Annual Report 2018



National Programme for Tuberculosis Control and Chest Diseases Ministry of Health, Nutrition & Indigenous Medicine Sri Lanka

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List of Abbreviations

AFB	Acid Fast Bacilli
AIDS	Acquired Immune Deficiency Syndrome
BCG	Bacillus Calmette–Guérin
DCC	District Chest Clinic
DOTS	Directly Observed Therapy Short-course
DST	Drug Susceptibility Testing
DTCO	District Tuberculosis Control Officers
ЕРТВ	Extra Pulmonary Tuberculosis
EQA	External Quality Assessment
FDC	Fixed Dose Combination
GDF	Global Drug Facility
GFATM	Global Fund to fight AIDS, Tuberculosis and Malaria
HIV	Human Immune Deficiency Virus
IEC	Information, Education and Communication
MDG	Millennium Development Goals
MDR-TB	Multi Drug Resistant Tuberculosis
NPTCCD	National Programme for Tuberculosis Control and Chest Diseases
NTRL	National Tuberculosis Reference Laboratory
OPD	Out Patient Department
РТВ	Pulmonary Tuberculosis
SAARC	South Asian Association for Regional Cooperation
SEARO	Regional Office for South-East Asia (WHO)
STAC	SAARC Tuberculosis and AIDS Centre
ТВ	Tuberculosis

WHO World Health Organization

Foreword

The Annual Report of the National Programme for the Tuberculosis Control and Chest Diseases- 2017, is the publication which contains important data on the status of Tuberculosis activities in Sri Lanka.

In this year many new ventures were launched to increase the case detection and case holding. Technological and management advances were introduced to the programme to improve the performance. Special attention was paid for high risk and special groups, public- private partnership, including political leadership and policy makers for further strengthening of TB control activities. Improvement of recording and reporting system, human resource development and international collaborations were also given special importance.

I am thankful to Secretary, Ministry of Health Nutrition and Indigenous Medicine, Director General of Health services and deputy director general (Public Health Services 1) for the guidance given to us. I highly appreciate the support rendered by the staff of NPTCCD, the District Tuberculosis Control Officers (DTCOs), Consultant Respiratory Physician and all other members of our team at central and peripheral level.

I am thankful to International agencies such as GFATM, WHO, SAARC, IOM and World Bank for the support rendered in most of our activities. I wish the programme to be a success to reach its vision of "TB free Sri Lanka".

Dr. Nirupa Pallewatte Deputy Director, NPTCCD

Preface

Progress, Activity and Administration Report is an annual publication of the National Programme for Tuberculosis Control and Chest Diseases.

The objective of this annual report is to provide information to the wide range of stakeholders on the progress and the performance of TB control activities in Sri Lanka.

Part I of the report gives the performance of the National Tuberculosis Control Programme. Data collected during 2017 are analyzed and presented. This would be useful for policy makers to take appropriate policy decisions in order to improve TB care services. In addition, District Tuberculosis Control Officers and other central and district level health professionals can utilize this information to focus their activities more precisely to reach national targets of TB Control.

Part II of the report provides information regarding the tuberculosis control activities carried out in Sri Lanka during the year 2017 at central and district level.

Part III of the report describes the administrative framework of the NPTCCD and facilities affiliated to TB control services.

PART I Progress Report

National Programme for Tuberculosis Control and Chest Diseases

National Programme for Tuberculosis Control and Chest Diseases (NPTCCD) is a central level organization in the Ministry of Health, which is headed by the Director, NPTCCD. The programme functions under the Deputy Director General (Public Health Services I) of the Ministry of Health. The central unit of the NPTCCD, National Tuberculosis Reference Laboratory (NTRL), Central Drug Stores (CDS) of the NPTCCD, District Chest Clinics (DCCs) of Colombo and Gampaha are under the direct administrative purview of the Director NPTCCD.

NPTCCD provides its services through a network of chest clinics, chest wards and laboratories. Inward facilities for TB patients are provided at the National Hospital for Respiratory Diseases (NHRD) situated in Welisara and several other chest wards situated in government Hospitals.

Diagnostic services are provided through National TB Reference Laboratory, Intermediate TB laboratories (ITL) in Kandy, Karapitiya, Jaffna and Ratnapura, district chest clinic laboratories and 157 functioning microscopy centers.

Central Drug Stores (CDS) of the NPTCCD is responsible for estimation, procurement and supply of anti TB drugs. Fixed Dose combinations of anti TB drugs are procured directly from Global Drug Facility to CDS. Distribution of anti TB drugs to District Chest Clinics is carried out on quarterly basis.

TB and respiratory disease control activities at the district level are carried out by the 26 District Chest Clinics situated in 25 districts. All the District Chest Clinics except Colombo and Gampaha are under the administrative scope of respective provincial and district health authorities.

NPTCCD is responsible for infrastructure development and financial management of the institutions under its direct administrative purview. It also provides technical guidance and financial assistance from funds obtained from donor agencies for implementation of the TB control activities at the district level.

In addition, NPTCCD is responsible for formulation of policies and guidelines for control of TB and other respiratory diseases and for planning, implementation, monitoring and evaluation of the TB control activities carried out in the entire country. TB surveillance is another main activity carried out by the NPTCCD. It also acts as a coordinating body between the central ministry and provincial health sector and other governmental and nongovernmental organizations.

NPTCCD carries out training of medical and paramedical staff engaged in TB care and carries out public awareness through various channels of communication.

The Government of Sri Lanka is the main source of funding for the NPTCCD. In addition, TB control activities are supported by the Global Fund for AIDS, Tuberculosis and Malaria (GFATM). World Health Organization (WHO) provides technical assistance to the programme. In 2017, several microscopy centers in Colombo and Gampaha districts were constructed using the funds provided by Health Sector Development Project (HSDP).

Vision

Sri Lanka free of Tuberculosis and other respiratory diseases.

Mission

To contribute to the socio-economic development of the nation by committing ourselves to create a TB free Sri Lanka and to reduce the morbidity and mortality due to respiratory diseases by formulation of policies, planning, coordinating and monitoring of all TB and other respiratory disease control activities in the country.

Sustainable Development Goals & End TB Strategy

During the period of 2000 to 2015, national efforts to reduce the burden of tuberculosis (TB) were based on achieving the targets set in accordance with the Millennium Development Goals (MDGs). In 2016, MDGs were replaced by the new set of goals, known as the Sustainable Development Goals (SDGs) which focuses on broader areas. A goal for Health is included in SDG 3 "Ensure healthy lives and promote well-being for all at all ages" which has 13 targets set for the period of 2016-2030. TB is described in target 3.3: "By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases"

The post 2015, Global TB strategy aims to end the global TB epidemic by 2035 and is linked with sustainable development goals. The targets and milestones to End TB are as follows:

Indicator	Milestones for 2020	Milestones for 2025	End TB targets for 2035		
Percentage reduction in the absolute number of TB deaths (baseline 2015)	35% reduction of deaths	75% reduction of deaths	95% reduction of deaths		
Percentage reduction in the TB incidence rate (baseline 2015)	20% reduction of incidence	50 % reduction of incidence	90% reduction of incidence (10 per 100,000 cases)		
Percentage of TB patients and their households experiencing catastrophic costs due to TB	0%	0%	0%		

Table1: Targets and milestones to End TB

NPTCCD has revised the it's National Strategic Plan (NSP) for TB control for the period of 2015-2020 to be in par with "End TB" global TB control strategies.

Methods

Goal & Objectives of National Strategic Plan for TB control (2015-2020)

Goal: Decrease the prevalence of TB by 10 % by 2020 based on TB burden figures of 2014 as per the WHO estimates.

Objectives

Objective 1:

To improve the TB control by detecting at least 80% of incident TB cases (all forms) by 2017 and 90% of incident cases by 2020

Objective 2:

To improve the outcome of enrolled TB patients

- a) By achieving 90% treatment success rate of all forms of non MDR TB patients and;
- b) To maintain at least 75% of treatment success rate among MDR TB cases by 2018

Objective 3:

To integrate TB control activities in to general healthcare system by establishing TB diagnostic and treatment services in 40% of all hospitals up to the level of Divisional Hospitals Type B or above by 2018 and in 80% -by 2020

Objective 4:

To improve the accessibility to TB treatment and care by engaging 30% of all private health care providers (hospitals and General Practitioners) in TB control by 2018, and 50% by 2020

Objective 5:

Ensure that quality TB services in line with current international standards are provided by qualified and regularly supervised personnel at 100% of all implementation sites by 2018

Surveillance of TB

Notification System

> TB Case Notification

TB is a notifiable disease since 1948. NPTCCD receives case notifications in a special form (Health 816 A) from District Chest Clinics, other government health institutions and from private health institutions. Once a TB patient is diagnosed at a chest clinic, he or she should be registered in the District TB Register and should be notified to Central unit of the NPTCCD and to National Epidemiological Surveillance System through Medical Officer of Health. Patients diagnosed at other institutions are also referred to the relevant chest clinics for registration, notification and further management.

> TB Death Notification

TB deaths are notified to the central unit by Health 814.A detailed report on deaths occurred among TB patients during the period of treatment are collected by form TB 17.

Deaths due to TB are also notified to the Registrar General's Department through vital registration system.

Monthly and Quarterly Records and Returns

Data on case detection (TB-08), sputum conversion (TB-09), treatment outcome (TB-10), programme management (TB-12) and TB and Non TB wards (TB-13) are collected quarterly from District Chest Clinics.

TB screening activities in prisons and OPD returns on TB suspects are collected monthly on the standard data collection forms. Data on culture specimens are sent from NTRL to Central Unit. DTCOs are responsible for sending completed returns and reports accurately and timely.

Presentation of Data

NPTCCD analyses the data and compiles the national reports. Performance at district level is discussed at the review meetings held bi-monthly at NPTCCD as well as at the district reviews held annually in respective districts.

Dissemination of Data

NPTCCD provides information to government and international organizations such as Epidemiology unit and other units of Ministry of Health, Central Bank of Sri Lanka, WHO, SAARC, STAC, GFATM etc.

In addition, information on TB is provided to provincial and regional health authorities and to DTCOs for further reference and interventions.

WHO revised classification of TB

Sri Lanka adopted revised WHO classification of TB of 2013 from 1st of January 2015 and reporting of information was started with the cohort of patients registered in 2015.

A case of tuberculosis is defined as "A patient in whom TB has been either bacteriologically confirmed in laboratory or clinically diagnosed based on a clinician's decision taking into account clinical picture, results of other investigations and risk factors".

Bacteriologically confirmed TB

A patient whose sputum or another biological specimen is positive for AFB by smear microscopy or culture or WHO Approved Rapid Diagnostics (WRD) such as X-pert MTB/RIF.

Clinically diagnosed TB

A patient who does not fulfil the criteria for bacteriological confirmation but has been diagnosed with active TB by a clinician and after consultation with a Consultant Respiratory Physician and decided to treat the patient a with a full course of TB treatment

Classification based on anatomical site of the disease

Pulmonary tuberculosis (PTB)

Any bacteriologically confirmed or clinically diagnosed case of TB involving the lung parenchyma or the tracheobronchial tree with or without the involvement of any other organs in the body.

Extra pulmonary tuberculosis (EPTB)

Any bacteriologically confirmed or clinically diagnosed case of TB involving organs other than the lung parenchyma or tracheobronchial tree, e.g. pleura, lymph nodes, abdomen, genitourinary tract, skin, bones and joints, meninges.

Classification based on history of previous TB treatment

> New patients

• A patient who has never taken treatment for TB

OR

• A patient who has taken anti-tuberculosis drugs for less than one month

New patients may have positive or negative bacteriology and may have disease at any anatomical site.

Previously treated patients

Patients, who have received 1 month or more of anti-TB drugs in the past are classified under this category. They are further classified by the outcome of their most recent course of treatment.

Relapse

Patients who have previously been treated for TB, were declared cured or treatment completed at the end of their most recent course of treatment, and are now diagnosed with a recurrent episode of TB.

• Treatment after failure

Patients who have previously been treated for TB and whose treatment failed during or at the end of their most recent course of TB treatment.

• Treatment after loss to follow-up

Patients who have previously been treated for TB and were declared lost to follow-up at the end of their most recent course of treatment. (These were previously known as treatment after default patients.

• Other previously treated patients

Patients who have previously been treated for TB but whose outcome after their most recent course of treatment is unknown or undocumented.

> Patients with unknown previous TB treatment history

Patients who do not fit into any of the categories listed above

Indices

The main indices used to measure the progress in TB control are,

- Case notification Rate
- Case Detection Rate
- Treatment Success Rate
- Sputum Conversion Rate
- Lost to follow up Rate
- Death Rate

Notification rate of all TB cases

The notification rate of all TB cases is defined as number of all forms of TB cases notified in a given year out of the mid-year population of the country in the same year

Number of all TB cases notified during the year

X 100,000 population

Mid-year population for the same year

Case Detection Rate

The term "*detection*" as used in this report, means that a patient is diagnosed as having TB and is reported to the NPTCCD by TB-08.

Case Detection Rate is defined as "percentage of total number of incident TB cases notified out of the total number of estimated incident cases of TB during the given year".

	No. of all forms (new / relapse) of TB cases notified during the specified year	
Case Detection Rate	X 100	
	Estimated total number of incidence cases of TB	
	for the same year	
	·	

Incidence of TB

The Incidence of TB is defined by the WHO as the number of new and relapse cases reported in a specified time period.

Estimation of TB Incidence

Estimation of TB incidence is calculated by WHO using a mathematical model which is revised annually. Accordingly, the case detection rate in this report is based on 2015 WHO estimates (65.0 per 100,000 population).

Treatment Success Rate

Treatment Success Rate is defined as the proportion of TB cases registered in a given year that **successfully completed** their entire course of treatment with or without bacteriological confirmation of cure ("cured" + "treatment completed").

(Number of patients who have successfully	
	completed treatment in the given period	
	Treatment Success Rate X 100 Number of patients registered in the same period	
)

Sputum Conversion Rate

Sputum Conversion rate is the percentage of smear-positive pulmonary TB cases registered in a specified period that converted from smear positive to smear negative at the end of intensive phase of treatment.

Sputum Conversion Rate -	Number of smear-positive pulmonary TB cases Registered in a specified period that are smear negative at the end of the intensive phase of Treatment
	Total number of smear-positive pulmonary TB cases registered for treatment in the same period

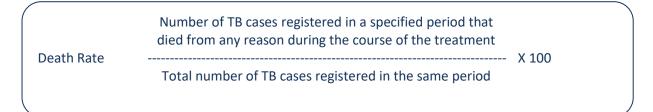
Lost to follow up Rate

The Lost to follow up Rate is defined as the percentage of TB cases registered in a specified period that interrupted treatment for more than two consecutive months.

	Number of TB cases registered in a specified period that interrupted treatment for more than two consecutive months	
Lost to follow up Rate		X 100

Death Rate

The Death rate is defined as the percentage of TB cases registered in a specified period that died from any reason during the course of treatment.



Results

Surveillance of Tuberculosis

TB Case Notifications (H 816 A)

During the year 2018, cases of all forms of Tuberculosis were notified to the center by H 816 A form (Table 6). In contrast to this, registered TB cases reported to the NPTCCD by TB 08 were 8856 (Table 9).

TB Death Notification (H 814)

During the year 2018, 247 TB deaths were notified by H 814 (Table 7).

Incidence of Tuberculosis

The incidence (new and relapse) rate of TB in Sri Lanka in 2018 was 40.1 (8258 new and 355 relapse cases) per 100,000 population (Table 9). There was a significant increase in incidence rate when compared with the incidence rate of year 2017, which was 39.0 (8013 new and 301 relapse cases) per 100,000 population (Figure 1). An increase of relapses was observed over the years and proportion of relapses among the incidence cases were getting increased over the years too.

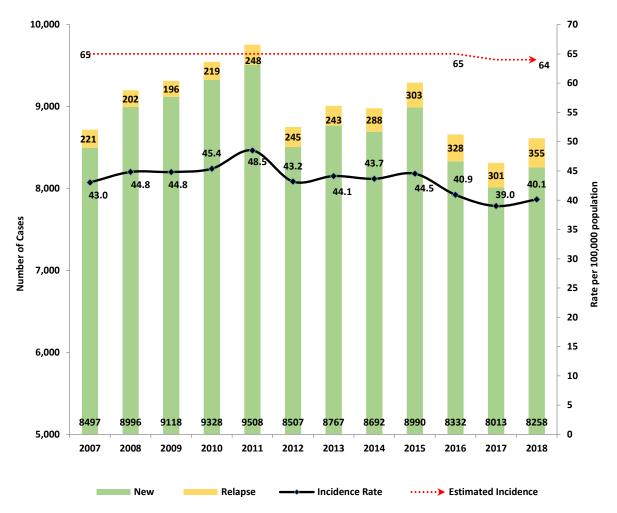


Figure 1: Incidence Rate of TB from 2007 - 2018

Case Detection

The total number of all forms of TB cases reported from DCCs was 8856. When compared to 2017, there was an increase of all forms of TB in 2018 (Figure 2). Out of this, 8258 (93.2%) were new cases, 591 (6.7%) were previously treated cases and 7 (0.08%) were cases with unknown treatment history.

Out of all new cases, 4181 (50.6%) were Bacteriology conformed TB cases. Of this 3916 (93.6%) were sputum positive PTB, 114 (1.4%) cases were sputum negative culture positive TB, and 151 (1.8%) cases were WRD positive. There were 1646 (19.9%) cases of clinically diagnosed PTB and 2431 (29.4%) cases of EPTB (Figure 3). There were 5827 cases of new pulmonary TB (70.56% of all new cases) and out of it, 4181 (50.6%) were bacteriologically confirmed.

Out of the previously treated cases 464 (78.5%) bacteriologically confirmed PTB, 52 (8.8%) clinically diagnosed PTB and 75 (12.7%) were EPTB cases.

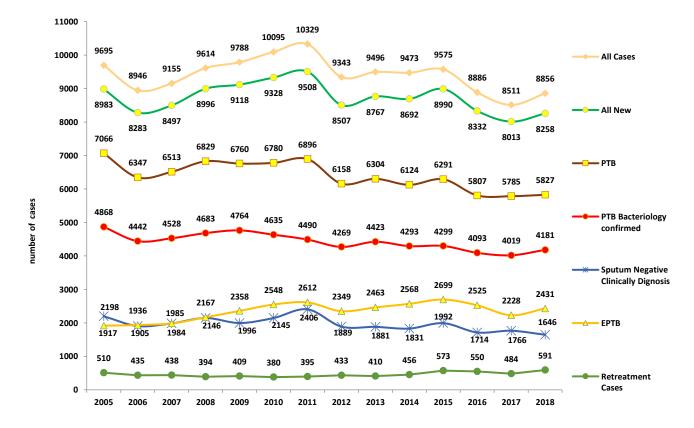
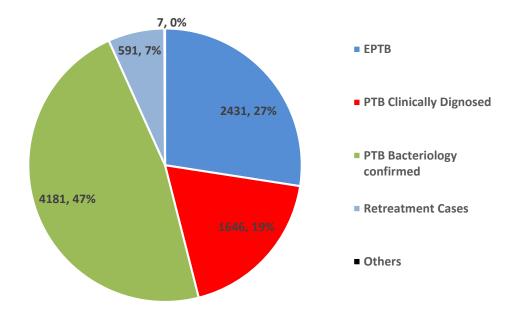


Figure 2: Case Detection of TB by Type in 2007 - 2018

There was a high disparity of TB case detection among districts (Figure 4). The highest number of TB cases was reported from Colombo 2088 (23.6%). High numbers of cases were reported from Gampaha 1139 (12.86%), Kalutara 617 (6.97%), Kandy 605 (6.8%), Ratnapura 434 (4.9%) and Galle 412 (4.6%) districts respectively.

Colombo district also accounted for highest number of relapse cases, 84 (23.6%) of total relapse cases and 44 (44.4%) of total lost to follow up cases (Table 9). Lowest number of TB cases (28) was reported from Mullaitivu district.





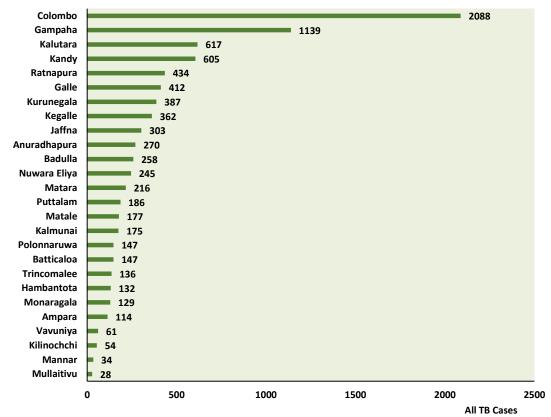


Figure 4: TB Case Detection by District of Registration in 2018

New TB Cases

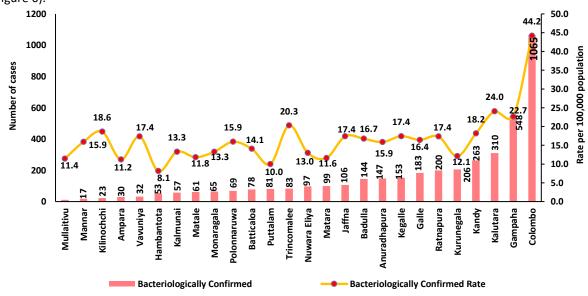
There was a disparity of distribution of new cases among districts (Figure 5). More than 55% of the total cases were bacteriologically confirmed in Colombo (55.7%) ,Kurunagala (56.4%),Vauniya (58.2%), Anuradhapura (58.3%) , Mannar (58.6%) ,Badulla (59.0%) , Batticaloa (59.5%) and Trincomalee (66.9%), while in Ampara (27.8%), Kalmunai (34.1%), Matale (37.2%) and Jaffna (37.6%) bacteriologically confirmed cases account for less

than 40% of total cases reported in respective districts. The number of clinically diagnosed cases detected were more than the bacteriologically confirmed cases in Kalmunai and Ampara districts.

Trincomalee	66.9			.9	11.3					21.8
Batticaloa		59.5			10.7					29.8
Badulla		59.0				16.0				25.0
Mannar			58.6			6.9				34.5
Anuradhapura			58.3			9.9				31.7
Vavuniya			58.2			14.5				27.3
Kurunegala 📃			56.4			17.0				26.6
Colombo			55.7			19.0				25.3
Kalutara			53.5			19.2				27.3
Gampaha		5	2.0		2	1.8				26.2
Monaragala		5	1.6		2	3.0				25.4
National Figure		50).6		- 19	.9				29.4
Galle		48.	4		18.8					32.8
Ratnapura		48.	3		10.9					40.8
Matara		48.	1		12.6					39.3
Polonnaruwa		47.	6		29.0					23.4
Puttalam		46.6	5		20.7					32.8
Kegalle		45.5			21.4					33.0
Kandy		45.5			20.9					33.6
Kilinochchi		45.1			29.4					25.5
Hambantota		42.4			18.4					39.2
Nuwara Eliya		41.8			19.0					39.2
Mullaitivu		40.7		3	7.0					22.2
Jaffna		37.6		30.5						31.9
Matale		37.2		24.4						38.4
Kalmunai	3.	4.1		42.5						23.4
Ampara	27.8		42.6							29.6
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	PTB Bacteriol	ogically Cor	nfirmed		New Clinica	ally Diagnosis		New EP	тв	

Figure 5: Percentage Distribution of New Cases of TB by Type and District in 2018

The highest number 1065, (44.2 per 100,000 population) of bacteriologically confirmed pulmonary TB cases was reported from Colombo district and this accounts for 24% of national figure. Second highest number, 548 (22.7 per 100,000 population) of bacteriologically confirmed pulmonary TB cases was reported from Gampaha district (Figure 6).





High numbers of cases were reported from Kalutara (310), Kandy (263) and Kurunagala (206) districts respectively. (Figure 6).

Clinically Diagnosed New Pulmonary TB

Total of 1646 cases of new clinically diagnosed pulmonary TB cases were reported in 2018. The highest number of clinically diagnosed cases was reported from Colombo district 364 (15.1 per 100,000 population). However, higher rates were reported from Kalmunai (16.5 per 100,000 population), Jaffna (14.1 per 100,000 population), Ampara (17.2 per 100,000 population) respectively. The number of clinically diagnosed cases detected were more than the bacteriologically confirmed in Kalmunai and Ampara districts (Figure 5).

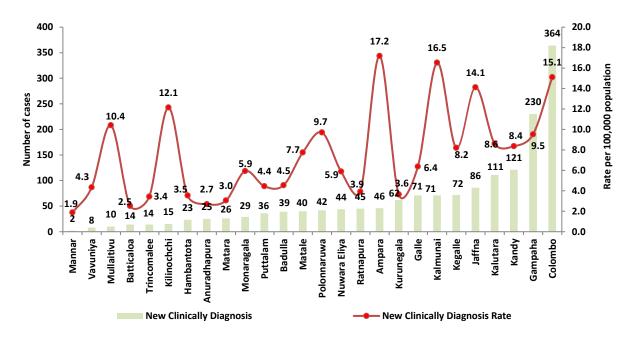


Figure 7: Distribution of Smear Negative New TB Cases Detection by Districts in 2018

New EPTB Case Detection

Total of 2431 cases of new extra pulmonary TB were reported in 2018. Colombo District accounted for highest number (483) of EPTB cases. The highest rate (20.0 per 100000 population) of EPTB was reported form Colombo district (Figure 8).

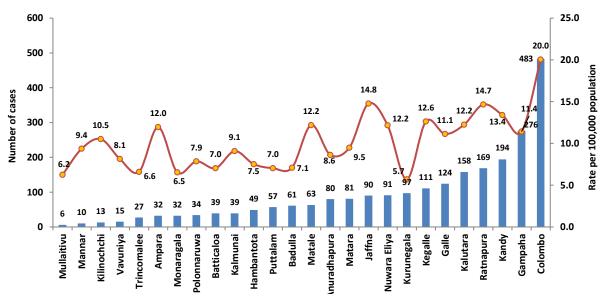


Figure8: Distribution Pulmonary TB Cases of New Extra Detection by Districts in 2018

Sites of EPTB Cases

Out of all EPTB cases, tuberculosis of respiratory tract confirmed by bacteriologically and histologically (ICD code A 15), accounted for 221 cases (8.8%), and 581 (23.3%) were cases of tuberculosis of respiratory tract, not confirmed by bacteriologically or histologically (ICD code A16). In addition, there were 176 (7%) cases of Tuberculosis of nervous system, 1284 (51.3%) cases of Tuberculosis of other organs , 238 (9.5%) cases of Tuberculosis of other specified organs were reported in 2018 (Table 2).

Table 2: Distribution of All Cases of Extra Pulmonary Tuberculosis by Site in 2018

ICD-10 Code	Site	Number of Cases	Percentage
A15: Respir	atory tuberculosis, bacteriologically and histologically confirmed	221	8.8
A15.4	Tuberculosis of intrathoracic lymph nodes	93	3.7
A15.6	Tuberculous pleurisy	126	5.0
A15.8	Other respiratory tuberculosis (mediastinal, nasopharyngeal, nose, sinus [any nasal])	2	0.1
A15.9	Respiratory tuberculosis unspecified	0	0.0
A16: Respir	atory tuberculosis, not confirmed bacteriologically or histologically	582	23.3
A16.3	Tuberculosis of intrathoracic lymph nodes	59	2.4
A16.4	Tuberculosis of larynx,trachea and bronchus	60	2.4
A16.5	Tuberculous pleurisy	450	18.0
A16.8	Other respiratory tuberculosis (mediastinal, nasopharyngeal, nose, sinus [any	5	0.2
A16.9	Respiratory tuberculosis unspecified	8	0.3
A17: Tuber	culosis of nervous system	176	7.0
A17.0	Tuberculous meningitis	133	5.3
A17.1	Meningeal tuberculoma	4	0.2
A17.8	Other tuberculosis of nervous system	23	0.9
A17.9	Tuberculosis of nervous system, unspecified	16	0.6
A18: Tuber	culosis of other organs	1284	51.3
	Tuberculosis of bones and joints	0	0.0
A18.0	Spinal TB (Includes Vertebral Column - M49.0*)	236	9.4
	Tuberculosis of other bones and joints (Excluding spinal TB)	75	3.0
A18.1	Tuberculosis of genitourinary system	61	2.4
A18.2	Tuberculous peripheral lymphadenopathy (TB adenitis)	537	21.5
A18.3	Tuberculosis of intestines, peritoneum and mesenteric glands	114	4.6
A18.4	Tuberculosis of skin and subcutaneous tissue	74	3.0
A18.5	Tuberculosis of eye	180	7.2
A18.6	Tuberculosis of ear	5	0.2
A18.7	Tuberculosis of adrenal glands	2	0.1
A18.8 Tube	rculosis of other specified organs	238	9.5
	Pericardium	30	1.2
	Disaminated	9	0.4
18.8	Site not specified	106	4.2
	Brest	3	0.1
	Other	90	3.6
	Total	2501	100.0

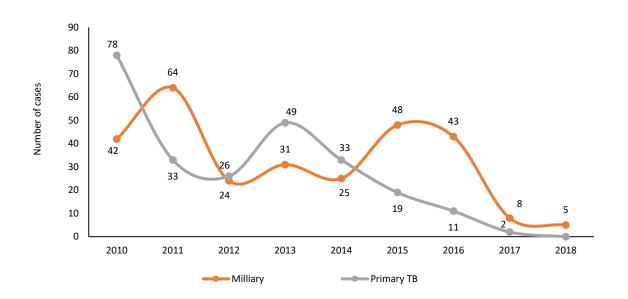


Figure 09: Distribution of Miliary and Primary TB cases from 2010-2018

Age and Sex Distribution of New TB Cases

The highest number, 1752 (21.2%) of new TB cases was in 55-64 age group. The lowest number was in 0-14 age group (268 cases, 3.2%). Out of 8258 all new cases, 4653 (56.3%) were in the economically productive age group of 15-54. More males (5265, 63.8%) were detected than the females (2993,36.2%). The highest number of new TB cases among males was found in the age group of 55-64 years (22.5%) of 5265 male cases, while that in the females was in the same age group 55-64 (18.9%) of 2993 female cases (Table 13). The number detected among females was slightly higher than the males in the age groups of 0-14 and 15 – 24 years.

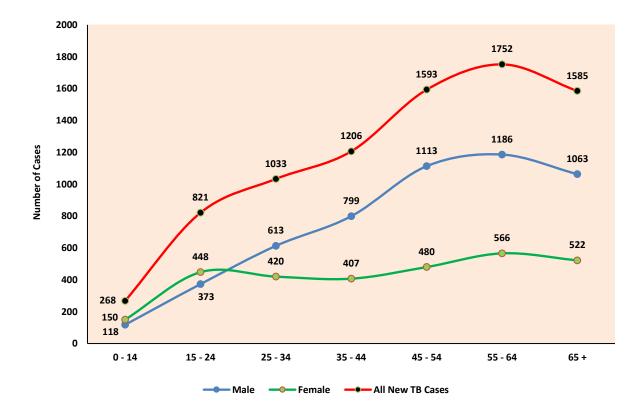


Figure 10: Distribution of All New Cases of TB by Age Group in 2018

Re-Treatment TB Cases

In 2018, 591 (6.7%) re-treatment cases were reported. This consisted of 355 relapses, 119 treatment after Failure, 99 treatment after lost to follow up and 18 other previously treated cases (Table 9)

The highest number of re-treatment cases 169 (28.6%) was reported from Colombo district and the second highest number was from Gampaha district 85 (14.4%). The total number of retreatment cases in 2018 was higher than in 2017 (484).

Treatment after Failure cases were reported in higher numbers in Colombo and Gampaha districts.

Colombo (44, 44.4 %) and Gampaha (18, 18.2 %) were the districts which reported higher numbers of treatment after lost to follow up cases. Colombo (84, 23.6%) district reported the highest number of relapse cases contributing a significant number of cases for the national figure (Figure 11).

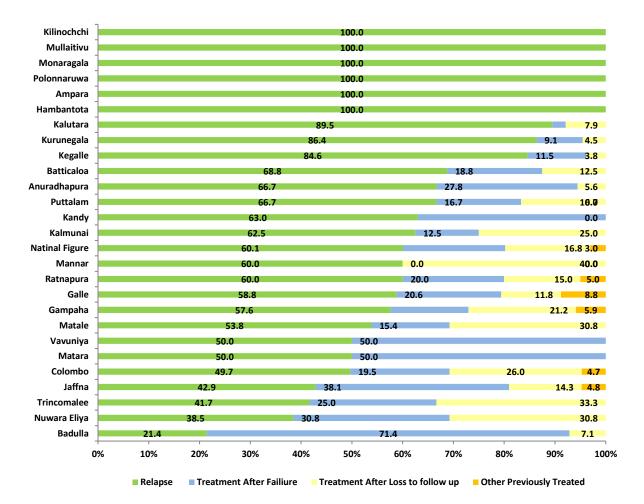


Figure 11: Proportion of Re-Treatment Categories by District in 2018

Table 3: Multi Drug Resistant Tuberculosis (MDR-TB)

	2010	2011	2012	2013	2014	2015	2016	2017	201 8
Number of laboratory confirmed MDRTB patients	8	12	5	4	13	13	17	25	14
Number enrolled in treatment in the same year	4	5	4	4	11	13	17	24	13
Number enrolled in treatment in the next year	1	4	1	-	-		-	-	-
Total number enrolled in treatment	5 (63%)	9 (75%)	5 (100%)	4 (100%)	11 (85%)	13 (100%)	17 (100%)	24 (96%)	13 (96%)

Multidrug Resistant TB

The incidence of MDR-TB is low in Sri Lanka when compared to other countries in the SEARO region. Twenty five cases of MDR-TB were reported in year 2018 and 13 of them were enrolled in treatment. Sri Lanka uses standardized treatment regimen and the period of treatment for MDR TB is at least 20 months.

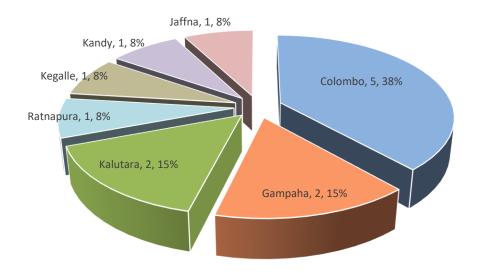


Figure 12: District distribution of Multi Drug Resistant Tuberculosis by District in 2017

TB/HIV Co-Infection

HIV testing of all TB patients was made mandatory since 2013. In 2018, 8168 (92.2%) TB patients were screened for HIV. Of these patients, 10 patients were found HIV positive. In addition, there were 13 patients with known HIV - status diagnosed with TB contributing to the total of 23 patients with HIV/ TB co-infection in 2018.

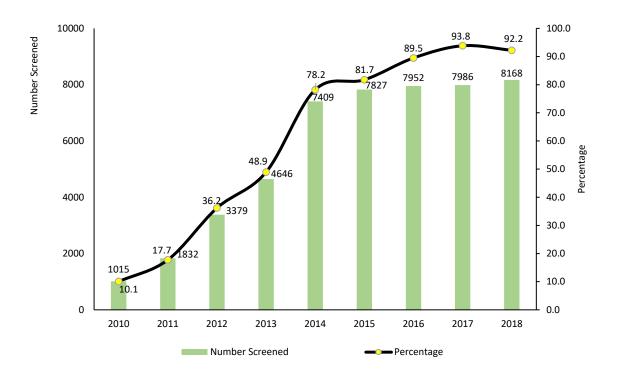


Figure 13: Percentages and Numbers of TB/HIV screening 2010-2018

TB Among Health Care Workers

In 2018, 76 health care workers had been diagnosed with TB. The majority of them (17, 22.4%) were reported from Kandy District. Next higher number was reported from Colombo (16, 21.1%) District.

TB Among Foreign Nationals

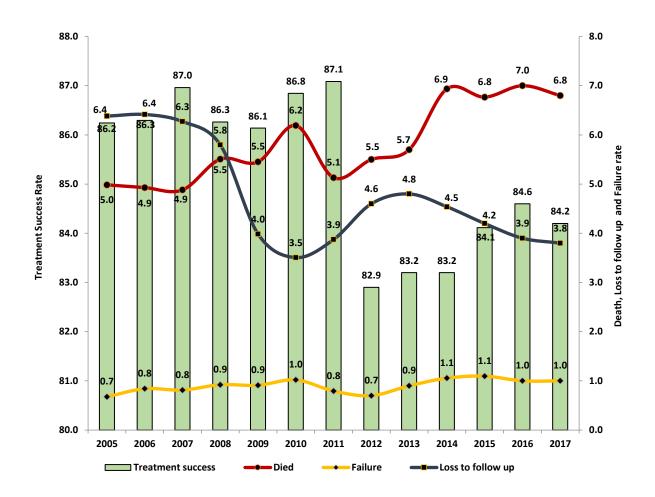
In 2018, 7 foreign nationals with TB were reported to NPTCCD from Gampaha (2), Kandy (1), Hambanthota (1), Kurunegala (1), Anuradhapura (1) and Vavuniya (1) districts.

Treatment Outcome

Outcome data presented below are based on the information provided according to the previous classification for cohort of patients registered in 2017.

Treatment Outcome of All Forms TB Cases

Total number of cases registered for treatment in 2017 was 8511. Out of this, outcome of 354 (4.2%) patients was not evaluated. Outcome of rest of the patients is presented in this report (Table 18).



Treatment Success Rate (TSR)

The cure rate among registered cases was 40.8% (3471 cases) and a further 43.4% (3696 cases) completed treatment, accounting for an overall treatment success rate of 84.2% (7167 cases).

TSR in 2017 had decreased when compared to TSR in 2016 which was 84.6% (7518 cases) (Figure 14). There were 13 districts with treatment success rate below the global target of 85% as well as National figure of TSR. These districts were Kandy (84.9%), Kegalle (84.9%), Jaffna (83.2%), Kaluttara (83.1%), Hambanthota (82.9%), Trincomalee (82.5%), Vauniya (82.4%), Colombo (82.2%), Gampaha (81.2%) and Galle (80.3%), Matale (80.3%) and Nuwara-Eliya (80.1%) district. Mannar (69.4%) shows highest cure rate and the Kalmunai district showed lowest cure rate (14.9%) and Kalmunai (70.6%) district showed the highest treatment completion rate compared to the other districts (Figure 15).

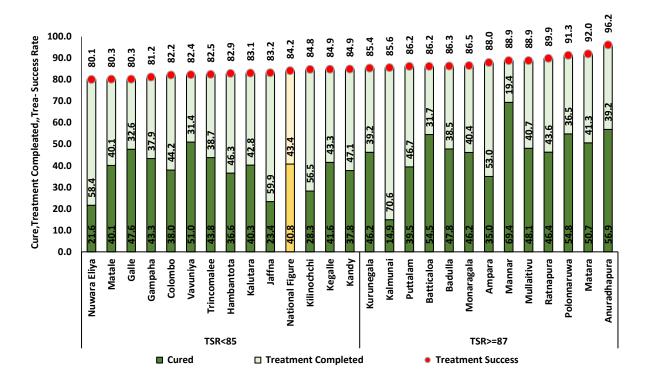


Figure 15: Treatment Success Rate of All Forms of TB According To Districts in 2017

> Treatment Failure Rate

The treatment failure rate was 1% in 2017. An increase in treatment failure rate was observed when compared to 2012 and 2014 in contrast to the slightly decreasing trend observed since 2015 to 2016. Year 2017 showed same failure Rate compare with the year 2016. Ampara and Badulla district accounted for the highest failure rate of 2% which are on the margin of estimated Failure Rate. All other District shows rate below the estimated figure (Table 18).

Lost to Follow Up Rate

In 2017 the Lost to Follow Up rate was 3.8%, slightly less (3.9%) when compared to the year 2016. The highest Lost to Follow Up rate was reported in Galle 30 (7.9%). Colombo 130 (6.3%) and Nuwara-Eliya 15 (5.2%) also accounted for high Lost to Follow Up rates (Table 18).

Death Rate

There were 575 (6.8%) deaths among the cohort of TB patients registered in year 2017. The highest number of deaths (111, 10.4%) were reported from Gampaha and Colombo district. More than 40 deaths were reported in Colombo, Gampaha and Kurunegala districts. Though the number of deaths were low, the highest death rate was reported from Vavuniya District (9, 17.6%). Two districts showed the death rate above the estimate of 5% (Table 18).

Treatment Outcome of New PTB Cases

Treatment Success Rate

In 2017, 5785 new PTB cases were registered for treatment. Of these cases 179 (3.1%) were in the category of "Outcome not been evaluated".

The cure rate among registered cases was 3223 (55.7%) and 1681 (29.1%) completed treatment, giving an overall treatment success rate of 4904 (84.8%). The lowest treatment success rate was shown in Vavuniya 29(78.4%) district. Jaffna, Colombo, Galle, Gampaha, Matale, Nuwara-Eliya and Trincomalee districts were below the global target 85% of TSR (Table 20).

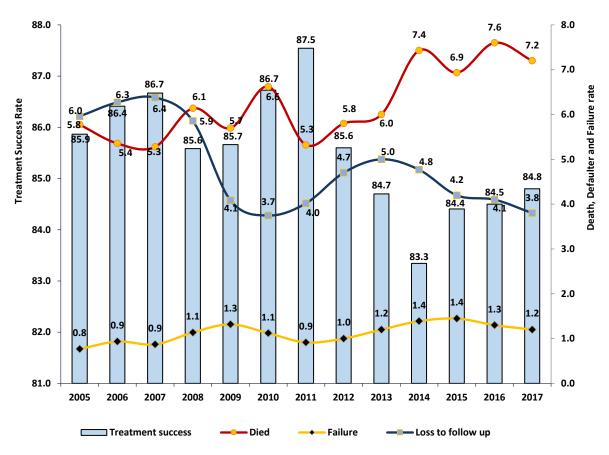


Figure 16: Treatment Outcome of New Pulmonary TB Cases from 2006-2017

> Treatment Failure Rate

Treatment failure rate among all new PTB cases was 67 (1.2%). A gradual decreasing trend of treatment failure rate have been observed since 2015 to 2016. This value is slightly less compared to year 2016. The highest rate 4 (3.1%) of all new PTB cases was reported from Badulla District (Table 20).

Lost to Follow Up Rate

The Lost to Follow Up rate was 220 (3.8 %) among all new cases. The highest Lost to Follow Up cases was reported in Colombo 88 (6.4%). Galle 20(7.7%) also accounted for high Lost to Follow Up rate which are above the global target of 5% (Table 20).

> Death Rate

The death rate was 415 (7.2%) among all new PTB cases and the highest death rate (8, 21.6%) was in Vavuniya District. Mullathive (3, 16.7%), Nuwara-Eliya (22, 13.4%) and Gampaha (90, 11.1%) districts also showed higher death rates (Table 20).

Treatment Outcome of New Bacteriology confirmed PTB cases

Treatment Success Rate

In 2017, 4055 new smear positive cases were registered for treatment. The cure rate among registered cases was 3223 (79.5%) and a further 248 (6.1%) completed treatment (no laboratory confirmation of cure), giving an overall treatment success rate of 3471 (85.6%). Treatment Success Rate remains unchanged in comparison with 2016 where the treatment success rate was 85.6%. The failure rate remained low at 1.6% with 10 Districts not having any single case of treatment failure. The Loss to follow up rate was 3.7% with only 3 Districts having lost to follow up rates above 5% (WHO target < 5%) and with 7 Districts were not having any single case of lost to follow up.(Figure 16).

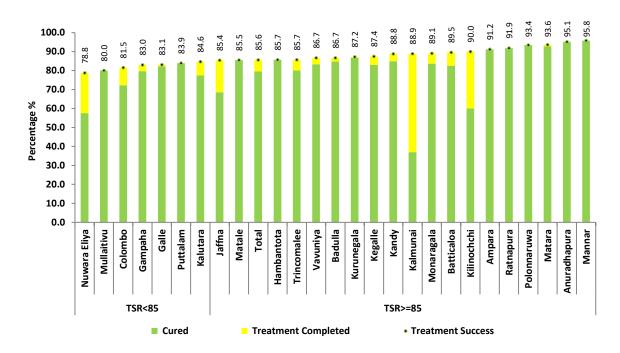


Figure 18: Treatment Success Rates of New Bacteriologically confirmed PTB Cases by Districts in 2017

Treatment Failure Rate

The Failure rate among new Bacteriology Confirmed patients was 1.6 %. Ten districts had not reported any treatment failures in 2017. The highest failure rate was 2(5.9%) which was reported from Ampara district (Table 21). The failure rate among new Bacteriology Confirmed patients was (1.6%, 63) in 2017.

Lost to Follow Up Rate

The Lost to Follow Up rate among new Bacteriology Confirmed patients was 3.7%. The Lost to Follow Up rate among new Bacteriology Confirmed patients was 4.5% (187) in 2016. The highest Lost to Follow Up rate was reported in 15(7.2%) Galle district. Higher Lost to Follow Up rates were reported from Colombo 65(6.7%), and Hambanthota 3(6.0%) while seven districts reported zero lost to follow up rates (Table 21).

Death Rate

The death rate 274 (6.8%) in 2017. This was remain unchanged when compared to 2016, 282 (6.8%). The highest death rate was reported from Mullathive District 3 (20%). Vauniya 4 (13.3%), Nuwara-Eliya 14(14%), and Monaragala 6 (10.9%) also accounted for higher death rates (Table 21).

Treatment Outcome of previously treated Patients

In 2017, of the 484 registered retreatment cases, only 244 (50.4%) cases were cured while other 108 (22.3%) cases had completed treatment giving a treatment success rate of 72.7% (352 cases). The low treatment success rate in this group was mainly due to the high lost to follow up rate (46, 9.5%) and high death rate (7.4%, 36 deaths). In addition, there were 7 (1.4%) treatment failures among retreatment cases in 2017. Another 45 (8.9%) were not evaluated (Table 24).

Treatment Outcome of Sputum Negative and Culture Positive Cases

In 2017, 152 new sputum negative culture positive cases were registered for treatment. The cure rate among registered cases was 110 (72.4%) cured and a further 21 (13.8%) completed treatment (no laboratory confirmation of cure), giving an overall treatment success rate of 86.2% (131 cases).

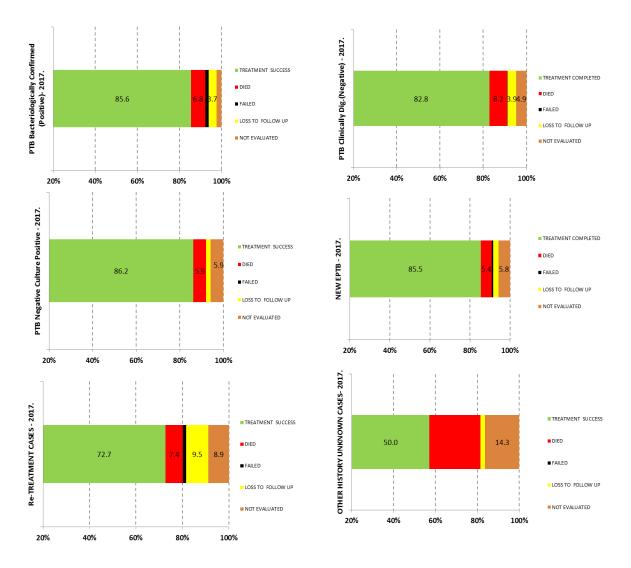


Figure 19: Treatment Outcome Summary of TB Patients (New Smear Positive, New Smear Negative New EPTB, Re-Treatment and Other history unknown cases in 2017)

DOTS Coverage

Population coverage of DOTS in the country is 100% since 2010.

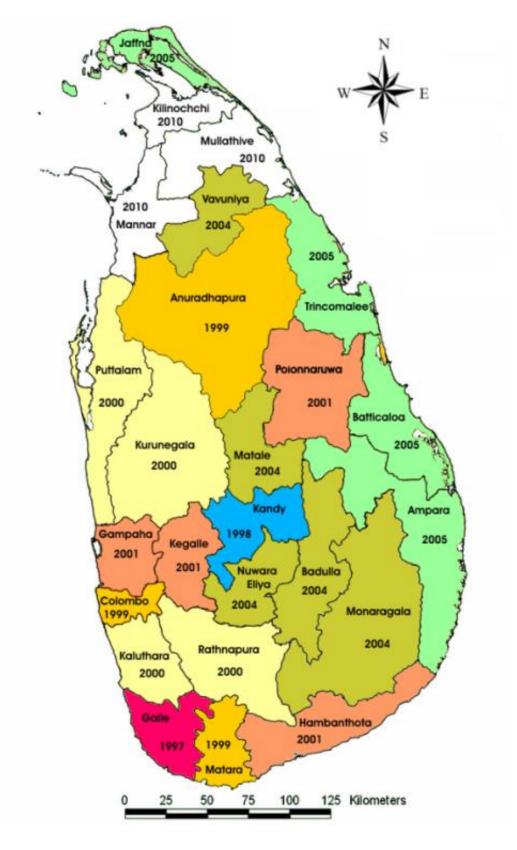


Figure 20: DOTS Coverage from 1997-2015 with Map of Year Achieved

PART II Activity Report Several important activities were carried out in 2018 in view of improving the quality of services provided by the NPTCCD:

- Sri Lanka has committed to achieve the WHO's End TB strategy targets by the year 2025. Reaching these targets requires intensive integrated strategic actions at the national and subnational level. As recommended by the Mid-term review conducted in Sri Lanka in July 2017, NPTCCD introduced a Pilot district programme that included rigorous actions to overcome the key challenges identified in eliminating TB. The pilot programme was initiated by recruiting Kalutara, Kegalle and Gampaha districts in 2018. This will be expanded in a stepwise manner so that all 25 districts will be covered by 2021.
- Decentralization of diagnostic services beyond DCC was done by establishing microscopic centres and introducing Presumptive TB register at the OPD setting to enhance case detection.
- Conducting Chest X-rays in presumptive TB patient is recommended as one of the initial tests to improve case detection and even contact investigation. To achieve universal TB patient management, the Diagnostic algorithm was reformed by incorporating Chest X-rays as an initial screening test to improve its sensitivity in order to integrate more Presumptive TB cases and contacts into diagnostic services.
- NPTCCD purchased and distributed 17 digital X-Ray machines to district chest clinics and health institutions in order to create a patient-friendly environment at health institutions and thus enhance TB case detection.
- Gene X-pert assay is a novel integrated diagnostic device for the diagnosis of tuberculosis and rapid detection of drug resistance in clinical specimens. NPTCCD procured and distributed 12 Gene X-pert machines and distributed them to health institutions for early and effective case management.
- With the provision of Global funds, NPTCCD procured a X-Ray mounted vehicle to initiate island wide TB screening activities especially among high risk groups.
- The mid-term review also revealed that prison inmates were a key high-risk group in Sri Lanka. Hence routine screening and awareness programmes were intensified at prison institutes and detention Camps Island wide.
- In addition to the routine screening activities, a mobile screening team conducted intensified screening activities in prisons and detention homes in western province utilizing the mobile X-Ray vehicle.
- NPTCCD with joint collaboration with the College of Pulmonologists and the College of Paediatricians developed a National Guideline on the management of tuberculosis in children. This updated manual aims to be a valuable tool for undergraduate and postgraduates in medicine, paediatricians, pulmonologists, specialists of other specialties and all medical personnel who manage paediatric patients with TB.

- Commemoration of World TB day was held on the 24th March 2018 in Colombo under the theme of "Wanted leaders for a TB free world- You can make history" with the participation of the honorable Health Minister Dr. Rajitha Seneratne and other stakeholders.
- NPTCCD received an international technical assistance for the preparation of ACSM strategy which included framework for implementation, monitoring and evaluation of the advocacy, social mobilization and communication programme. ACSM hands-on Skill-building training workshop was conducted for DTCO's and Medical officers.
- In order to overcome the drawbacks incorporated in the paper-based information management system, NPTCCD launched an electronic patient information management system (e-PIMS). This has been piloted in 3 districts (Colombo, Matara, and Kurunegala) and will be expanded island wide in the near future.
- The key staff of NPTCCD attended several international meetings and conferences. In addition, Consultant Community Physicians (CCP's), medical officers attached to NPTCCD and other staff including Regional Directors of Health Services (RDHS's) participated in international training programs and workshops.
- NPTCCD coordinated "SAARC Regional Training on Diagnosis and Treatment of Paediatric TB" workshop with the participation of foreign and local delegates in April 2018 in Negombo, Sri Lanka.
- To monitor the progress of TB control activities and to identify the issues and constraints for the provision of diagnostic, curative and preventive care, regular supervisory visits were conducted from the central level.

Major Challenges

The followings factors were identified as major challenges:

- 1. Maintaining trained health man power for TB control activities and addressing the misdistribution of human resources at central and peripheral level.
- 2. Reaching the unreached population groups such as those with limited access to services i.e. urban poor, estate workers, drug addicts.
- 3. Provision of TB care services for migrants and resettling population.
- 4. Strengthening early detection of TB cases and further improvement in treatment sustainability.
- 5. Maintain low incidence of Muti-drug resistant TB cases.
- 6. Overcoming the TB-related stigma
- 7. Reduction of TB deaths
- 8. Provision of social benefits and nutritional support for TB patients and their families
- 9. Maintaining financial sustainability of the National Programme for Tuberculosis Control and Chest Diseases.
- 10. Addressing the social determinants of health

Major challenges in respiratory disease control

- 1. Establishment of a surveillance system for respiratory diseases
- 2. Strengthening coordination between all stakeholders involved in respiratory disease care and control

PART III Administration Report

OPD Attendance and Ward Admissions

District Chest Clinics provide ambulatory care for patients with TB and respiratory diseases. During the year 2018, 222,595 new patients were registered at District Chest Clinics. Out of these patients, (103,254,46.4%) were self-referrals. Others included referrals from general health institutions or private practitioners (48,784,21.9%), contacts of TB patients (15,606, 7.0%) and persons came for medical examinations (54,951, 24.7%).

In addition to National Hospital for Respirotory Diseases, there are several chest wards situated in different types of hospitals in the country which provide inward care for TB & non TB respirotory patients.

Laboratory Services

Sputum Smear Microscopy

Sputum smear examinations are done for diagnosis of TB and for monitoring of treatment. The patients having symptoms suggestive for TB, attending to the healthcare facilities are screened for TB by sputum examinations. During the period of treatment all pulmonary TB patients are monitored with sputum examinations at regular and specified intervals.

Sputum Culture for AFB

TB culture and DST facilities are available only at the National Reference Laboratory at Welisara. Regional Laboratory, Kandy and Ratnapura provide culture facilities only. Sputum cultures are being done for smearnegative PTB cases, all re-treatment cases before initiation of anti TB treatment and on presumptive MDR TB cases.

> Testing By WHO recommended Rapid Diagnostics (Gene X pert)

WHO recommended diagnostic facilities (Gene X pert) are available in Sri Lanka since 2014 in a limited scale and these facilities were expanded in year 2018.

Year	Laboratory	Number of Gene X pert tests performed	Number of specimens with +ve results
2018	NTRL	8384	1980
2016	All Districts	17,944	3176

Table 5: Testing By WHO recommended Rapid Diagnostics in 2018

External Quality Assurance of Sputum Microscopy

Quality assurance of sputum smear microscopy is an important component of the National TB Programme. Slides are being sent from all laboratories of District Chest Clinics & NHRD Welisara to the NTRL for EQA. Sputum smears done in microscopy centers of general health institutions are being sent to laboratories at District Chest Clinics for EQA. In addition, samples from 4 private hospitals are received for EQA.

X-Ray Facilities

X-ray facilities are available only in some chest clinics namely: Colombo, Kurunegala, Kandy, Badulla. Kalutara, Ratnapura, Galle and Matara. The other clinics obtain this facility from the nearest hospital. Microfilms (70 mm) and standard size films are used in these clinics.

The number of X-ray films of the three types consumed in 2018 at the Chest Clinics were as follows.

- Number of Micro Films : 15,263
- Number of Large Films : 92,447
- > Total : 1,07,710
- Digital Films : 40,862

BCG Vaccination

The BCG vaccination is an essential component of Expanded Programme of Immunization in Sri Lanka. Accordingly, all newborns are being vaccinated within 24 hours of delivery. BCG vaccination will protect the child from two deadly forms of Tuberculosis in children, i.e.; TB Meningitis and Milliary TB. (Disseminated TB).In 2015, 99% of the all the new born babies has been vaccinated with BCG.

Chest clinics provide services whenever revaccination is necessary, in situations such as absence of BCG scar in children below 5 years of age. There were 1759 revaccinations carried out in chest clinics.

Detailed Tables

	Mort	tality
Year	Number	Rate per 100,000 population
2006	347	1.7
2007	205	1.0
2008	355	1.7
2009	275	1.3
2010	395	1.9
2011	358	1.8
2012	203	1.0
2013	314	1.5
2014	309	1.5
2015	329	1.6
2016	253	1.2
2017	204	1.0
2018	247	1.2

Table 8: Annual Mortality of All TB Cases from 2006-2018

Source: Health 814

Table 9: Distribution Rates of all TB cases by District of Residence in 2018

	Estimated	No. of Cases	No. of Cases
District	Mid-Year	Detected	Per 100,000
	Population		Population
Colombo	2,409,923	2088	86.6
Gampaha	2,418,192	1139	47.1
Kalutara	1,289,883	617	47.8
Kandy	1,448,848	605	41.8
Matale	516,561	177	34.3
Nuwara Eliya	748,118	245	32.7
Galle	1,113,815	412	37.0
Matara	853,296	216	25.3
Hambantota	651,843	132	20.3
Jaffna	609,439	303	49.7
Vavuniya	184,356	61	33.1
Batticaloa	554,583	147	26.5
Ampara	267,770	114	42.6
Kalmunai	429,574	175	40.7
Trincomalee	409,172	136	33.2
Kurunegala	1,703,061	387	22.7
Puttalam	810,301	186	23.0
Anuradhapura	927,108	270	29.1
Polonnaruwa	433,030	147	33.9
Badulla	859,733	258	30.0
Moneragala	489,527	129	26.4
Ratnapura	1,152,264	434	37.7
Kegalle	878,304	362	41.2
Mannar	106,807	34	31.8
Mullaitivu	96,111	28	29.1
Kilinochchi	123,505	54	43.7
Total	21,485,123	8856	41.2

Table 10: All TB Case Detection by District of Registration in 201 ${\it 8}$

													Ret	reatme	nt Cas	ses													
		New	Cases			Rela	apse			Treat After F)	Lo	ost to F	ollow	up	Pre	Ot evious	her y Trea	ted	Ret	To reatme		ses	His	Treatr story u		/n	
District	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	ЕРТВ	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	ЕРТВ	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	ЕРТВ	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	ЕРТВ	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	ЕРТВ	Total	Grand Total
Colombo	1065	364	483	1912	65	5	14	84	29	2	2	33	33	8	3	44	6	1	1	8	133	16	20	169	4	3	0	7	2088
Gampaha	548	230	276	1054	41	5	3	49	11	2	0	13	16	2	0	18	1	0	4	5	69	9	7	85	0	0	0	0	1139
Kalutara	310	111	158	579	28	2	4	34	1	0	0	1	1	1	1	3	0	0	0	0	30	3	5	38	0	0	0	0	617
Kandy	263	121	194	578	13	0	4	17	9	1	0	10	0	0	0	0	0	0	0	0	22	1	4	27	0	0	0	0	605
Matale	61	40	63	164	3	0	4	7	2	0	0	2	4	0	0	4	0	0	0	0	9	0	4	13	0	0	0	0	177
Nuwara Eliya	97	44	91	232	4	0	1	5	4	0	0	4	0	3	1	4	0	0	0	0	8	3	2	13	0	0	0	0	245
Galle	183	71	124	378	12	5	3	20	6	1	0	7	3	0	1	4	3	0	0	3	24	6	4	34	0	0	0	0	412
Matara	99	26	81	206	4	1	0	5	5	0	0	5	0	0	0	0	0	0	0	0	9	1	0	10	0	0	0	0	216
Hambantota	53	23	49	125	5	1	1	7	0	0	0	0	0	0	0	0	0	0	0	0	5	1	1	7	0	0	0	0	132
Jaffna	106	86	90	282	7	1	1	9	7	1	0	8	1	2	0	3	0	0	1	1	15	4	2	21	0	0	0	0	303
Vavuniya	32	8	15	55	2	0	1	3	3	0	0	3	0	0	0	0	0	0	0	0	5	0	1	6	0	0	0	0	61
Batticaloa	78	14	39	131	10	1	0	11	3	0	0	3	1	0	1	2	0	0	0	0	14	1	1	16	0	0	0	0	147
Ampara	30	46	32	108	4	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	6	0	0	0	0	114
Kalmunai	57	71	39	167	5	0	0	5	0	0	1	1	2	0	0	2	0	0	0	0	7	0	1	8	0	0	0	0	175
Trincomalee	83	14	27	124	4	0	1	5	3	0	0	3	3	0	1	4	0	0	0	0	10	0	2	12	0	0	0	0	136
Kurunegala	206	62	97	365	16	1	2	19	2	0	0	2	1	0	0	1	0	0	0	0	19	1	2	22	0	0	0	0	387
Puttalam	81	36	57	174	8	0	0	8	2	0	0	2	1	1	0	2	0	0	0	0	11	1	0	12	0	0	0	0	186
Anuradhapura	147	25	80	252	8	1	3	12	5	0	0	5	1	0	0	1	0	0	0	0	14	1	3	18	0	0	0	0	270
Polonnaruwa	69	42	34	145	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	147
Badulla	144	39	61	244	3	0	0	3	10	0	0	10	1	0	0	1	0	0	0	0	14	0	0	14	0	0	0	0	258
Monaragala	65	29	32	126	2	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	0	0	0	0	129
Ratnapura	200	45	169	414	9	0	3	12	3	0	1	4	1	1	1	3	0	0	1	1	13	1	6	20	0	0	0	0	434
Kegalle	153	72	111	336	16	3	3	22	2	0	1	3	0	0	1	1	0	0	0	0	18	3	5	26	0	0	0	0	362
Mannar	17	2	10	29	2	0	1	3	0	0	0	0	1	0	1	2	0	0	0	0	3	0	2	5	0	0	0	0	34
Mullaitivu	11	10	6	27	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	28
Kilinochchi Total	23 4181	15 1646	13 2431	51 8258	3 277	0 26	0 52	3 355	0 107	0 7	0 5	0 119	0 70	0 18	0 11	0 99	0 10	0 1	0 7	0 18	3 464	0 52	0 75	3 591	0 4	0 3	0	0 7	54 8856

Table 11: Distribution of New Cases of TB by Province in 2018

			•					Numb	per of Patients					
Province	PTB Bacteriologi cally Confirmed	Rate	PTB Clinically Dig	Rate	ЕРТВ	Rate	All New	Rate	Re-treatment	Rate	Previous Treatment History Unknown	Rate	All TB	Rate
Western	1923	31.4	705	11.5	917	15.0	3545	57.9	292	4.8	7	0.1	3844	62.8
Central	421	15.5	205	7.6	348	12.8	974	35.9	53	2.0	0	0.0	1027	37.8
Sabaragamuwa	353	17.4	117	5.8	280	13.8	750	36.9	46	2.3	0	0.0	796	39.2
Sorthern	335	12.8	120	4.6	254	9.7	709	27.1	51	1.9	0	0.0	760	29.0
North Western	287	11.4	98	3.9	154	6.1	539	21.4	34	1.4	0	0.0	573	22.8
Eastern	248	14.9	145	8.7	137	8.2	530	31.9	42	2.5	0	0.0	572	34.4
Northern	189	16.9	121	10.8	134	12.0	444	39.6	36	3.2	0	0.0	480	42.8
North Central	216	15.9	67	4.9	114	8.4	397	29.2	20	1.5	0	0.0	417	30.7
Uva	209	15.5	68	5.0	93	6.9	370	27.4	17	1.3	0	0.0	387	28.7
Total	4181	19.5	1646	7.7	2431	11.3	8258	38.4	591	2.8	14	0.1	8856	41.2

				Number of Pa	atients			
Age Group	Smear Positive	Rate	Smear Negative	Rate	ЕРТВ	Rate	All New	Rate
0 - 14	41	0.7	101	1.8	126	2.2	268	4.7
15 - 24	414	10.4	119	3.0	288	7.2	821	20.5
25 - 34	482	13.7	142	4.0	409	11.6	1033	29.4
35 - 44	634	22.8	162	5.8	410	14.7	1206	43.4
45 - 54	883	51.7	255	14.9	455	26.6	1593	93.3
55 - 64	921	82.3	423	37.8	408	36.4	1752	156.5
65 +	806	30.2	444	16.7	335	12.6	1585	59.5
Total	4181	19.5	1646	7.7	2431	11.3	8258	38.4

Table 12: Distribution of new cases of TB by Age and Type in 201 $\! 8$

Table 13: Distribution of New Cases of TB by Age and Sex in 2018 Cases of TB by Age and Sex in 2018

		Male			Female			All New Cases	
Age Group	Estimated Mid-Year Population	No	Rate	Estimated Mid-Year Population	No	Rate	Estimated Mid-Year Population	No	Rate
0 - 14	2,924,125	118	4.0	2,771,581	150	5.4	5,695,706	268	4.7
15 - 24	1,764,398	373	21.1	2,234,453	448	20.0	3,998,851	821	20.5
25 - 34	1,766,077	613	34.7	1,751,038	420	24.0	3,517,115	1033	29.4
35 - 44	1,147,306	799	69.6	1,632,869	407	24.9	2,780,175	1206	43.4
45 - 54	870,147	1113	127.9	837,920	480	57.3	1,708,067	1593	93.3
55 - 64	595,138	1186	199.3	524,237	566	108.0	1,119,375	1752	156.5
65 +	1,357,860	1063	78.3	1,307,974	522	39.9	2,665,834	1585	59.5
Total	10,425,051	5265	50.5	11,060,072	2993	27.1	21,485,123	8258	38.4

District						Male									I	Female					Male	Female	Total
District	0 -4	5-14	15 -24	25 - 34	35 -44	45 -54	55 -64	65 -74	75-Ovei	Total	0 -4	5-14	15 -24	25 - 34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	wale	Female	i otai
Colombo	21	11	84	124	192	282	271	148	73	1206	31	21	127	83	93	113	141	72	25	706	1206	706	1912
Gampaha	1	9	45	67	101	131	187	109	41	691	2	8	44	41	43	61	74	68	22	363	691	363	1054
Kalutara	0	4	19	37	54	80	90	53	16	353	1	6	32	26	35	35	40	46	5	226	353	226	579
Kandy	13	5	32	44	46	65	65	57	19	346	7	8	32	29	40	36	44	30	6	232	346	232	578
Matale	0	2	6	13	17	21	26	17	5	107	0	1	6	12	6	9	10	12	1	57	107	57	164
Nuwara Eliya	2	0	15	18	20	26	23	15	4	123	2	6	24	17	16	12	19	9	4	109	123	109	232
Galle	1	2	22	34	33	52	53	44	17	258	0	1	20	16	18	19	15	24	7	120	258	120	378
Matara	1	1	6	12	22	23	33	28	7	133	0	3	10	13	13	10	15	7	2	73	133	73	206
Hambantota	3	0	5	9	10	24	18	18	8	95	0	2	7	6	4	1	6	3	1	30	95	30	125
Jaffna	0	5	9	23	20	22	27	39	8	153	3	1	26	9	19	21	24	22	4	129	153	129	282
Vavuniya	0	1	3	4	5	8	10	6	0	37	0	1	2	6	5	2	2	0	0	18	37	18	55
Batticaloa	1	1	7	9	26	14	18	8	1	85	2	2	8	6	9	5	9	4	1	46	85	46	131
Ampara	0	1	6	8	11	14	10	13	7	70	2	0	3	7	1	5	13	7	0	38	70	38	108
Kalmunai	0	3	5	7	10	26	31	14	3	99	1	1	13	9	6	10	17	7	4	68	99	68	167
Trincomalee	0	1	9	7	10	17	22	10	3	79	0	4	4	4	11	7	10	5	0	45	79	45	124
Kurunegala	0	2	15	25	44	56	60	36	16	254	2	1	11	18	13	24	18	16	8	111	254	111	365
Puttalam	3	0	7	16	21	23	24	17	5	116	1	1	6	15	8	9	8	9	1	58	116	58	174
Anuradhapura	5	4	17	25	28	43	33	23	7	185	1	2	8	11	15	16	10	2	2	67	185	67	252
Polonnaruwa	0	1	5	8	16	27	23	16	4	100	1	1	6	9	6	3	10	8	1	45	100	45	145
Badulla	2	4	10	27	24	33	25	22	13	160	3	5	16	14	7	13	17	9	0	84	160	84	244
Monaragala	0	1	6	15	9	23	15	14	4	87	2	3	1	8	8	7	5	2	3	39	87	39	126
Ratnapura	1	2	21	40	43	46	53	24	12	242	3	4	24	40	18	32	31	16	4	172	242	172	414
Kegalle	2	1	15	36	29	45	46	31	9	214	0	3	15	13	8	25	24	23	11	122	214	122	336
Mannar	0	0	1	2	0	3	10	2	3	21	0	0	1	2	2	1	0	2	0	8	21	8	29
Mullaitivu	1	0	2	0	3	3	5	4	3	21	0	0	0	2	0	1	2	1	0	6	21	6	27
Kilinochchi	0	0	1	3	5	6	8	4	3	30	0	1	2	4	3	3	2	5	1	21	30	21	51
Total	57	61	373	613	799	1113	1186	772	291	5265	64	86	448	420	407	480	566	409	113	2993	5265	2993	8258

Table 14: Age and Sex Distribution of All New TB Cases by District in 2018

District					ľ	Vale									Fer	nale					Mala	Famala	Tetal
District	0 -4	5-14	15 -24	25 - 34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	0 -4	No	15 -24	25 -34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	Male	Female	Total
Colombo	2	1	42	71	125	191	173	89	46	740	1	5	57	35	49	58	76	33	11	325	740	325	1065
Gampaha	1	0	22	30	62	81	112	56	22	386	0	4	21	15	19	27	34	33	9	162	386	162	548
Kalutara	0	0	8	17	39	48	55	35	9	211	1	0	20	8	11	17	14	27	1	99	211	99	310
Kandy	0	0	13	19	25	46	39	24	9	175	0	1	20	10	15	10	17	11	4	88	175	88	263
Matale	0	0	3	3	9	9	13	5	1	43	0	0	3	5	2	3	3	2	0	18	43	18	61
Nuwara Eliya	0	0	9	7	11	9	8	9	2	55	0	4	12	9	2	3	9	3	0	42	55	42	97
Galle	0	1	13	15	16	36	28	18	9	136	0	1	9	6	6	5	7	9	4	47	136	47	183
Matara	0	1	4	5	14	14	12	13	5	68	0	1	4	9	2	5	6	3	1	31	68	31	99
Hambantota	0	0	2	3	7	13	6	8	3	42	0	0	1	4	1	1	3	1	0	11	42	11	53
Jaffna	0	3	4	8	5	14	6	18	3	61	0	0	12	4	6	10	5	8	0	45	61	45	106
Vavuniya	0	0	1	2	5	4	6	5	0	23	0	1	0	3	3	2	0	0	0	9	23	9	32
Batticaloa	0	0	5	5	14	10	13	6	1	54	0	0	4	4	3	3	7	2	1	24	54	24	78
Ampara	0	0	0	3	4	6	2	8	4	27	0	0	2	0	0	1	0	0	0	3	27	3	30
Kalmunai	0	0	1	5	3	11	12	4	0	36	0	0	4	3	2	5	3	3	1	21	36	21	57
Trincomalee	0	1	5	5	6	15	13	5	2	52	0	2	3	3	6	4	9	4	0	31	52	31	83
Kurunegala	0	0	7	17	28	29	37	22	9	149	0	0	7	9	6	11	10	10	4	57	149	57	206
Puttalam	0	0	3	9	12	13	10	7	1	55	0	0	3	8	3	2	5	5	0	26	55	26	81
Anuradhapura	0	0	11	14	12	31	25	16	6	115	0	0	7	4	6	8	6	1	0	32	115	32	147
Polonnaruwa	0	1	3	5	8	13	8	10	0	48	0	0	5	5	1	2	5	3	0	21	48	21	69
Badulla	0	0	9	19	17	16	16	17	9	103	0	3	14	6	3	6	7	2	0	41	103	41	144
Monaragala	0	0	5	6	7	13	8	7	2	48	0	1	1	6	4	1	1	1	2	17	48	17	65
Ratnapura	0	0	8	22	20	24	31	12	8	125	1	3	10	14	6	11	20	9	1	75	125	75	200
Kegalle	0	1	6	17	20	22	22	12	7	107	0	0	9	1	2	11	8	8	7	46	107	46	153
Mannar	0	0	0	0	0	2	7	2	2	13	0	0	1	0	0	1	0	2	0	4	13	4	17
Mullaitivu	0	0	0	0	1	1	2	3	2	9	0	0	0	1	0	1	0	0	0	2	9	2	11
Kilinochchi	0	0	0	2	4	4	2	4	1	17	0	0	1	1	2	0	0	2	0	6	17	6	23
Total	3	9	184	309	474	675	666	415	163	2898	3	26	230	173	160	208	255	182	46	1283	2898	1283	4181

Table 15: Age and Sex Distribution of Smear Positive New TB Cases by District in 2018

District					ſ	Male									F	emale					Male	Famala	Total
District	0 -4	5-14	15 -24	25 - 34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	0 -4	5-14	15 -24	25 -34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	waie	Female	Total
Colombo	11	4	17	15	26	40	58	26	14	211	24	5	23	15	13	16	27	24	6	153	211	153	364
Gampaha	0	0	9	15	11	21	42	36	15	149	1	3	6	7	10	7	23	16	8	81	149	81	230
Kalutara	0	1	2	5	5	10	18	12	6	59	0	1	3	6	9	8	12	10	3	52	59	52	111
Kandy	10	2	8	5	6	5	14	21	8	79	5	7	2	3	4	5	8	8	0	42	79	42	121
Matale	0	1	1	2	3	4	7	10	2	30	0	0	0	1	2	0	2	5	0	10	30	10	40
Nuwara Eliya	0	0	2	3	1	5	9	5	1	26	1	0	1	0	3	4	5	1	3	18	26	18	44
Galle	0	1	2	5	4	6	13	14	6	51	0	0	4	1	1	3	4	6	1	20	51	20	71
Matara	0	0	0	0	2	2	6	10	1	21	0	1	0	1	0	0	1	1	1	5	21	5	26
Hambantota	0	0	0	1	1	2	7	6	2	19	0	0	1	0	1	0	1	1	0	4	19	4	23
Jaffna	0	0	1	7	9	3	12	12	2	46	0	0	7	3	4	4	8	12	2	40	46	40	86
Vavuniya	0	0	0	2	0	1	2	1	0	6	0	0	1	0	0	0	1	0	0	2	6	2	8
Batticaloa	1	0	0	1	4	1	3	1	0	11	2	0	0	0	0	0	0	1	0	3	11	3	14
Ampara	0	0	3	2	3	3	7	4	3	25	1	0	0	4	1	2	8	5	0	21	25	21	46
Kalmunai	0	0	2	1	2	11	17	5	3	41	0	1	4	3	1	4	10	4	3	30	41	30	71
Trincomalee	0	0	1	0	0	0	6	2	1	10	0	0	0	0	1	1	1	1	0	4	10	4	14
Kurunegala	0	0	1	3	6	16	10	8	5	49	1	0	0	0	1	6	1	2	2	13	49	13	62
Puttalam	1	0	1	1	3	3	10	6	2	27	1	0	2	1	1	1	0	2	1	9	27	9	36
Anuradhapura	0	2	2	2	5	2	3	2	1	19	0	1	0	0	1	1	0	1	2	6	19	6	25
Polonnaruwa	0	0	1	2	2	8	10	4	3	30	0	0	0	1	3	0	3	4	1	12	30	12	42
Badulla	2	1	0	3	1	9	3	3	1	23	3	0	0	3	1	2	3	4	0	16	23	16	39
Monaragala	0	0	0	4	0	5	4	6	1	20	2	1	0	0	0	3	3	0	0	9	20	9	29
Ratnapura	0	0	4	3	5	6	7	3	4	32	1	0	3	3	0	3	1	1	1	13	32	13	45
Kegalle	1	0	4	5	4	11	14	8	1	48	0	0	0	1	1	6	10	4	2	24	48	24	72
Mannar	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	2	0	2
Mullaitivu	1	0	1	0	0	1	2	1	1	7	0	0	0	1	0	0	1	1	0	3	7	3	10
Kilinochchi	0	0	0	0	0	1	5	0	2	8	0	0	0	1	1	2	1	1	1	7	8	7	15
Total	27	12	62	87	103	177	289	206	86	1049	42	20	57	55	59	78	134	115	37	597	1049	597	1646

Table 16: Age and Sex Distribution of Smear Negative New TB Cases by District in 2018

Table 17: Age and Sex Distribution of All New PTB Cases by District in 2018

District					N	Male									F	emale						E	Treet
District	0 -4	5-14	15 -24	25 -34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	0 -4	5-14	15 -24	25 -34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	Male	Female	Total
Colombo	13	5	59	86	151	231	231	115	60	951	25	10	80	50	62	74	103	57	17	478	951	478	1429
Gampaha	1	0	31	45	73	102	154	92	37	535	1	7	27	22	29	34	57	49	17	243	535	243	778
Kalutara	0	1	10	22	44	58	73	47	15	270	1	1	23	14	20	25	26	37	4	151	270	151	421
Kandy	10	2	21	24	31	51	53	45	17	254	5	8	22	13	19	15	25	19	4	130	254	130	384
Matale	0	1	4	5	12	13	20	15	3	73	0	0	3	6	4	3	5	7	0	28	73	28	101
Nuwara Eliya	0	0	11	10	12	14	17	14	3	81	1	4	13	9	5	7	14	4	3	60	81	60	141
Galle	0	2	15	20	20	42	41	32	15	187	0	1	13	7	7	8	11	15	5	67	187	67	254
Matara	0	1	4	5	16	16	18	23	6	89	0	2	4	10	2	5	7	4	2	36	89	36	125
Hambantota	0	0	2	4	8	15	13	14	5	61	0	0	2	4	2	1	4	2	0	15	61	15	76
Jaffna	0	3	5	15	14	17	18	30	5	107	0	0	19	7	10	14	13	20	2	85	107	85	192
Vavuniya	0	0	1	4	5	5	8	6	0	29	0	1	1	3	3	2	1	0	0	11	29	11	40
Batticaloa	1	0	5	6	18	11	16	7	1	65	2	0	4	4	3	3	7	3	1	27	65	27	92
Ampara	0	0	3	5	7	9	9	12	7	52	1	0	2	4	1	3	8	5	0	24	52	24	76
Kalmunai	0	0	3	6	5	22	29	9	3	77	0	1	8	6	3	9	13	7	4	51	77	51	128
Trincomalee	0	1	6	5	6	15	19	7	3	62	0	2	3	3	7	5	10	5	0	35	62	35	97
Kurunegala	0	0	8	20	34	45	47	30	14	198	1	0	7	9	7	17	11	12	6	70	198	70	268
Puttalam	1	0	4	10	15	16	20	13	3	82	1	0	5	9	4	3	5	7	1	35	82	35	117
Anuradhapura	0	2	13	16	17	33	28	18	7	134	0	1	7	4	7	9	6	2	2	38	134	38	172
Polonnaruwa	0	1	4	7	10	21	18	14	3	78	0	0	5	6	4	2	8	7	1	33	78	33	111
Badulla	2	1	9	22	18	25	19	20	10	126	3	3	14	9	4	8	10	6	0	57	126	57	183
Monaragala	0	0	5	10	7	18	12	13	3	68	2	2	1	6	4	4	4	1	2	26	68	26	94
Ratnapura	0	0	12	25	25	30	38	15	12	157	2	3	13	17	6	14	21	10	2	88	157	88	245
Kegalle	1	1	10	22	24	33	36	20	8	155	0	0	9	2	3	17	18	12	9	70	155	70	225
Mannar	0	0	0	0	0	3	7	2	3	15	0	0	1	0	0	1	0	2	0	4	15	4	19
Mullaitivu	1	0	1	0	1	2	4	4	3	16	0	0	0	2	0	1	1	1	0	5	16	5	21
Kilinochchi	0	0	0	2	4	5	7	4	3	25	0	0	1	2	3	2	1	3	1	13	25	13	38
Total	30	21	246	396	577	852	955	621	249	3947	45	46	287	228	219	286	389	297	83	1880	3947	1880	5827

District						Male									Fe	emale						F	Tatal
District	0 -4	5-14	15 -24	25 - 34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	0 -4	5-14	15 -24	25 - 34	35 -44	45 -54	55 -64	65 -74	75-Over	Total	Male	Female	Total
Colombo	8	6	25	38	41	51	40	33	13	255	6	11	47	33	31	39	38	15	8	228	255	228	483
Gampaha	0	9	14	22	28	29	33	17	4	156	1	1	17	19	14	27	17	19	5	120	156	120	276
Kalutara	0	3	9	15	10	22	17	6	1	83	0	5	9	12	15	10	14	9	1	75	83	75	158
Kandy	3	3	11	20	15	14	12	12	2	92	2	0	10	16	21	21	19	11	2	102	92	102	194
Matale	0	1	2	8	5	8	6	2	2	34	0	1	3	6	2	6	5	5	1	29	34	29	63
Nuwara Eliya	2	0	4	8	8	12	6	1	1	42	1	2	11	8	11	5	5	5	1	49	42	49	91
Galle	1	0	7	14	13	10	12	12	2	71	0	0	7	9	11	11	4	9	2	53	71	53	124
Matara	1	0	2	7	6	7	15	5	1	44	0	1	6	3	11	5	8	3	0	37	44	37	81
Hambantota	3	0	3	5	2	9	5	4	3	34	0	2	5	2	2	0	2	1	1	15	34	15	49
Jaffna	0	2	4	8	6	5	9	9	3	46	3	1	7	2	9	7	11	2	2	44	46	44	90
Vavuniya	0	1	2	0	0	3	2	0	0	8	0	0	1	3	2	0	1	0	0	7	8	7	15
Batticaloa	0	1	2	3	8	3	2	1	0	20	0	2	4	2	6	2	2	1	0	19	20	19	39
Ampara	0	1	3	3	4	5	1	1	0	18	1	0	1	3	0	2	5	2	0	14	18	14	32
Kalmunai	0	3	2	1	5	4	2	5	0	22	1	0	5	3	3	1	4	0	0	17	22	17	39
Trincomalee	0	0	3	2	4	2	3	3	0	17	0	2	1	1	4	2	0	0	0	10	17	10	27
Kurunegala	0	2	7	5	10	11	13	6	2	56	1	1	4	9	6	7	7	4	2	41	56	41	97
Puttalam	2	0	3	6	6	7	4	4	2	34	0	1	1	6	4	6	3	2	0	23	34	23	57
Anuradhapura	5	2	4	9	11	10	5	5	0	51	1	1	1	7	8	7	4	0	0	29	51	29	80
Polonnaruwa	0	0	1	1	6	6	5	2	1	22	1	1	1	3	2	1	2	1	0	12	22	12	34
Badulla	0	3	1	5	6	8	6	2	3	34	0	2	2	5	3	5	7	3	0	27	34	27	61
Monaragala	0	1	1	5	2	5	3	1	1	19	0	1	0	2	4	3	1	1	1	13	19	13	32
Ratnapura	1	2	9	15	18	16	15	9	0	85	1	1	11	23	12	18	10	6	2	84	85	84	169
Kegalle	1	0	5	14	5	12	10	11	1	59	0	3	6	11	5	8	6	11	2	52	59	52	111
Mannar	0	0	1	2	0	0	3	0	0	6	0	0	0	2	2	0	0	0	0	4	6	4	10
Mullaitivu	0	0	1	0	2	1	1	0	0	5	0	0	0	0	0	0	1	0	0	1	5	1	6
Kilinochchi	0	0	1	1	1	1	1	0	0	5	0	1	1	2	0	1	1	2	0	8	5	8	13
Total	27	40	127	217	222	261	231	151	42	1318	19	40	161	192	188	194	177	112	30	1113	1318	1113	2431

Table 18: Age and Sex Distribution of New EPTB Cases by District in 2018

Table 19: Distribution of Treatment Outcome of All forms of TB by Districts in 2017

		G		Trea	tment	Trea	tment			Di	ed			F -1	•	Lost to	Follow	NAT	- h (-)	
District	Total Number Registered		ıred	Comp	leted	Suc	cess	Confirem due t		All Othe	r Deaths	All D	eaths	Fai	lure	u	ւթ	Not Ev	aluated	Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	2051	780	38.0	906	44.2	1686	82.2	19	0.9	92	4.5	111	5.4	34	1.7	130	6.3	90	4.4	2051
Gampaha	1066	462	43.3	404	37.9	866	81.2	41	3.8	70	6.6	111	10.4	8	0.8	42	3.9	39	3.7	1066
Kalutara	568	229	40.3	243	42.8	472	83.1	11	1.9	26	4.6	37	6.5	0	0.0	19	3.3	40	7.0	568
Kandy	484	183	37.8	228	47.1	411	84.9	7	1.4	28	5.8	35	7.2	5	1.0	4	0.8	29	6.0	484
Matale	152	61	40.1	61	40.1	122	80.3	6	3.9	10	6.6	16	10.5	1	0.7	4	2.6	9	5.9	152
Nuwara Eliya	291	63	21.6	170	58.4	233	80.1	24	8.2	3	1.0	27	9.3	3	1.0	15	5.2	13	4.5	291
Galle	380	181	47.6	124	32.6	305	80.3	5	1.3	17	4.5	22	5.8	5	1.3	30	7.9	18	4.7	380
Matara	225	114	50.7	93	41.3	207	92.0	2	0.9	6	2.7	8	3.6	4	1.8	1	0.4	5	2.2	225
Hambantota	123	45	36.6	57	46.3	102	82.9	6	4.9	3	2.4	9	7.3	0	0.0	4	3.3	8	6.5	123
Jaffna	274	64	23.4	164	59.9	228	83.2	6	2.2	11	4.0	17	6.2	3	1.1	11	4.0	15	5.5	274
Vavuniya	51	26	51.0	16	31.4	42	82.4	6	11.8	3	5.9	9	17.6	0	0.0	0	0.0	0	0.0	51
Batticaloa	145	79	54.5	46	31.7	125	86.2	7	4.8	2	1.4	9	6.2	0	0.0	2	1.4	9	6.2	145
Ampara	100	35	35.0	53	53.0	88	88.0	4	4.0	1	1.0	5	5.0	2	2.0	0	0.0	5	5.0	100
Kalmunai	201	30	14.9	142	70.6	172	85.6	1	0.5	10	5.0	11	5.5	0	0.0	14	7.0	4	2.0	201
Trincomalee	137	60	43.8	53	38.7	113	82.5	11	8.0	2	1.5	13	9.5	0	0.0	3	2.2	8	5.8	137
Kurunegala	424	196	46.2	166	39.2	362	85.4	12	2.8	29	6.8	41	9.7	3	0.7	14	3.3	4	0.9	424
Puttalam	195	77	39.5	91	46.7	168	86.2	2	1.0	9	4.6	11	5.6	2	1.0	3	1.5	11	5.6	195
Anuradhapura	260	148	56.9	102	39.2	250	96.2	5	1.9	0	0.0	5	1.9	3	1.2	1	0.4	1	0.4	260
Polonnaruwa	115	63	54.8	42	36.5	105	91.3	4	3.5	1	0.9	5	4.3	1	0.9	0	0.0	4	3.5	115
Badulla	205	98	47.8	79	38.5	177	86.3	7	3.4	5	2.4	12	5.9	4	2.0	2	1.0	10	4.9	205
Monaragala	104	48	46.2	42	40.4	90	86.5	6	5.8	5	4.8	11	10.6	0	0.0	1	1.0	2	1.9	104
Ratnapura	507	235	46.4	221	43.6	456	89.9	0	0.0	19	3.7	19	3.7	4	0.8	18	3.6	10	2.0	507
Kegalle	344	143	41.6	149	43.3	292	84.9	4	1.2	20	5.8	24	7.0	6	1.7	9	2.6	13	3.8	344
Mannar	36	25	69.4	7	19.4	32	88.9	0	0.0	4	11.1	4	11.1	0	0.0	0	0.0	0	0.0	36
Mullaitivu	27	13	48.1	11	40.7	24	88.9	0	0.0	3	11.1	3	11.1	0	0.0	0	0.0	0	0.0	27
Kilinochchi	46	13	28.3	26	56.5	39	84.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	15.2	46
Total	8511	3471	40.8	3696	43.4	7167	84.2	196	2.3	379	4.5	575	6.8	88	1.0	327	3.8	354	4.2	8511

				Trag	tment					Die	d									
District	Total Number Registered	Cu	ıred		pleted	Treatme	nt Success		ed as not to TB	All Othe	r Deaths	All D	eaths	Fai	lure	Lost to 1	Follow up	Not Ev	aluated	Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	1890	704	37.2	875	46.3	1579	83.5	17	0.9	81	4.3	98	5.2	29	1.5	104	5.5	80	4.2	1890
Gampaha	996	431	43.3	381	38.3	812	81.5	39	3.9	61	6.1	100	10.0	8	0.8	37	3.7	39	3.9	996
Kalutara	540	217	40.2	239	44.3	456	84.4	11	2.0	24	4.4	35	6.5	0	0.0	16	3.0	33	6.1	540
Kandy	465	174	37.4	222	47.7	396	85.2	7	1.5	26	5.6	33	7.1	5	1.1	4	0.9	27	5.8	465
Matale	147	59	40.1	60	40.8	119	81.0	6	4.1	9	6.1	15	10.2	1	0.7	4	2.7	8	5.4	147
Nuwara Eliya	276	58	21.0	162	58.7	220	79.7	24	8.7	3	1.1	27	9.8	3	1.1	14	5.1	12	4.3	276
Galle	361	170	47.1	123	34.1	293	81.2	4	1.1	17	4.7	21	5.8	5	1.4	25	6.9	17	4.7	361
Matara	211	102	48.3	93	44.1	195	92.4	2	0.9	6	2.8	8	3.8	2	0.9	1	0.5	5	2.4	211
Hambantota	119	43	36.1	56	47.1	99	83.2	6	5.0	3	2.5	9	7.6	0	0.0	4	3.4	7	5.9	119
Jaffna	258	61	23.6	159	61.6	220	85.3	6	2.3	11	4.3	17	6.6	3	1.2	10	3.9	8	3.1	258
Vavuniya	50	25	50.0	16	32.0	41	82.0	6	12.0	3	6.0	9	18.0	0	0.0	0	0.0	0	0.0	50
Batticaloa	135	71	52.6	45	33.3	116	85.9	7	5.2	2	1.5	9	6.7	0	0.0	2	1.5	8	5.9	135
Ampara	95	31	32.6	53	55.8	84	88.4	4	4.2	1	1.1	5	5.3	2	2.1	0	0.0	4	4.2	95
Kalmunai	189	30	15.9	133	70.4	163	86.2	1	0.5	9	4.8	10	5.3	0	0.0	13	6.9	3	1.6	189
Trincomalee	127	56	44.1	49	38.6	105	82.7	10	7.9	2	1.6	12	9.4	0	0.0	3	2.4	7	5.5	127
Kurunegala	407	183	45.0	166	40.8	349	85.7	12	2.9	27	6.6	39	9.6	3	0.7	12	2.9	4	1.0	407
Puttalam	187	73	39.0	90	48.1	163	87.2	2	1.1	8	4.3	10	5.3	2	1.1	3	1.6	9	4.8	187
Anuradhapura	246	138	56.1	100	40.7	238	96.7	4	1.6	0	0.0	4	1.6	3	1.2	1	0.4	0	0.0	246
Polonnaruwa	108	57	52.8	42	38.9	99	91.7	4	3.7	1	0.9	5	4.6	1	0.9	0	0.0	3	2.8	108
Badulla	193	89	46.1	78	40.4	167	86.5	5	2.6	5	2.6	10	5.2	4	2.1	2	1.0	10	5.2	193
Monaragala	99	46	46.5	40	40.4	86	86.9	5	5.1	5	5.1	10	10.1	0	0.0	1	1.0	2	2.0	99
Ratnapura	490	226	46.1	215	43.9	441	90.0	0	0.0	19	3.9	19	3.9	4	0.8	18	3.7	8	1.6	490
Kegalle	322	132	41.0	145	45.0	277	86.0	4	1.2	20	6.2	24	7.5	6	1.9	5	1.6	10	3.1	322
Mannar	34	23	67.6	7	20.6	30	88.2	0	0.0	4	11.8	4	11.8	0	0.0	0	0.0	0	0.0	34
Mullaitivu	26	12	46.2	11	42.3	23	88.5	0	0.0	3	11.5	3	11.5	0	0.0	0	0.0	0	0.0	26
Kilinochchi	42	12	28.6	25	59.5	37	88.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	11.9	42
Total	8013	3223	40.2	3585	44.7	6808	85.0	186	2.3	350	4.4	536	6.7	81	1.0	279	3.5	309	3.9	8013

Table 20: Distribution of Treatment Outcome of All Forms of New (PTB and EPTB) Cases by District in 2017

			Cured	Trea	tment					Di	ied									
District	Total Number Registered	Cu	ıred		pleted	Treatme	nt Success	Confirem due t	ed as not to TB	All Othe	r Deaths	All D	eaths	Fai	lure	Lost to 1	Follow up	Not Ev	aluated	Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	1379	704	51.1	436	31.6	1140	82.7	9	0.7	70	5.1	79	5.7	21	1.5	88	6.4	51	3.7	1379
Gampaha	813	431	53.0	222	27.3	653	80.3	32	3.9	58	7.1	90	11.1	8	1.0	32	3.9	30	3.7	813
Kalutara	367	217	59.1	99	27.0	316	86.1	9	2.5	16	4.4	25	6.8	0	0.0	11	3.0	15	4.1	367
Kandy	324	174	53.7	102	31.5	276	85.2	6	1.9	18	5.6	24	7.4	4	1.2	4	1.2	16	4.9	324
Matale	98	59	60.2	22	22.4	81	82.7	3	3.1	6	6.1	9	9.2	1	1.0	3	3.1	4	4.1	98
Nuwara Eliya	164	58	35.4	72	43.9	130	79.3	20	12.2	2	1.2	22	13.4	3	1.8	5	3.0	4	2.4	164
Galle	259	170	65.6	44	17.0	214	82.6	3	1.2	9	3.5	12	4.6	5	1.9	20	7.7	8	3.1	259
Matara	139	102	73.4	26	18.7	128	92.1	1	0.7	5	3.6	6	4.3	2	1.4	1	0.7	2	1.4	139
Hambantota	75	43	57.3	21	28.0	64	85.3	3	4.0	3	4.0	6	8.0	0	0.0	4	5.3	1	1.3	75
Jaffna	192	61	31.8	102	53.1	163	84.9	5	2.6	8	4.2	13	6.8	3	1.6	6	3.1	7	3.6	192
Vavuniya	37	25	67.6	4	10.8	29	78.4	5	13.5	3	8.1	8	21.6	0	0.0	0	0.0	0	0.0	37
Batticaloa	99	71	71.7	17	17.2	88	88.9	4	4.0	2	2.0	6	6.1	0	0.0	1	1.0	4	4.0	99
Ampara	76	31	40.8	36	47.4	67	88.2	4	5.3	1	1.3	5	6.6	2	2.6	0	0.0	2	2.6	76
Kalmunai	172	30	17.4	118	68.6	148	86.0	1	0.6	9	5.2	10	5.8	0	0.0	12	7.0	2	1.2	172
Trincomalee	91	56	61.5	20	22.0	76	83.5	7	7.7	1	1.1	8	8.8	0	0.0	3	3.3	4	4.4	91
Kurunegala	303	183	60.4	75	24.8	258	85.1	5	1.7	23	7.6	28	9.2	3	1.0	11	3.6	3	1.0	303
Puttalam	137	73	53.3	47	34.3	120	87.6	1	0.7	6	4.4	7	5.1	2	1.5	3	2.2	5	3.6	137
Anuradhapura	179	138	77.1	33	18.4	171	95.5	4	2.2	0	0.0	4	2.2	3	1.7	1	0.6	0	0.0	179
Polonnaruwa	80	57	71.3	17	21.3	74	92.5	3	3.8	1	1.3	4	5.0	1	1.3	0	0.0	1	1.3	80
Badulla	128	89	69.5	22	17.2	111	86.7	2	1.6	2	1.6	4	3.1	4	3.1	2	1.6	7	5.5	128
Monaragala	74	46	62.2	18	24.3	64	86.5	4	5.4	4	5.4	8	10.8	0	0.0	0	0.0	2	2.7	74
Ratnapura	296	226	76.4	43	14.5	269	90.9	0	0.0	16	5.4	16	5.4	1	0.3	8	2.7	2	0.7	296
Kegalle	224	132	58.9	62	27.7	194	86.6	3	1.3	12	5.4	15	6.7	4	1.8	5	2.2	6	2.7	224
Mannar	30	23	76.7	4	13.3	27	90.0	0	0.0	3	10.0	3	10.0	0	0.0	0	0.0	0	0.0	30
Mullaitivu	18	12	66.7	3	16.7	15	83.3	0	0.0	3	16.7	3	16.7	0	0.0	0	0.0	0	0.0	18
Kilinochchi	31	12	38.7	16	51.6	28	90.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	9.7	31
Total	5785	3223	55.7	1681	29.1	4904	84.8	134	2.3	281	4.9	415	7.2	67	1.2	220	3.8	179	3.1	5785

 Table 21: Distribution of Treatment Outcome of All New PTB Cases by District in 2017

				Tree	tment					Died						Lost to	Follow			
District	Total Number Registered	Cu	ıred		pleted	Treatmen	nt Success	Confiremed T		All Othe	r Deaths	All D	eaths	Fai	ilure		р р	Not Ev	aluated	Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	975	704	72.2	91	9.3	795	81.5	3	0.3	58	5.9	61	6.3	18	1.8	65	6.7	36	3.7	975
Gampaha	541	431	79.7	18	3.3	449	83.0	12	2.2	39	7.2	51	9.4	8	1.5	24	4.4	9	1.7	541
Kalutara	280	217	77.5	20	7.1	237	84.6	9	3.2	11	3.9	20	7.1	0	0.0	9	3.2	14	5.0	280
Kandy	205	174	84.9	8	3.9	182	88.8	2	1.0	10	4.9	12	5.9	4	2.0	3	1.5	4	2.0	205
Matale	69	59	85.5	0	0.0	59	85.5	0	0.0	5	7.2	5	7.2	1	1.4	3	4.3	1	1.4	69
Nuwara Eliya	100	58	58.0	21	21.0	79	79.0	12	12.0	2	2.0	14	14.0	3	3.0	1	1.0	3	3.0	100
Galle	207	170	82.1	2	1.0	172	83.1	2	1.0	7	3.4	9	4.3	5	2.4	15	7.2	6	2.9	207
Matara	110	102	92.7	1	0.9	103	93.6	1	0.9	3	2.7	4	3.6	2	1.8	1	0.9	0	0.0	110
Hambantota	50	43	86.0	0	0.0	43	86.0	2	4.0	2	4.0	4	8.0	0	0.0	3	6.0	0	0.0	50
Jaffna	89	61	68.5	15	16.9	76	85.4	4	4.5	3	3.4	7	7.9	3	3.4	3	3.4	0	0.0	89
Vavuniya	30	25	83.3	1	3.3	26	86.7	3	10.0	1	3.3	4	13.3	0	0.0	0	0.0	0	0.0	30
Batticaloa	86	71	82.6	6	7.0	77	89.5	4	4.7	2	2.3	6	7.0	0	0.0	1	1.2	2	2.3	86
Ampara	34	31	91.2	0	0.0	31	91.2	0	0.0	1	2.9	1	2.9	2	5.9	0	0.0	0	0.0	34
Kalmunai	81	30	37.0	42	51.9	72	88.9	0	0.0	5	6.2	5	6.2	0	0.0	4	4.9	0	0.0	81
Trincomalee	70	56	80.0	4	5.7	60	85.7	5	7.1	1	1.4	6	8.6	0	0.0	2	2.9	2	2.9	70
Kurunegala	211	183	86.7	1	0.5	184	87.2	1	0.5	15	7.1	16	7.6	3	1.4	6	2.8	2	0.9	211
Puttalam	87	73	83.9	0	0.0	73	83.9	0	0.0	6	6.9	6	6.9	2	2.3	2	2.3	4	4.6	87
Anuradhapura	145	138	95.2	0	0.0	138	95.2	3	2.1	0	0.0	3	2.1	3	2.1	1	0.7	0	0.0	145
Polonnaruwa	61	57	93.4	0	0.0	57	93.4	2	3.3	0	0.0	2	3.3	1	1.6	0	0.0	1	1.6	61
Badulla	105	89	84.8	2	1.9	91	86.7	2	1.9	2	1.9	4	3.8	4	3.8	1	1.0	5	4.8	105
Monaragala	55	46	83.6	3	5.5	49	89.1	4	7.3	2	3.6	6	10.9	0	0.0	0	0.0	0	0.0	55
Ratnapura	246	226	91.9	0	0.0	226	91.9	0	0.0	13	5.3	13	5.3	1	0.4	6	2.4	0	0.0	246
Kegalle	159	132	83.0	7	4.4	139	87.4	3	1.9	8	5.0	11	6.9	3	1.9	2	1.3	4	2.5	159
Mannar	24	23	95.8	0	0.0	23	95.8	0	0.0	1	4.2	1	4.2	0	0.0	0	0.0	0	0.0	24
Mullaitivu	15	12	80.0	0	0.0	12	80.0	0	0.0	3	20.0	3	20.0	0	0.0	0	0.0	0	0.0	15
Kilinochchi	20	12	60.0	6	30.0	18	90.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	10.0	20
Total	4055	3223	79.5	248	6.1	3471	85.6	74	1.8	200	4.9	274	6.8	63	1.6	152	3.7	95	2.3	4055

Table 22: Distribution of Treatment Outcome of New Sputum Positive PTB Cases by District in 2017

		Trea	tment]	Died							N		
District	Total Number Registered	Comj	pleted	Confiren due t	ned as not to TB	All Othe	er Deaths	All D	eaths	- Fail	lure	Lost to F	ollow up	Not Ev	aluated	Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	404	345	85.4	6	1.5	12	3.0	18	4.5	3	0.7	23	5.7	15	3.7	404
Gampaha	272	204	75.0	20	7.4	19	7.0	39	14.3	0	0.0	8	2.9	21	7.7	272
Kalutara	87	79	90.8	0	0.0	5	5.7	5	5.7	0	0.0	2	2.3	1	1.1	87
Kandy	119	94	79.0	4	3.4	8	6.7	12	10.1	0	0.0	1	0.8	12	10.1	119
Matale	29	22	75.9	3	10.3	1	3.4	4	13.8	0	0.0	0	0.0	3	10.3	29
Nuwara Eliya	64	51	79.7	8	12.5	0	0.0	8	12.5	0	0.0	4	6.3	1	1.6	64
Galle	52	42	80.8	1	1.9	2	3.8	3	5.8	0	0.0	5	9.6	2	3.8	52
Matara	29	25	86.2	0	0.0	2	6.9	2	6.9	0	0.0	0	0.0	2	6.9	29
Hambantota	25	21	84.0	1	4.0	1	4.0	2	8.0	0	0.0	1	4.0	1	4.0	25
Jaffna	103	87	84.5	1	1.0	5	4.9	6	5.8	0	0.0	3	2.9	7	6.8	103
Vavuniya	7	3	42.9	2	28.6	2	28.6	4	57.1	0	0.0	0	0.0	0	0.0	7
Batticaloa	13	11	84.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	15.4	13
Ampara	42	36	85.7	4	9.5	0	0.0	4	9.5	0	0.0	0	0.0	2	4.8	42
Kalmunai	91	76	83.5	1	1.1	4	4.4	5	5.5	0	0.0	8	8.8	2	2.2	91
Trincomalee	21	16	76.2	2	9.5	0	0.0	2	9.5	0	0.0	1	4.8	2	9.5	21
Kurunegala	92	74	80.4	4	4.3	8	8.7	12	13.0	0	0.0	5	5.4	1	1.1	92
Puttalam	50	47	94.0	1	2.0	0	0.0	1	2.0	0	0.0	1	2.0	1	2.0	50
Anuradhapura	34	33	97.1	1	2.9	0	0.0	1	2.9	0	0.0	0	0.0	0	0.0	34
Polonnaruwa	19	17	89.5	1	5.3	1	5.3	2	10.5	0	0.0	0	0.0	0	0.0	19
Badulla	23	20	87.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.3	2	8.7	23
Monaragala	19	15	78.9	0	0.0	2	10.5	2	10.5	0	0.0	0	0.0	2	10.5	19
Ratnapura	50	43	86.0	0	0.0	3	6.0	3	6.0	0	0.0	2	4.0	2	4.0	50
Kegalle	65	55	84.6	0	0.0	4	6.2	4	6.2	1	1.5	3	4.6	2	3.1	65
Mannar	6	4	66.7	0	0.0	2	33.3	2	33.3	0	0.0	0	0.0	0	0.0	6
Mullaitivu	3	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3
Kilinochchi	11	10	90.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	10
Total	1730	1433	82.8	60	3.5	81	4.7	141	8.2	4	0.2	68	3.9	84	4.9	1730

Table 23: Distribution of Treatment Outcome of New Sputum Negative PTB Cases by District in 2017

		Treat	ment			Di	ed			5 -1				N (P		
District	Total Number Registered	Comp	oleted		l as not due TB	All Othe	r Deaths	All De	eaths	Fai	lure	LOST TO P	Follow up	Not Ev	aluated	Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	511	439	85.9	8	1.6	11	2.2	19	3.7	8	1.6	16	3.1	29	5.7	511
Gampaha	183	159	86.9	7	3.8	3	1.6	10	5.5	0	0.0	5	2.7	9	4.9	183
Kalutara	173	140	80.9	2	1.2	8	4.6	10	5.8	0	0.0	5	2.9	18	10.4	173
Kandy	141	120	85.1	1	0.7	8	5.7	9	6.4	1	0.7	0	0.0	11	7.8	141
Matale	49	38	77.6	3	6.1	3	6.1	6	12.2	0	0.0	1	2.0	4	8.2	49
Nuwara Eliya	112	90	80.4	4	3.6	1	0.9	5	4.5	0	0.0	9	8.0	8	7.1	112
Galle	102	79	77.5	1	1.0	8	7.8	9	8.8	0	0.0	5	4.9	9	8.8	102
Matara	72	67	93.1	1	1.4	1	1.4	2	2.8	0	0.0	0	0.0	3	4.2	72
Hambantota	44	35	79.5	3	6.8	0	0.0	3	6.8	0	0.0	0	0.0	6	13.6	44
Jaffna	66	57	86.4	1	1.5	3	4.5	4	6.1	0	0.0	4	6.1	1	1.5	66
Vavuniya	13	12	92.3	1	7.7	0	0.0	1	7.7	0	0.0	0	0.0	0	0.0	13
Batticaloa	36	28	77.8	3	8.3	0	0.0	3	8.3	0	0.0	1	2.8	4	11.1	36
Ampara	19	17	89.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	10.5	19
Kalmunai	17	15	88.2	0	0.0	0	0.0	0	0.0	0	0.0	1	5.9	1	5.9	17
Trincomalee	36	29	80.6	3	8.3	1	2.8	4	11.1	0	0.0	0	0.0	3	8.3	36
Kurunegala	104	91	87.5	7	6.7	4	3.8	11	10.6	0	0.0	1	1.0	1	1.0	104
Puttalam	50	43	86.0	1	2.0	2	4.0	3	6.0	0	0.0	0	0.0	4	8.0	50
Anuradhapura	67	67	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	67
Polonnaruwa	28	25	89.3	1	3.6	0	0.0	1	3.6	0	0.0	0	0.0	2	7.1	28
Badulla	65	56	86.2	3	4.6	3	4.6	6	9.2	0	0.0	0	0.0	3	4.6	65
Monaragala	25	22	88.0	1	4.0	1	4.0	2	8.0	0	0.0	1	4.0	0	0.0	25
Ratnapura	194	172	88.7	0	0.0	3	1.5	3	1.5	3	1.5	10	5.2	6	3.1	194
Kegalle	98	83	84.7	1	1.0	8	8.2	9	9.2	2	2.0	0	0.0	4	4.1	98
Mannar	4	3	75.0	0	0.0	1	25.0	1	25.0	0	0.0	0	0.0	0	0.0	4
Mullaitivu	8	8	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8
Kilinochchi	11	9	81.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	18.2	11
Total	2228	1904	85.5	52	2.3	69	3.1	121	5.4	14	0.6	59	2.6	130	5.8	2228

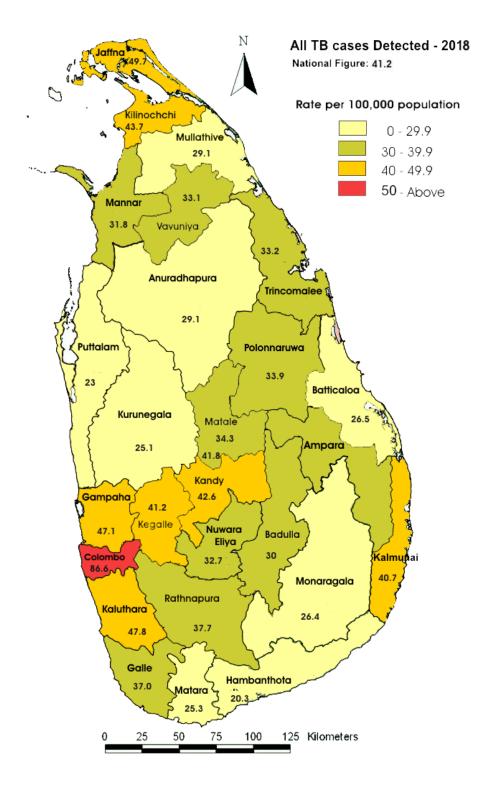
Table 24: Distribution of Treatment Outcome of EPTB Cases by District in 2017

Table 25: Distribution of Treatment Outcome of Re-Treatment TB Cases by District in 2017

				Trea	tment	Trea	tment			Di	ed					.		NAE		
District	Total Number Registered		red	Сотр	leted	Suc	cess	Confiren due t	ed as not o TB	All Othe	r Deaths	All D	eaths	Fai	lure	Lost to I	Follow up	Not Ev	aluated	Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	149	73	49.0	29	19.5	102	68.5	1	0.7	9	6.0	10	6.7	5	3.4	24	16.1	8	5.4	149
Gampaha	69	30	43.5	23	33.3	53	76.8	2	2.9	9	13.0	11	15.9	0	0.0	5	7.2	0	0.0	69
Kalutara	28	12	42.9	4	14.3	16	57.1	0	0.0	2	7.1	2	7.1	0	0.0	3	10.7	7	25.0	28
Kandy	19	9	47.4	6	31.6	15	78.9	0	0.0	2	10.5	2	10.5	0	0.0	0	0.0	2	10.5	19
Matale	5	2	40.0	1	20.0	3	60.0	0	0.0	1	20.0	1	20.0	0	0.0	0	0.0	1	20.0	5
Nuwara Eliya	15	5	33.3	8	53.3	13	86.7	0	0.0	0	0.0	0	0.0	0	0.0	1	6.7	1	6.7	15
Galle	19	11	57.9	1	5.3	12	63.2	1	5.3	0	0.0	1	5.3	0	0.0	5	26.3	1	5.3	19
Matara	14	12	85.7	0	0.0	12	85.7	0	0.0	0	0.0	0	0.0	2	14.3	0	0.0	0	0.0	14
Hambantota	4	2	50.0	1	25.0	3	75.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	25.0	4
Jaffna	16	3	18.8	5	31.3	8	50.0	0	0.0	0	0.0	0	0.0	0	0.0	1	6.3	7	43.8	16
Vavuniya	1	1	100.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
Batticaloa	10	8	80.0	1	10.0	9	90.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	10.0	10
Ampara	5	4	80.0	0	0.0	4	80.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	20.0	5
Kalmunai	12	0	0.0	9	75.0	9	75.0	0	0.0	1	8.3	1	8.3	0	0.0	1	8.3	1	8.3	12
Trincomalee	10	4	40.0	4	40.0	8	80.0	1	10.0	0	0.0	1	10.0	0	0.0	0	0.0	1	10.0	10
Kurunegala	17	13	76.5	0	0.0	13	76.5	0	0.0	2	11.8	2	11.8	0	0.0	2	11.8	0	0.0	17
Puttalam	8	4	50.0	1	12.5	5	62.5	0	0.0	1	12.5	1	12.5	0	0.0	0	0.0	2	25.0	8
Anuradhapura	14	10	71.4	2	14.3	12	85.7	1	7.1	0	0.0	1	7.1	0	0.0	0	0.0	1	7.1	14
Polonnaruwa	7	6	85.7	0	0.0	6	85.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	14.3	7
Badulla	12	9	75.0	1	8.3	10	83.3	2	16.7	0	0.0	2	16.7	0	0.0	0	0.0	0	0.0	12
Monaragala	5	2	40.0	2	40.0	4	80.0	1	20.0	0	0.0	1	20.0	0	0.0	0	0.0	0	0.0	5
Ratnapura	17	9	52.9	6	35.3	15	88.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	11.8	17
Kegalle	21	11	52.4	3	14.3	14	66.7	0	0.0	0	0.0	0	0.0	0	0.0	4	19.0	3	14.3	21
Mannar	2	2	100.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
Mullaitivu	1	1	100.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
Kilinochchi	4	1	25.0	1	25.0	2	50.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	50.0	4
Total	484	244	50.4	108	22.3	352	72.7	9	1.9	27	5.6	36	7.4	7	1.4	46	9.5	43	8.9	484

		C	ıred	Trea	tment	Trea	tment			Di	ed			Fail		Lost to F	all an un	N-4 F-	- h 4 - J	
District	Total Number Registered	Cu	irea	Comj	pleted	Suc	cess	Confiremed : T		All Othe	r Deaths	All D	eaths	ran	lure	LOSI IO F	onow up	Not Ev	aiuated	Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	12	3	25.0	2	16.7	5	41.7	1	8.3	2	16.7	3	25.0	0	0.0	2	16.7	2	16.7	12
Gampaha	1	1	100.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
Kalutara	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kandy	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Matale	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Nuwara Eliya	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Galle	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Matara	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Hambantota	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Jaffna	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0
Vavuniya	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0
Batticaloa	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0
Ampara	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0
Kalmunai	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0
Trincomalee	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0
Kurunegala	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0
Puttalam	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0
Anuradhapura	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Polonnaruwa	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Badulla	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Monaragala	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Ratnapura	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kegalle	1	0	0.0	1	100.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
Mannar	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Mullaitivu	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kilinochchi	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	14	4	28.6	3	21.4	7	50.0	1	7.1	2	14.3	3	21.4	0	0.0	2	14.3	2	14.3	14

Table 26: Distribution of Treatment Outcome of Other TB Cases by District in 2017



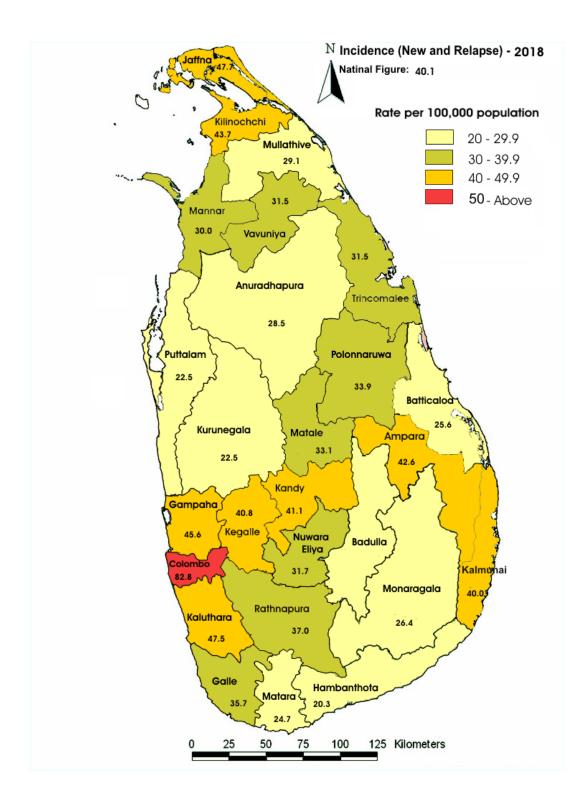


Figure 23

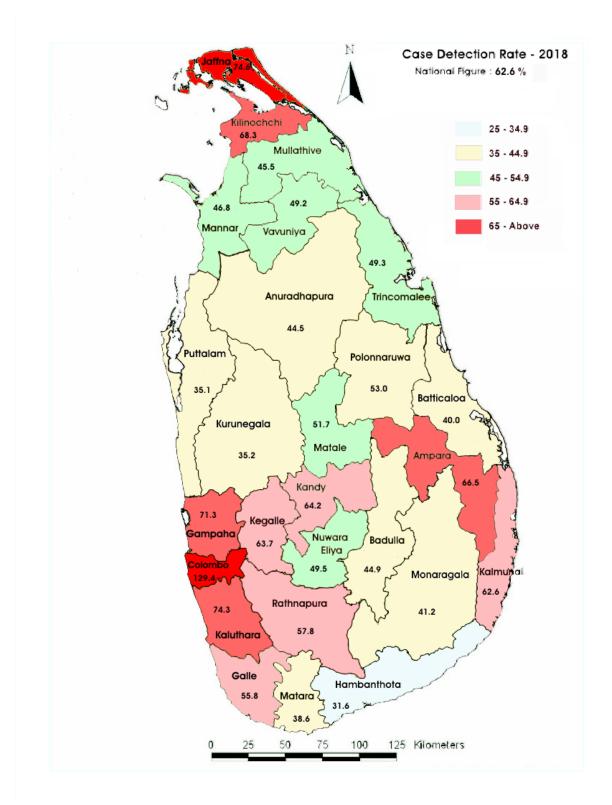
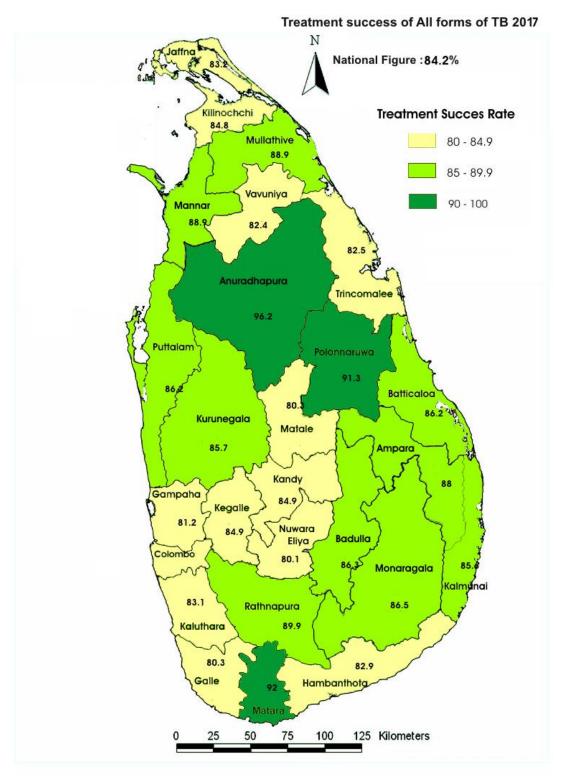


Figure 24



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