaccessibility/ poor access to health services. Patient factors include intake of a lesser number of prescribed drugs and inadequate doses, treatment interruption, irregular intake of drugs, development of adverse reactions to anti TB drugs and lack of family support and other socio-economic problems affecting the sustainability of treatment.

Diagnosis of MDRTB is laboratory based. Sputum of suspected MDRTB patients should be sent for Xpert MTB/ RIF and culture and drug susceptibility testing (DST). Xpert MTB/RIF is a WHO recommended a rapid diagnostic method which gives results within a few hours and it identifies resistance to rifampicin.
MDRTB is difficult to treat. Commonly used first-line drugs are not effective. Patients need to be treated for a longer duration with second-line drugs. These drugs are more toxic and can cause severe adverse reactions. The treatment success of MDRTB is poor and mortality rates are high.

In some cases, they may develop more severe forms such as extensively drug resistant TB (XDRTB) which is resistant to both rifampicin and isoniazid along with resistance to any other quinolone and one of the second line injectable drugs

If untreated, the patient may end up with death. They also can spread the disease to others. Second-line anti TB drugs are more costly than the first line drugs and a serious burden to TB programmes and overall for health systems. Multi drug resistant TB is a major public health problem worldwide and is a growing threat to TB care and control activities carried out around the globe.

According to the WHO statistics, in 2017, there were estimated 558,000 patients with MDR/ RRTB and out of them, 82% (460,000) were MDRTB patients. MDR TB is more among previously treated patients. Globally in 2017, 3.5% among new cases and 18% among previously treated cases had MDRTB. Nearly 50% of the global case burden is from three countries mainly China, India and the Russian Federation. According to global data, only one in fifth who were eligible for MDRTB treatment were enrolled in treatment. The treatment success rate for MDR TB is 54%.

An estimated 230,000 deaths were due to MDR/ RR TB in 2017.

The incidence of MDRTB in Sri Lanka remains low. A Drug Resistant Survey carried out in 2017 revealed 0.5% rifampicin resistance among new TB patients and 4% among previously treated patients. Multi drug resistance was identified among 0.07 % of the new and 1.02% among previously treated patients in the study sample.

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There were 25 cases of MDRTB reported to the central unit of NPTCCD in 2017. The majority of the patient were males and belong to the age group of 50-59 years. There weren't any patients below the age of 20 years. In 2017, 12 MDRTB patients were among new and 13 were among previously diagnosed patients. The majority (28%) of the patients were from the Colombo District. A higher number of patients were reported from Kurunegala, Rathnapura, Kalutara & Kegalle districts. Sri Lanka has managed to maintain the treatment success rate in high values throughout the past years. It was 77% for the cohort of patients enrolled for treatment in 2015.

Unlike in other countries in the world, Sri Lanka has managed to enrol all the eligible patients in MDRTB treatment. All most all the patients are admitted to the special ward in the National Hospital for respiratory diseases for treatment during the intensive phase of treatment under the supervision and guidance of respiratory physicians. Patients are referred to the respective district chest clinics for the continuation of treatment under supervision by the respiratory physician and District TB Control Officer. This patient management system has impacted the high treatment success rate of MDRTB patients.
But maintaining the low incidence of MDRTB and high treatment success rates are a huge challenge to the country due to the following reasons.

- High lost to follow up rate among drug susceptible TB patients in some districts and repeated treatment interruption among vulnerable groups which may lead to the development of drug resistance.
- International travel- People are travelling to and travelling from high burden countries of TB/ MDRTB for education, occupation and other purposes
- Social and economic problems associated with long term hospitalization of patients
- Impact of comorbidities such as diabetes, alcoholic liver disease etc., for the treatment outcome

Therefore, prevention and control activities should be focused on

- Providing treatment for all the drug susceptible TB patients completely.
- All the measures should be taken to sustain patients in treatment and minimize treatment interruption. Patients and family members should be counselled on the importance of completing the treatment.
- The continuous supply of second-line drugs to all MDRTB treating facilities should be ensured. Directly Observed Treatment (DOTs) should be provided to all patients in order to ensure compliance with anti TB drugs
- Timely detection of all MDR/RR TB patients.
- This is very important for better treatment outcome and to prevent the spread of resistant forms in the community. Therefore, measures should be taken to identify presumptive MDRTB cases (MDRTB suspects) early and conducting necessary investigations (Xpert MTB / RIF, Culture & DST).
- Enrolment of all diagnosed patients for treatment.
- As treatment is long (18 months for longer regimen and 9 months for shorter regimen) and requires hospitalization during the intensive phase, all the patients should be properly counselled about the disease and management to ensure compliance and better treatment outcomes. Patients should be provided with directly observed treatment during the treatment period.
- Psychosocial support should be provided to patient s and family members.
- Contact tracing
- Close contacts of MDR/RR TB should be screened for symptoms initially and then careful clinical follow up should be done for 2 years in 6 monthly intervals.
- Infection Control
- Infection control in health care institutions and in the community is important in preventing the spread of the disease. All the general measures taken to control airborne infections should adhere. Cough etiquette should be practised. Proper sputum disposal methods should be adopted.
- Patients with MDRTB should be isolated until they become non-infectious. Measures should be taken to ensure adequate airflow and cross ventilation.
- Personal protective equipment (N 95 masks) should be provided to staff working in high-risk settings for MDRTB (Laboratories, MDT TB wards etc.) and proper use of them should be ensured.
- Patients can be given surgical masks to minimize entering infected droplets to the environment.
- Community Awareness
- The general public should be educated on all important aspects of Tuberculosis to reduce stigma and to improve treatment-seeking behaviour. It will also enhance community support to needy patients.

Compiled by
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References

Global Tuberculosis Report – 2018 WHO, Geneva
Global Tuberculosis Report – 2017 WHO, Geneva
Drug Resistance Survey (2016-2018) Report, NPTCCD (Unpublished)
National Guidelines for Programmatic Management of Drug Resistant TB, 2015, NPTCCD, Ministry of Health

Table 1: Selected notifiable diseases reported by Medical Officers of Health 16th – 22nd June 2018 (25th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmania-sis		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	278	4249	2	44	0	5	0	29	1	23	0	103	0	6	0	3	0	0	6	393	0	26	0	2	**62**	**100**
paha	150	2218	0	34	0	5	0	12	0	14	0	124	0	4	0	10	0	0	5	406	0	23	1	19	**67**	**100**
Kalutara	33	1589	1	40	0	3	0	5	0	36	7	287	0	5	0	6	0	0	9	328	1	39	0	9	**52**	**100**
Kandy	65	1687	3	41	0	4	0	3	0	9	0	30	1	63	0	15	0	0	4	182	0	17	0	14	**61**	**100**
Matale	13	536	0	8	0	1	0	1	0	31	1	49	0	2	0	3	0	0	0	21	0	7	1	54	**59**	**100**
NuwaraEliya	1	93	1	32	0	3	0	9	0	9	2	15	3	84	0	17	0	0	1	135	0	22	0	0	**31**	**100**
Galle	11	542	2	26	0	7	0	0	0	2	2	225	0	16	0	2	0	1	5	172	0	31	0	5	**13**	**100**
Hambantota	12	500	0	9	0	3	0	2	0	4	0	27	0	23	0	1	0	1	9	154	0	2	2	321	**75**	**100**
Matara	8	471	0	25	0	5	0	4	0	21	1	123	0	21	0	6	0	0	5	162	0	5	0	210	**53**	**100**
Jaffna	109	1698	6	88	0	1	1	30	2	205	0	8	1	232	0	1	0	2	2	185	1	9	0	3	**38**	**93**
Kilinochchi	13	172	2	19	0	1	0	8	0	1	0	2	0	8	0	0	0	1	0	28	0	2	0	1	**48**	**100**
Mannar	0	32	0	11	0	0	0	2	0	2	0	1	0	0	0	0	0	0	0	25	0	1	0	2	**38**	**100**
Vavuniya	25	271	1	10	0	3	0	30	0	9	1	22	0	7	0	0	0	1	0	36	0	3	0	3	**57**	**100**
Mullaitivu	3	46	0	5	0	0	0	8	1	10	0	8	0	3	0	0	0	0	0	6	0	1	0	1	**19**	**100**
Batticaloa	113	3585	2	94	0	5	0	2	0	20	0	28	0	1	0	2	0	2	1	83	0	11	0	0	**66**	**100**
Ampara	10	106	4	30	0	1	0	1	0	2	0	30	0	0	0	4	0	1	3	128	0	11	0	1	**66**	**100**
Trincomalee	64	596	1	33	0	1	0	4	0	10	0	37	0	16	0	1	0	0	2	132	0	3	0	18	**28**	**100**
Kurunegala	31	1342	2	73	0	8	0	9	0	3	0	67	1	11	0	9	0	1	8	291	0	47	0	122	**67**	**100**
Puttalam	11	1173	0	23	0	4	0	3	0	4	0	18	0	6	0	2	0	0	2	88	0	41	0	1	**71**	**100**
Anuradhapura	3	469	0	27	0	4	0	2	0	37	1	77	0	13	0	4	0	1	1	246	0	20	2	190	**42**	**95**
Polonnaruwa	6	162	0	15	0	1	0	0	0	12	1	68	0	0	0	3	0	0	3	137	0	8	1	115	**60**	**88**
Badulla	12	245	0	60	0	4	0	6	0	10	1	91	2	38	1	18	0	0	4	278	0	60	1	5	**46**	**100**
Monaragala	15	546	0	44	0	2	0	1	0	2	6	195	2	76	0	14	0	0	1	93	3	36	0	21	**65**	**100**
Ratnapura	16	1129	1	90	0	26	0	15	0	3	2	282	0	21	0	12	0	1	3	178	0	59	6	135	**45**	**100**
Kegalle	23	707	0	36	0	7	0	4	0	71	4	117	0	48	0	8	0	0	14	210	0	25	0	5	**65**	**100**
Kalmune	5	1305	0	24	0	0	0	1	0	20	0	3	0	0	0	1	0	0	0	114	0	6	0	1	**50**	**100**
SRILANKA	**1030**	**25469**	**28**	**941**	**0**	**104**	**1**	**191**	**4**	**570**	**29**	**2037**	**10**	**704**	**1**	**142**	**0**	**12**	**88**	**4211**	**5**	**515**	**14**	**1258**	**53**	**99**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 22nd June , 2018 Total number of reporting units 353 Number of reporting units data provided for the current week: 351 C**-Completeness

A = Cases reported during the current week. **B** = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

16th – 22nd June 2018 (25th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2018	Number of cases during same week in 2017	Total number of cases to date in 2018	Total number of cases to date in 2017	Difference between the number of cases to date in 2018 & 2017
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	01	01	01	30	38	21 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	01	01	01	00	02	00	00	00	01	06	01	181	163	11 %
Measles	00	00	00	00	00	02	00	00	00	02	00	62	175	-64.5 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	04	06	-33.3%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	11	09	22.2 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	15	21	- 28.5 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	28	09	211.1 %
Tuberculosis	43	00	00	00	00	24	00	00	00	67	168	3882	3898	0.4 %

Key to Table 1 & 2

Provinces: **W**: Western, **C**: Central, **S**: Southern, **N**: North, **E**: East, **NC**: North Central, **NW**: North Western, **U**: Uva, **Sab**: Sabaragamuwa.

RDHS Divisions: **CB**: Colombo, **GM**: Gampaha, **KL**: Kalutara, **KD**: Kandy, **ML**: Matale, **NE**: Nuwara Eliya, **GL**: Galle, **HB**: Hambantota, **MT**: Matara, **JF**: Jaffna, **KN**: Killinochchi, **MN**: Mannar, **VA**: Vavuniya, **MU**: Mullaitivu, **BT**: Batticaloa, **AM**: Ampara, **TR**: Trincomalee, **KM**: Kalmunai, **KR**: Kurunegala, **PU**: Puttalam, **AP**: Anuradhapura, **PO**: Polonnaruwa, **BD**: Badulla, **MO**: Moneragala, **RP**: Ratnapura, **KG**: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS =**Congenital Rubella Syndrome

NA = Not Available

Number of Malaria Cases Up to End of June 2018,

02

All are Imported!!!

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