



# WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit  
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## *Tuberculosis case detection - are we counting all?*

Since the World Health Organization declared tuberculosis as a global emergency in 1993, there was a substantial success in implementing standardized care and improving rates of cure. The number of cases per capita is falling at a slow rate of less than 1% per year. However, due to the population growth, the total number of incident cases of TB is increasing in the absolute terms. In fact, the global burden of tuberculosis remains enormous.

Tuberculosis is one of the top three killer diseases worldwide along with HIV and malaria. According to the World Health Organisation, 2 billion people (1/3 of the world's population), are infected with the tuberculosis bacterium. About one in ten of those infected will develop the disease. TB infection is currently spreading at the rate of one person per second. The disease kills more young people and adults than any other infectious disease. Each year, an estimated eight million to 10 million people contract the disease and two to three million people die from it. Most of the estimated number of cases

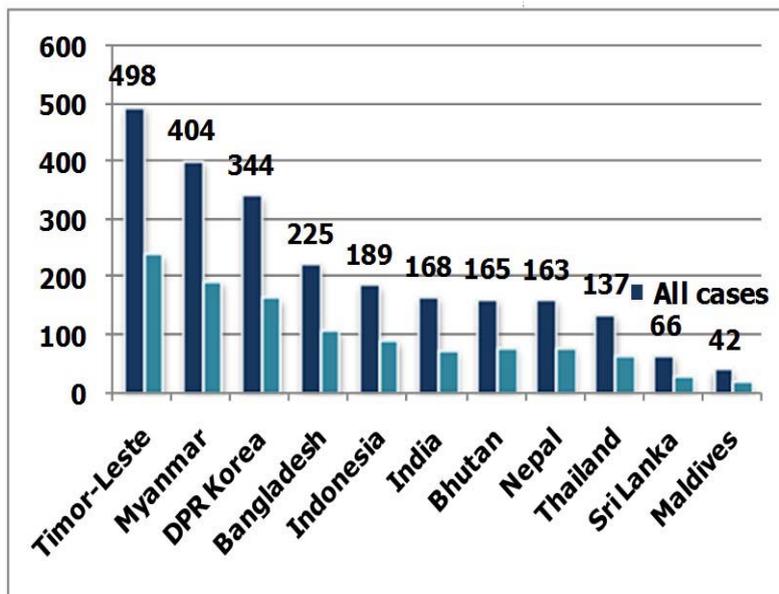
in 2007 was in Asia (55%) and Africa (31%).

TB has been on the rise since the 1980s, particularly in Southeast Asia and sub-Saharan Africa. Much of TB's resurgence is directly connected to the HIV/AIDS pandemic -- especially in Africa, where two-thirds of those living with HIV also carry TB. Worldwide, an estimated one-third of the 40 million people living with HIV/AIDS are co-infected with TB. As well as up to thirty-five million people worldwide could die of TB over the next two decades unless greater action is taken to treat and prevent the disease.

Out of the 22 high-burden countries, 11 are in Asia. Five of them are among WHO South-East Asian Region member countries. In total, the annual incidence of TB cases in the SEAR is 3.2 million and carries one-third of the global burden of TB. India accounts for over 20% of the global burden. An estimated 500,000 die of TB in the Region each year. The estimated incidence in Region varies

from 42 per 100,000 population in Maldives to 498 in Timor-Leste. Sri Lanka records the second lowest estimated incidence of TB, at 66 per 100,000 population. The next in the line is Thailand with an estimated incidence of 137 per 100,000 population.

While there is an estimated incidence of 66 per 100,000 population, the recorded incidence of TB in Sri Lanka in 2009 was 47.9. This means that there is a gap of around 3500 between the estimated and



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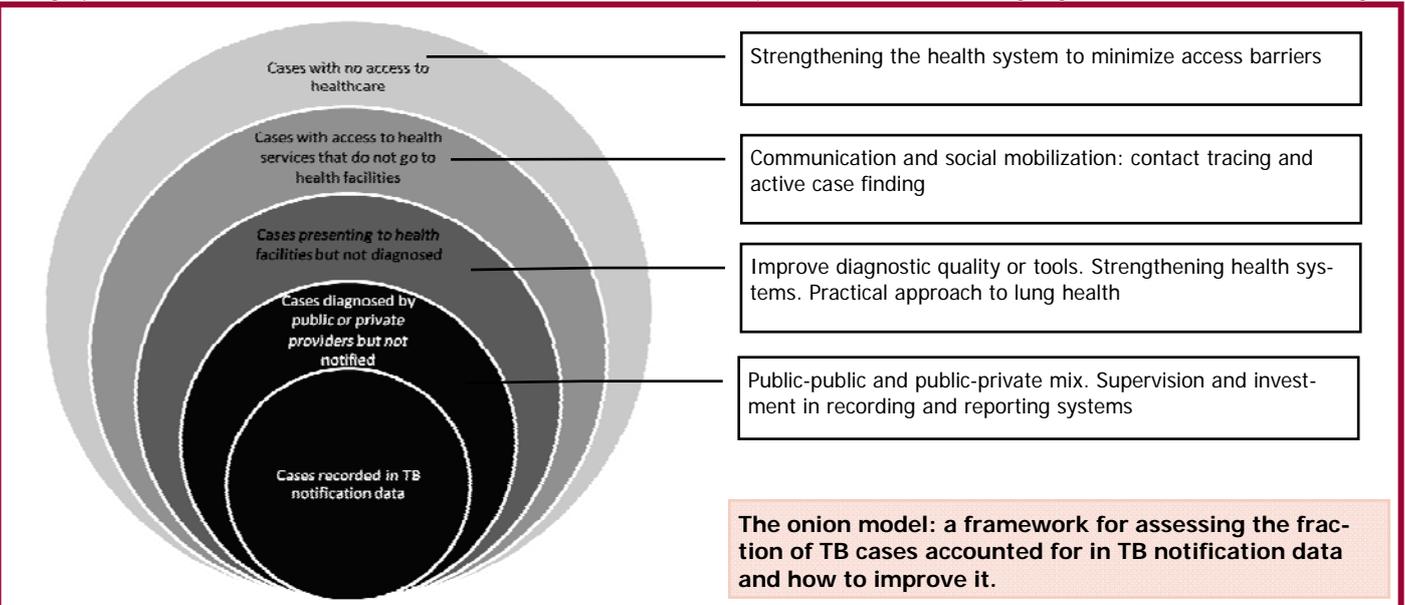
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**SRI LANKA - 2010**

reported number of cases. This gap could be either due to an overestimation of the true incidence or due to underreporting or poor case detection. The estimated incidence has been made by an expert panel of the World Health Organization and is based on the available best evidence. As well as, there is evidence that each year, a certain number of TB cases are not being detected and some diagnosed cases are not reported to the Programme. Therefore, it is reasonable to believe that underreporting and poor case detection are important factors to explain the gap between estimated and reported number of cases than an overestimation of incident cases. The 'onion model' best explains where these deficiencies can occur.

Although Sri Lanka is having a free healthcare system with universal coverage, still there may be at least a small proportion of population in certain remote areas where there is no ready access to healthcare services. For example, an elderly or disabled with poor social or family support may not be able to seek care whenever it is needed. If it is tuberculosis, the patient may suffer for long or die of it. Then, there is a certain proportion of the population those who do not seek healthcare although it is accessible. Those who seek alternative methods of healthcare and people who are self-negligent, for example, drug addicts and alcoholics fall into this category.

should not be used as the main criterion to accept or reject the diagnosis of tuberculosis. Due to the nature of peoples' health care seeking behaviours there are instances, even after TB is suspected and they were referred for sputum microscopy, patient will not perform the investigation. Some patients may provide sputum but will not turn up to obtain results. To minimise this, every primary healthcare setting (out patient departments) should maintain a Register of TB Suspects. Whenever, a TB suspect is referred for sputum microscopy, his/her details should enter in this register with clear and accurate information on patient's name, residential address and contact numbers. On the other hand, in the laboratory where sputum microscopy for acid-fast bacilli is performed, a TB Laboratory Register should be maintained. These will help to readily identify patients with positive sputum smear and to trace them in the community if not turned up to obtain treatment.

In certain instances, especially in the private sector, patients are accurately diagnosed and treatment is commenced but is not reported to the National Programme for TB Control & Chest Diseases (NPTCCD). Wherever the patient is diagnosed and treated, it is important to record them in the respective District TB Register in order to maintain accurate records on case finding, sputum conversion and treatment outcome –three important clinical data on TB patients. In addition, being registered at the District TB Regis-



There are instances, where despite that TB symptomatic seek healthcare they are not accurately diagnosed. The treating physician especially in the primary healthcare settings should have a high degree of alert on patients' symptoms to suspect TB. It has been estimated that 1-2% of attendees to out patient services fall into the category of 'TB suspects' who should undergo sputum smear examination. But district data shows that only a very small proportion of these TB suspects are actually subjected to sputum smear examination. If a patient present with cough for more than two weeks with or without low grade fever, night sweating, loss of appetite, loss of weight, fatigue, chest pain or haemoptysis, the physician should suspect TB and should request for sputum microscopy. Diagnosis should not be entirely based on chest x-ray findings since x-ray changes in tuberculosis are non-specific and may be misleading. ESR may be high in some patients with TB but it is not either sensitive or specific to diagnose TB. Therefore, ESR

ter patients will be benefitted by receiving fixed-dose combination (FDC) drugs. This reduces the number of tablets a patient need to ingest at a time to 3, where it will be about 11 tablets/capsules if individual drugs are prescribed. This improves patient compliance thereby reduces defaulting treatment which is one of the most important factor in the development of multi-drug resistant TB (MDR-TB).

Source:

World Health Organization (2010). Tuberculosis in the South-East Asia Region. SEA-TB-315. WHO Regional Office for South-East Asia.

World Health Organization (2009). TB Impact Measurement. Policy and recommendations for how to assess the Epidemiological burden of TB and the impact of TB Control. WHO/HTM/TB/2009.416

This article was compiled by Dr Sudath Samaraweera, Consultant Community Physician, National Programme for Tuberculosis Control & Chest Diseases.

Table 1: Vaccine-preventable Diseases & AFP

27<sup>th</sup> March - 02<sup>nd</sup> April 2010(13<sup>th</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	00	00	00	00	00	00	00	00	00	04	27	19	+ 42.1 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	00	00	00	00	00	00	00	00	03	01	27	36	- 25.0 %
Tetanus	00	00	00	00	01 TR=1	00	00	00	00	01	00	07	07	00.0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	05	19	- 73.7 %
Tuberculosis	19	00	04	00	07	07	00	00	00	37	136	2350	1997	+ 17.7 %

Table 2: Newly Introduced Notifiable Disease

27<sup>th</sup> March - 02<sup>nd</sup> April 2010(13<sup>th</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	06	09	08	09	11	14	07	06	15	85	305	1090	2841	- 61.6 %
Meningitis	05 KT=1 CB=5	03 NE=3	03 GL=3	01 VA=1	00	02 KN=2	01 AP=1	00	01 KG=1	16	27	424	264	+ 60.6 %
Mumps	03	01	02	04	00	00	01	00	05	16	19	233	464	- 49.8 %
Leishmaniasis	00	00	02 HB=2	00	00	00	06 AP=6	00	00	08	14	103	340	- 69.7 %

**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.  
 DPDS 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, Whooping Cough, Chickenpox, Meningitis, Mumps.

Special Surveillance: Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008.

**10<sup>th</sup> South East Asia Regional Scientific Meeting of the International Epidemiological Association**

**23<sup>rd</sup> - 26<sup>th</sup> May 2010**

**Colombo, Sri Lanka**

**Theme**

**"Epidemiological Methods in Evidence Based Healthcare"**

Visit <http://www.episea2010.com>

**Table 4: Selected notifiable diseases reported by Medical Officers of Health**  
27<sup>th</sup> March - 02<sup>nd</sup> April 2010(13<sup>th</sup> Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received %
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
Colombo	16	1403	2	42	0	5	0	16	1	6	4	175	0	3	1	20	0	1	69
Gampaha	12	1447	0	9	0	7	0	12	0	8	2	136	0	1	1	28	1	1	53
Kalutara	14	375	1	40	1	5	0	5	3	23	6	109	0	0	0	14	0	1	58
Kandy	5	474	0	86	1	1	0	7	0	1	1	22	0	51	0	21	0	0	52
Matale	5	291	6	176	0	0	0	7	0	57	0	26	0	0	0	14	0	0	50
Nuwara	1	55	2	34	0	0	0	35	0	3	1	9	0	27	0	12	0	0	54
Galle	20	210	4	59	0	3	0	0	0	6	3	21	0	2	1	6	0	2	79
Hambant	2	264	1	12	0	2	0	1	0	3	0	20	0	39	0	3	0	0	82
Matara	2	120	0	31	0	1	0	1	0	35	4	101	0	62	0	9	0	0	82
Jaffna	0	1845	0	44	0	1	0	270	0	5	0	0	0	93	0	24	0	1	0
Kili-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mannar	6	69	0	13	0	0	1	22	0	2	0	0	0	0	2	10	0	0	100
Vavuniya	1	468	0	13	0	1	0	23	0	7	0	0	0	0	1	7	0	0	25
Mullaitivu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Batticaloa	21	806	0	32	0	1	0	10	2	11	0	1	0	1	0	0	0	0	43
Ampara	1	47	0	20	0	1	0	4	0	6	0	16	0	0	0	6	0	0	29
Trincomal	9	669	0	44	0	4	0	3	0	7	0	8	0	4	0	9	0	0	50
Kurunega	4	437	0	59	0	2	0	9	0	4	4	129	1	20	3	39	0	1	50
Puttalam	1	470	0	21	0	3	0	29	0	120	0	50	0	0	0	3	0	0	33
Anuradha	1	676	1	20	0	0	0	3	0	21	0	18	0	13	0	19	0	4	32
Polonnar	0	109	0	19	0	1	0	1	0	2	0	31	0	0	0	14	0	0	57
Badulla	1	188	0	47	0	0	5	36	0	10	1	19	1	22	1	23	0	0	40
Monaraga	3	136	1	56	0	0	0	16	0	3	0	13	0	18	0	28	0	0	55
Ratnapur	16	445	4	91	0	3	0	6	0	8	2	109	0	25	0	35	0	1	44
Kegalle	0	301	1	18	0	4	0	22	0	15	1	75	0	5	0	34	0	0	55
Kalmunai	14	406	0	46	0	0	0	4	0	0	0	0	0	0	0	7	0	1	38
<b>SRI LANKA</b>	<b>155</b>	<b>11711</b>	<b>23</b>	<b>1032</b>	<b>02</b>	<b>45</b>	<b>06</b>	<b>542</b>	<b>06</b>	<b>363</b>	<b>29</b>	<b>1088</b>	<b>02</b>	<b>386</b>	<b>10</b>	<b>385</b>	<b>01</b>	<b>13</b>	<b>50</b>

Source: Weekly Returns of Communicable Diseases WRCD).

\*Dengue Fever / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.

\*\*Timely refers to returns received on or before 02<sup>nd</sup> April, 2010 Total number of reporting units =311. Number of reporting units data provided for the current week: 205

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

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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](mailto:chepid@sltnet.lk).

**ON STATE SERVICE**

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