



# WEEKLY EPIDEMIOLOGICAL REPORT

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## Catastrophic Costs, Social Protection and determinants: Implications for TB

The Sustainable Development Goals (SDGs) for 2030 were adopted by the United Nations in 2015. One of the targets is to end the global TB epidemic. The WHO End TB Strategy, approved by the World Health Assembly in 2014, calls for a 90% reduction in TB deaths and an 80% reduction in the TB incidence rate by 2030, compared with 2015.

There were an estimated 1.4 million TB deaths in 2015, and an additional 0.4 million deaths resulting from TB disease among people living with HIV. Although the number of TB deaths fell by 22% between 2000 and 2015, TB remained one of the top 10 causes of death worldwide in 2015.

### Catastrophic costs

The financial allocation available for TB care and prevention in low and middle-income countries in 2016 was US\$ 6.6 billion, of which 84% was from domestic sources. Investments in low and middle-income countries fell almost US\$ 2 billion short of the US\$ 8.3 billion needed in 2016. This annual gap will widen to US\$ 6 billion in 2020 if the current funding levels do not increase. Out-of-pocket expenditures exceeded 45% of total health expenditure in 46 countries, including 11 of the 30 high TB burden countries.

The End TB Strategy has three high-level indicators: the TB incidence rate, the absolute number of TB deaths and the percentage of TB patients and their households that experience catastrophic costs as a result of TB disease. Targets for these indicators have been set for 2030 and 2035, with accompanying milestones for 2020 and 2025.

The 2020 milestones of the End TB Strategy are a 35% reduction in the absolute number of TB deaths and a 20% reduction in the TB incidence

rate, compared with levels in 2015; and that no TB-affected households face catastrophic costs.

### Social Protection

Social protection can be advanced through better models of care and social benefits. Many low- and middle-income countries have financed social and economic support for TB patients, but these support packages need to be better documented and evaluated. For overall impact and sustainability, using national social protection platforms is a priority. WHO recommends baseline national surveys to assess the nature and severity of TB patient costs, and to improve service delivery and social protection accordingly.

### Addressing the social determinants

The social determinants of health (SDH) are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems.

Addressing the social determinants of health is a shared responsibility across disease programmes and other stakeholders within and beyond the health sector.

Poverty is a powerful social determinant of tuberculosis. Crowded and poorly ventilated living and working environments often associated with poverty constitute direct risk factors for tuberculosis transmission. Under-nutrition is an important risk factor for developing active disease. Poverty is also associated with poor knowledge on general health and a lack of empowerment to act on health knowledge, which leads to risk of exposure to several tuberculosis risk factors, such as HIV, smoking and alcohol abuse.

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There is a strong inverse association between GDP per capita and TB incidence. The first goal of the SDGs is ending poverty in all its forms everywhere and it includes two targets for 2030. The first is to eradicate extreme poverty for all people everywhere, currently measured as people living on less than US\$ 1.25 a day. The second is to reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions, according to national definitions.

Societies that have experienced broad socioeconomic development have seen a substantial reduction in TB incidence and mortality rates. Poverty alleviation has historically contributed the most to the reduction in TB rates in countries that now have a low TB burden. However, economic growth alone is not a guarantee for a rapid decline in TB cases and deaths. Unequal wealth distribution, with large parts of the population are left behind, leaves fertile ground for a sustained TB burden. Not all economic development is of benefit to the fight against TB. Industrialization with rapid urbanization increases population density and is often coupled with rapid Infected rate .

Dramatic lifestyle changes in emerging economies – for example, increasing smoking and alcohol use, and changes in diet and exercise – can have a negative impact on TB rates via an increase in non-communicable diseases that act as risk factors for TB. In most societies, the poorest are also the worst affected by these risk factors and diseases.

Under- funded or poorly organized health systems are often not equipped to ensure equitable access to high-quality TB diagnosis and treatment. The poorest and most vulnerable groups face severe barriers to accessing diagnosis and treatment, and to staying in care. They also have a particularly high risk of suffering severe financial and social consequences as a result of TB, and may have the least access to any social protection mechanisms. Although poverty is a cause of TB, the disease is also a cause of poverty; this vicious circle plays out on individual, household and community level. In response to social determinants of TB, there are a number of societal-level actions that can help to drive effective TB prevention beyond the poverty alleviation, UHC financing and social protection discussed above, for which governments are ultimately responsible.

Societal-level actions include:

- integrated public health programmes that help to reduce diabetes, smoking and harmful alcohol use; food security initiatives for high-risk populations ;
- environmental protection, especially in certain industries (e.g. mining);
- building codes (e.g. for homes, workplaces, health facilities, prisons, schools and institutions for elderly) that are conducive to infection control;
- good urban planning (e.g. with slum upgrading); and
- effective and safe energy and cooking devices that minimize pollution.

In moving forward to end TB and on the SDGs in general, there needs to be close collaboration across and beyond government on multiple development priorities. Therefore, there is a substantial challenge ahead to ramp up investment and commitment to the new development agenda

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**Table 1 : Water Quality Surveillance  
Number of microbiological water samples December 2016**

District	MOH areas	No: Expected *	No: Received
Colombo	15	90	90
Gampaha	15	90	22
Kalutara	12	72	NR
Kalutara NIHS	2	12	NR
Kandy	23	138	NR
Matale	13	78	NR
Nuwara Eliya	13	78	NR
Galle	20	120	NR
Matara	17	102	29
Hambantota	12	72	NR
Jaffna	12	72	60
Kilinochchi	4	24	0
Manner	5	30	0
Vavuniya	4	24	33
Mullatvu	5	30	NR
Batticaloa	14	84	81
Ampara	7	42	0
Trincomalee	11	66	31
Kurunegala	29	174	59
Puttalam	13	78	4
Anuradhapura	19	114	NR
Polonnaruwa	7	42	16
Badulla	16	96	98
Moneragala	11	66	98
Rathnapura	18	108	46
Kegalle	11	66	5
Kalmunai	13	78	NR

\* No of samples expected (6 / MOH area / Month)  
NR = Return not received

Table 1: Selected notifiable diseases reported by Medical Officers of Health 07<sup>th</sup> - 13<sup>th</sup> Jan 2017 (02<sup>nd</sup> Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmaniasis		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	531	1084	3	10	0	0	1	2	0	0	0	2	0	1	0	1	0	0	0	6	9	0	2	0	0	75	81
Gampaha	29	292	2	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4	5	0	2	0	0	13	67	
Kalutara	91	218	1	2	0	0	0	0	0	1	1	8	0	1	0	0	0	0	8	14	0	4	0	0	79	93	
Kandy	69	119	1	1	0	0	0	0	0	0	4	4	6	11	0	0	0	0	4	11	2	2	0	0	96	100	
Matale	14	40	1	3	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	8	1	1	62	85	
Nuwaraweliya	12	23	0	3	0	0	0	1	0	0	0	1	4	7	0	0	0	0	0	8	0	0	0	0	62	92	
Galle	120	324	1	2	0	0	0	0	0	0	4	6	2	3	0	0	0	0	2	5	0	0	0	0	45	80	
Hambantota	38	67	0	3	0	0	0	1	0	0	1	5	0	0	1	1	0	0	7	9	1	1	1	4	67	83	
Matarata	114	183	1	3	1	1	0	0	2	0	3	2	4	2	4	0	1	0	5	10	0	0	2	2	100	100	
Jaffna	48	184	11	23	0	0	0	0	1	0	4	28	64	0	1	0	0	0	7	10	0	1	0	0	67	83	
Kilinochchi	5	10	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	75	100	
Mannar	55	84	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	100	
Vavuniya	3	30	1	3	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	3	0	0	0	1	50	100	
Mullaitivu	3	8	0	0	0	0	0	1	0	0	2	2	0	1	0	0	0	0	0	0	0	1	0	0	60	100	
Batticaloa	9	38	4	8	1	1	0	0	0	0	5	0	0	0	0	0	0	0	2	4	0	1	0	0	57	79	
Ampara	0	7	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Trincomalee	59	96	0	0	0	0	0	0	1	1	0	2	0	1	1	1	0	0	3	11	3	3	0	0	83	92	
Kurunegala	60	159	3	7	0	0	0	0	0	0	4	4	1	1	0	1	0	0	9	17	1	7	2	8	79	97	
Puttalam	33	84	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	2	1	1	64	93	
Anuradhapura	10	39	0	0	0	0	0	0	1	2	1	5	0	4	0	0	0	0	4	8	1	6	5	10	32	63	
Polonnaruwa	7	28	1	3	0	0	0	0	0	0	1	4	0	1	0	0	0	0	0	3	0	0	2	4	71	86	
Badulla	63	123	3	9	2	2	0	0	0	0	1	4	1	2	1	1	0	0	10	20	6	14	0	1	82	88	
Monaragala	9	30	1	4	0	0	0	0	1	1	0	2	1	4	0	2	0	0	4	7	1	3	0	1	73	100	
Ratnapura	70	186	1	5	3	3	1	1	0	0	6	16	0	0	2	2	0	0	2	3	0	5	0	0	61	89	
Kegalle	20	78	1	4	0	0	0	0	0	0	1	1	0	1	0	0	0	0	5	11	0	5	0	0	55	91	
Kalmune	37	82	5	8	1	1	1	1	0	0	1	2	0	0	0	0	0	0	5	5	0	0	0	0	69	77	
<b>SRILANKA</b>	<b>1509</b>	<b>3616</b>	<b>42</b>	<b>107</b>	<b>8</b>	<b>8</b>	<b>3</b>	<b>8</b>	<b>4</b>	<b>9</b>	<b>25</b>	<b>86</b>	<b>45</b>	<b>106</b>	<b>4</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>178</b>	<b>15</b>	<b>67</b>	<b>15</b>	<b>33</b>	<b>65</b>	<b>88</b>	

Source: Weekly Returns of Communicable Diseases (WRCD).

\*T=Timeliness refers to returns received on or before 13<sup>th</sup> January, 2017 Total number of reporting units 337 Number of reporting units data provided for the current week: 303 C\*\*=Completeness  
A = Cases reported during the current week. B = Cumulative cases for the year.

**Table 2: Vaccine-Preventable Diseases & AFP**

07<sup>th</sup> – 13<sup>th</sup> Jan 2017 (02<sup>nd</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2017	Number of cases during same week in 2016	Total number of cases to date in 2017	Total number of cases to date in 2016	Difference between the number of cases to date in 2017 & 2016
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	01	02	00	00	00	00	00	00	03	02	04	02	+100%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	01	00	00	00	01	00	00	00	02	05	10	09	+11.1%
Measles	03	00	00	00	02	01	00	00	00	06	07	12	07	+71.4%
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	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	00	0%
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	04	00	0%
Whooping Cough	00	00	01	00	00	00	00	00	00	01	01	01	01	0%
Tuberculosis	20	11	25	00	15	05	00	13	14	103	263	289	393	-26.4%

**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

AFP and all clinically confirmed Vaccine Preventable Diseases except Tuberculosis and Mumps should be investigated by the MOH

Influenza Surveillance in Sentinel Hospitals - ILI & SARI								
Month	Human					Animal		
	No Received	ILI	SARI	Infl A	Infl B	Pooled samples	Serum Samples	Positives
December	4705	57	48	23	0	1235	457	0

Source: Medical Research Institute & Veterinary Research Institute

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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). **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

**ON STATE SERVICE**

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