



WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health

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Childhood Tuberculosis - Challenges and opportunities in improving case finding

Despite taking great public health steps to control tuberculosis (TB), it remains an enormous public health challenge worldwide. Tuberculosis has been the commonest cause of death from a single infectious pathogen until 2020 when it was overtaken by COVID-19.

Sri Lanka is facing a greater challenge in TB case finding. The country usually notifies 8,000 to 9,000 TB patients, whereas the WHO estimated number is 14,000 patients, leading to the situation of missing around 5000 to 6000 TB cases annually. This is applicable to paediatric TB as well. The proportion of all forms of TB notifications among children under 0-14 years of age remained below the expected range over the years (figure 1). When compared with global estimates for low-middle income countries which should be 5-15% of total TB cases, a significant under-notification and under-reporting of child TB cases is noted in the country.

As childhood tuberculosis (TB) reflects recent transmission, its burden provides an

accurate measure of the level of TB control in a particular community. In Sri Lanka, the TB age-specific curve has been shifting towards the right over the years, emphasizing less community transmission and more vulnerability among older ages. However, considering the WHO target, the country is committed to finding out minimum of 600 childhood TB cases per year, as per the country target set in the National Strategic Plan 2021-2025. Under this backdrop, it is worth enlightening the healthcare workers in both curative and preventive health sectors on the existing challenges and opportunities in order to improve paediatric TB case finding.

Diagnosing Childhood TB carries inbuilt challenges. Globally, childhood TB is under-reported due to its paucibacillary nature and the difficulty of confirming the diagnosis. The clinical and radiographic manifestations are less specific in children compared to adults and are often confused with bacterial pneumonia. Microbiologic confirmation of disease

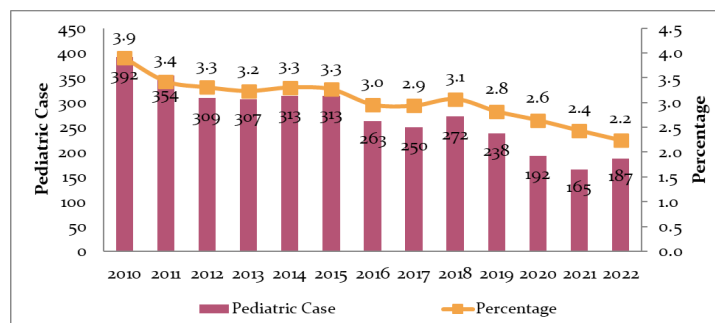


Figure 1. Trend of total childhood TB cases and proportionate contribution to total cases 2010-2022

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is limited by the paucibacillary nature of the disease. Collection of a good quality sputum sample from children is often a challenge and recommends induced sputum or gastric lavage which may not be carried out in all settings.

Recent TB reviews had emphasized that the efforts on diagnosing paediatric TB in the country is sub-optimum. The gaps imply a low investigation rate among children less than 5 years old, sub-optimal capacity and understanding of the childhood TB diagnostic algorithm and policies, limited capacity among health care providers to induce sputum production in children, possible low suspicion and capacity to diagnose pediatric TB among medical officers at Outpatient settings and clinics, and weak referral linkages to pediatric facilities for further evaluation, are some of these limitations leading to low childhood TB detection.

On the other hand, the opportunities for momentum to improve childhood diagnosis are immense in the country. The National Programme for Tuberculosis Control and Chest Diseases (NPTCCD) has developed a paediatric TB algorithm and made both the curative and preventive sectors aware of this including the possible referral pathways (Figure 2).

In contrast to the adult TB diagnostic algorithm, the paediatric TB algorithm contains many criteria beyond respiratory symptoms. The existence of different stakeholders to

gear the effective diagnosis among suspected children is what we are lacking is continuous momentum and collaboration among stakeholders. All healthcare workers who encounter the paediatric population, Paediatricians, Primary Care Physicians in the government and private sectors, Medical Officers of Health, Public Health Midwives, Clinical Nutritionists, Child Developmental Officers in the estates etc should suspect paediatric TB when they encounter a child with stipulated criteria in the algorithm.

Hence, to improve childhood TB diagnosis, clinicians should think beyond the traditional framework of diagnosing TB when it comes to childhood Tuberculosis. It is much more important to assess the child as a whole including the risk of exposure, and epidemiological background in relation to TB to facilitate TB diagnosis among children. The other healthcare workers should adhere to the given algorithm and referral pathways to enhance diagnosis. Under the given economic crisis, there is a tendency to have nutritionally driven immune deficiency which could lead to a higher number of paediatric TB in the community than expected. Therefore, it is a timely need to **“Think TB”** and keep TB high on the list when examining children in the institutional and field settings as a continuous drive to eliminate childhood tuberculosis is a must to end TB by 2035.

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 09th-15th Mar 2024 (11th Week)

RDHS	Dengue Fever		Dysentery		Encephalitis		En. Fever		F. Poisoning		Leptospirosis		Typhus F.		Viral Hep.		H. Rabies		Chickenpox		Meningitis		Leishmania-		Tuberculosis		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	A	B	T*	C**	
Colombo	207	3739	0	5	0	1	0	2	0	3	11	84	0	0	0	3	0	0	12	92	0	10	0	0	54	441	95	100	
Gampaha	90	1521	0	5	0	4	0	2	0	0	22	149	0	2	0	1	0	0	9	62	2	28	1	6	27	247	93	99	
Kalutara	91	958	0	9	0	0	0	3	3	3	13	155	1	3	0	5	0	0	8	125	3	20	0	13	152	93	100		
Kandy	59	1424	0	5	0	0	0	0	0	3	7	69	2	5	0	2	0	0	8	148	0	4	0	12	5	144	100	100	
Matale	8	286	0	1	0	0	0	1	0	4	0	38	0	0	0	1	0	0	4	19	1	4	1	65	7	26	100	100	
Nuwara Eliya	4	156	2	19	0	2	0	1	0	9	3	65	1	12	2	3	0	0	6	45	0	3	0	0	9	67	100	100	
Galle	28	911	0	14	0	6	0	1	0	16	20	225	4	34	0	4	1	1	20	126	3	23	0	3	9	102	95	100	
Hambantota	27	359	1	5	0	0	0	0	0	0	9	214	0	13	0	2	0	0	6	64	2	11	15	127	8	34	100	100	
Matara	23	313	0	2	0	2	0	0	0	4	3	92	0	6	0	0	0	0	10	66	2	36	1	28	6	18	100	100	
Jaffna	99	4615	0	21	0	1	1	2	0	15	0	12	24	317	0	3	0	1	6	69	0	5	0	0	10	46	93	93	
Kilinochchi	8	249	1	2	0	0	0	0	0	1	0	9	0	6	0	0	0	0	0	1	0	2	0	0	0	7	100	100	
Mannar	1	166	0	0	0	0	0	1	0	0	1	16	0	5	0	0	0	0	0	4	0	2	0	1	1	16	100	100	
Vavuniya	5	120	0	0	0	0	0	0	0	1	1	47	0	1	0	4	0	0	0	7	1	6	0	3	0	5	100	100	
Mullaitivu	7	167	0	3	0	0	0	0	0	2	2	45	0	8	0	0	0	0	0	2	0	0	0	1	4	3	8	64	100
Batticaloa	55	928	2	40	0	5	0	1	1	10	1	19	0	1	0	5	0	0	0	14	1	18	0	1	6	23	100	100	
Ampara	13	121	1	12	0	1	0	0	0	7	4	96	0	1	0	3	0	0	0	37	1	16	2	5	4	53	100	100	
Trincomalee	23	356	1	6	0	0	0	1	0	1	10	80	2	7	0	0	0	0	3	10	0	3	2	8	2	17	100	100	
Kurunegala	50	1104	0	5	3	7	0	0	3	339	13	214	1	13	0	2	0	2	9	99	8	67	15	134	9	124	85	98	
Puttalam	9	553	1	1	0	1	0	0	0	0	3	108	1	5	0	0	0	0	2	33	1	13	1	5	1	43	54	100	
Anuradhapura	33	431	1	4	0	0	0	0	0	2	10	165	4	18	0	6	0	0	7	42	0	16	22	212	7	58	96	100	
Polonnaruwa	10	149	0	6	0	0	0	0	0	2	4	99	0	1	0	1	0	0	2	41	1	7	15	114	0	17	100	100	
Badulla	13	459	1	8	0	1	0	0	1	9	19	168	1	7	0	5	0	0	12	76	1	8	0	7	6	48	94	100	
Monaragala	19	320	0	4	0	0	0	1	0	0	20	351	0	13	0	7	0	0	2	23	3	37	12	59	0	20	82	100	
Ratnapura	56	707	1	19	1	1	0	0	1	3	31	403	0	8	1	8	0	1	15	79	3	32	1	56	10	63	100	100	
Kegalle	44	810	0	3	0	2	0	0	1	3	24	166	0	5	1	5	0	0	11	166	2	19	1	12	8	71	100	100	
Kalmunai	22	455	0	8	0	0	0	0	0	0	2	32	0	1	1	1	0	0	5	38	0	3	0	0	0	32	85	100	
SRILANKA	1004	21377	12	207	4	34	2	16	10	437	233	3121	41	492	5	71	1	5	157	1488	35	393	90	862	205	1882	93	99	

Source: Weekly Returns of Communicable Diseases (esurveillance.avid.gov.lk). T=Timeliness refers to returns received on or before 15th Mar, 2024. Total number of reporting units 358. Number of reporting units data provided for the current week: 355. C**=Completeness. A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

09th – 15th Mar 2024 (11th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2024	Number of cases during same week in 2023	Total number of cases to date in 2024	Total number of cases to date in 2023	Difference between the number of cases to date in 2024 & 2023
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	01	00	00	00	02	01	16	19	-15.7 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	01	00	00	00	01	00	00	01	00	03	02	64	44	45.4 %
Measles	01	00	00	00	01	01	00	00	00	03	00	151	00	0 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
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	00	01	-100 %
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	01	00	0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	01	02	-50 %

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

Influenza 2024							
Month	Human				Animal		
	No Total	No Positive	Infl A	Infl B	Pooled samples	Serum Samples	Positives
February	435	60	46	14	2251	750	0

Duration: from 01st of February to 28th of February
 Source: MRI, TH Karapitiya, National Cancer Institute

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

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