

ANNUAL REPORT 2019

NATIONAL PROGRAM FOR TUBERCULOSIS CONTROL & CHEST DISEASES



DRAFT

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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
EPTB	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
PTB	Pulmonary Tuberculosis
SAARC	South Asian Association for Regional Cooperation
SEARO	Regional Office for South-East Asia (WHO)
STAC	SAARC Tuberculosis and AIDS Centre
TB	Tuberculosis
WHO	World Health Organization

MESSAGE FROM THE DIRECTOR

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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 2019 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 2019 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

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INTRODUCTION

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 and Indigenous Medical Service, 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 in government hospitals throughout the country.

Diagnostic services are provided through National TB Reference Laboratory, Intermediate TB laboratories (ITL) in Kandy, Karapitiya, Jaffna and Ratnapura, DCC laboratories and 180 functioning microscopy centers.

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

TB and respiratory disease control activities at district level are carried out by the 26 DCCs situated in 25 administrative districts. All the DCCs except Colombo and Gampaha are under the administrative scope of respective provincial and district health authorities. Colombo and Gampaha districts function as a part of the NPTCCD, under the administrative purview of the Director NPTCCD.

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) and SAARC provide support for research and capacity development of healthcare staff involved in TB related activities.

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.

Table 1: Targets and milestones to End TB

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 (10:100,000 cases)
Percentage of TB patients and their households experiencing catastrophic costs due to TB	0%	0%	0%

GOALS AND OBJECTIVES

NPTCCD has revised its National Strategic Plan (NSP) for TB control for the period of 2015-2020 to be in par with “End TB” global TB control strategies.

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

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 2017

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 2017 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 2017, 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 2017 and thereafter.

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 814A 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. The electronic patient information management system (ePIMS) was introduced to the system in 2018. The ePIMS constitute of five modules. At present, all the districts are entering data to the ePMIS in addition to maintaining paper-based records and returns.

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 quarterly 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 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

Outcome indices

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

Mid-year population for the same year X 100,000 population

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*”.

$$\text{Case Detection Rate} = \frac{\text{No. of all forms (new / relapse) of TB cases notified during the specified year}}{\text{Estimated total number of incidence cases of TB for the same year}} \times 100$$

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”).

$$\text{Treatment Success Rate} = \frac{\text{Number of patients who have successfully completed treatment in the given period}}{\text{Number of patients registered in the same period}} \times 100$$

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.

$$\text{Sputum Conversion Rate} = \frac{\text{Number of smear-positive pulmonary TB cases Registered in a specified period that are smear negative at the end of the intensive phase of Treatment}}{\text{Total number of smear-positive pulmonary TB cases registered for treatment in the same period}} \times 100$$

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.

$$\text{Lost to follow up Rate} = \frac{\text{Number of TB cases registered in a specified period that interrupted treatment for more than two consecutive months}}{\text{Total number of TB cases registered in the same period}} \times 100$$

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.

$$\text{Death Rate} = \frac{\text{Number of TB cases registered in a specified period that died from any reason during the course of the treatment}}{\text{Total number of TB cases registered in the same period}} \times 100$$

Results

Surveillance of Tuberculosis

➤ TB Case Notifications

Cases of all forms of Tuberculosis should be notified to the NPTCCD using the H816-A form. a total of 8572 was notified to NPTCCD in 2019. In addition, all the TB cases registered at a district chest clinic for treatment and follow up are notified to the NPTCCD via TB-08. In 2019, this number was 8434. The difference is due to

➤ TB Death Notification (H 814)

During the year 2019, 535 TB deaths were notified by H814 (Table 7).

Incidence of Tuberculosis

The incidence rate of TB in Sri Lanka for 2019 was 37.8 per 100,000 population. The incidence rate has dropped by 2.3% compared to the previous year (Figure 1). The proportion of relapse cases among detected TB patients in 2019 (4.6%) shows an increase compared to the same proportion in 2018.

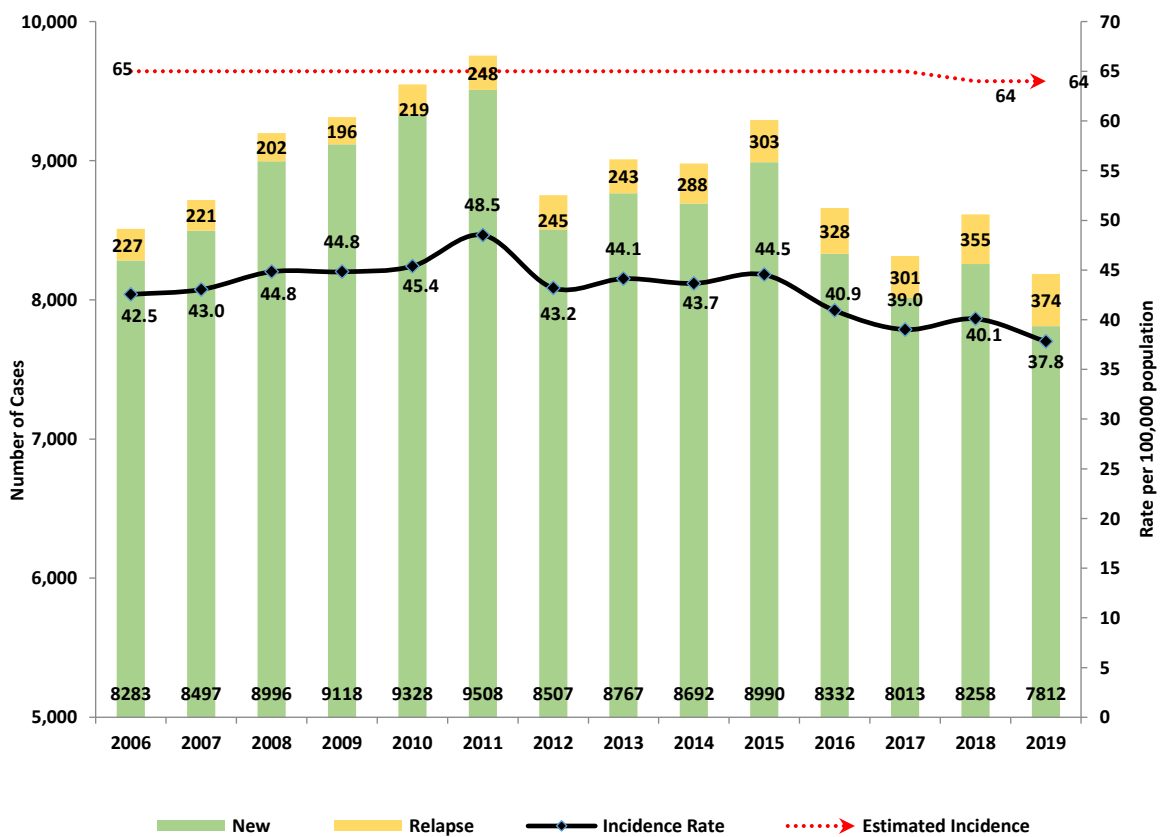


Figure 1: Tuberculosis incidence rates from 2007 to 2019

Case Detection

The total number of all forms of new TB cases reported from DCCs was 8434. This is a reduction from the previous year total number (Figure 2). Of this, 7812 (92.6%) were new cases, 604 (7.2%) were previously treated cases and 18 (0.2%) were cases with unknown treatment history.

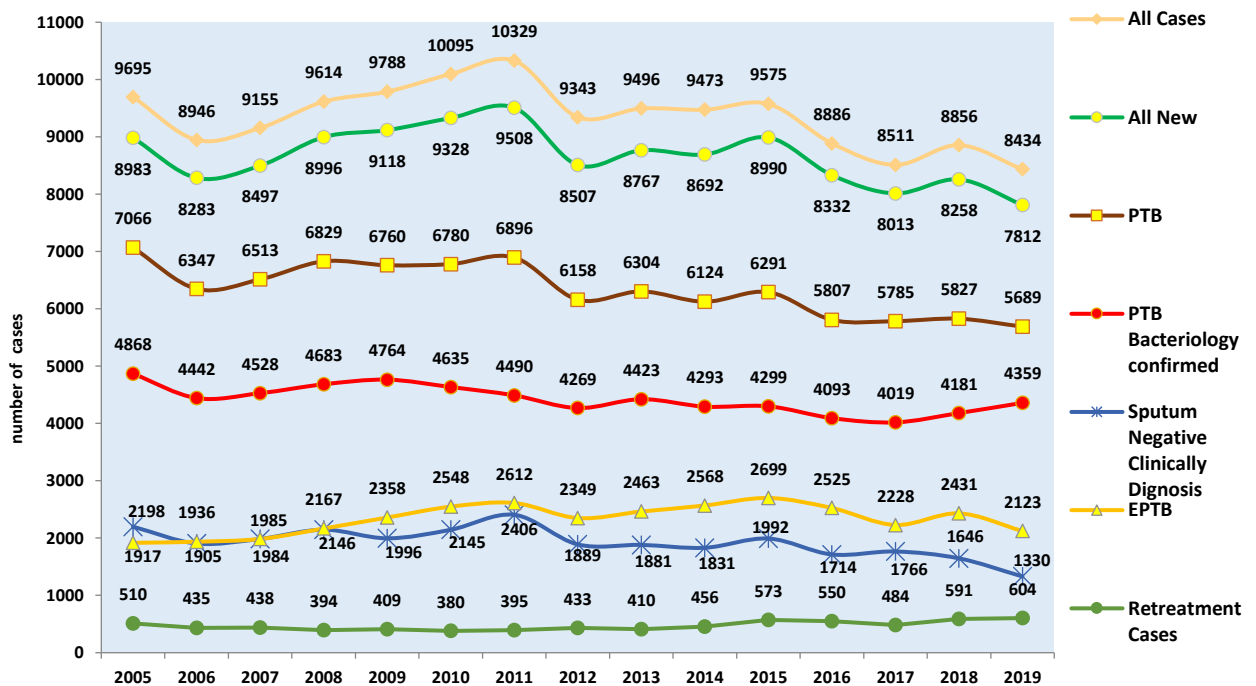


Figure 2: Case Detection of TB by Type in 2007 - 2018

Among the 7812 new TB cases, 5689 (72.8%) were pulmonary TB (PTB) cases and the rest 2123 (37.3%) were extra pulmonary TB (EPTB) cases. Of the 5689 PTB cases, 4359 (76.6%) were bacteriologically diagnosed, while 1330 (23.4%) were clinically diagnosed (Figure 3). Of the 4359 bacteriologically confirmed PTB cases, 3916 (89.8%) were sputum microscopy positive, 168 (3.8%) were sputum negative culture positive, and 181 (4.1%) were xpert MTF/RI positive cases. Out of the previously treated cases of 604, 465 (77.0%) were bacteriologically confirmed PTB, 64 (10.6%) were clinically diagnosed PTB and 75 (12.4%) were EPTB cases.

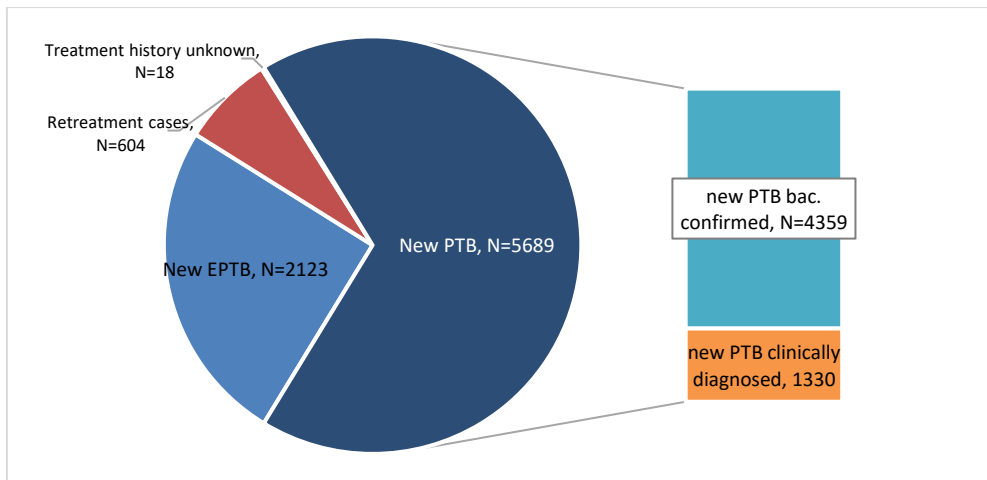


Figure 3: Case Detection of TB by Type in 2019

There was a high disparity of TB case detection among districts (Figure 4). The highest number of TB cases was reported from Colombo (n=2024; 24.0%), followed by Gampaha (n=1070; 12.7%) and Kandy (n=620; 7.3%).

Colombo district also accounted for the highest number of relapse cases of 199, which was 32.9% of total relapse cases. Colombo also reported the highest number of cases in categories of 'treatment after failures' (n=39, 35.4%) and lost to follow up cases (n=56; 53.3%) (Table 9). Lowest numbers of TB cases were reported from the Eastern province, with Mannar district reporting 22 cases (0.3%) and Mullaitivu district reporting 23 cases (0.3%).

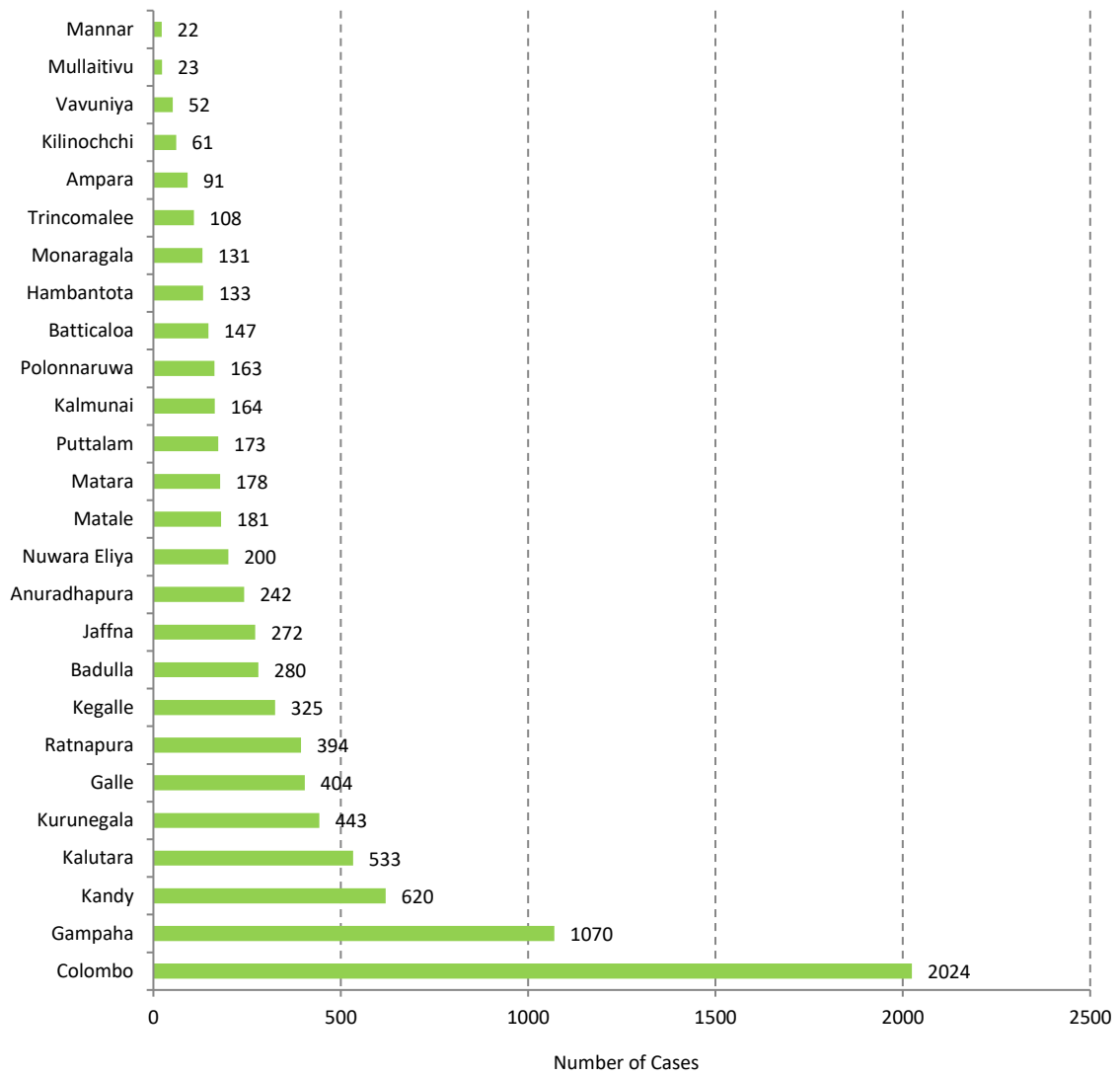


Figure 4: TB Case Detection by District of Registration in 2019

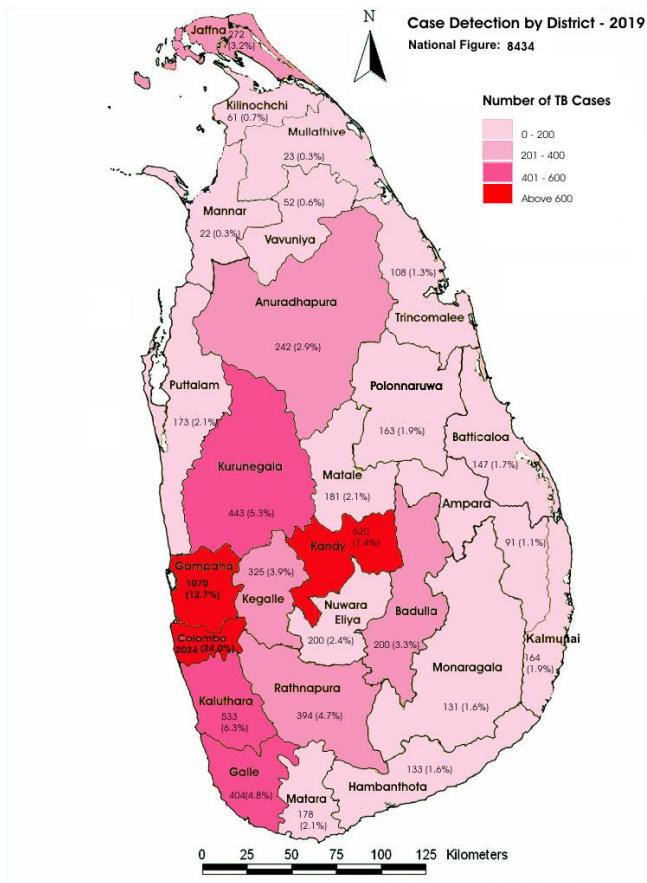


Figure 5: The Map of Sri Lanka with TB Case Detection by District - 2019

New TB Cases

The distribution of categories of new TB cases among districts varied a lot (Figure 7). The proportion of new TB cases that were bacteriologically confirmed ranged from 84.2% in Mannar district to 46.2% in Monaragala district. Likewise, the proportion of clinically diagnosed among new TB cases ranged from 32.5% in Polonnaruwa district to 0.0% in Mannar district. The highest proportion of EPTB among the new cases were reported from Monaragala district (39.5%), while the lowest proportion of 9.5% was reported from Mullaitivu district.

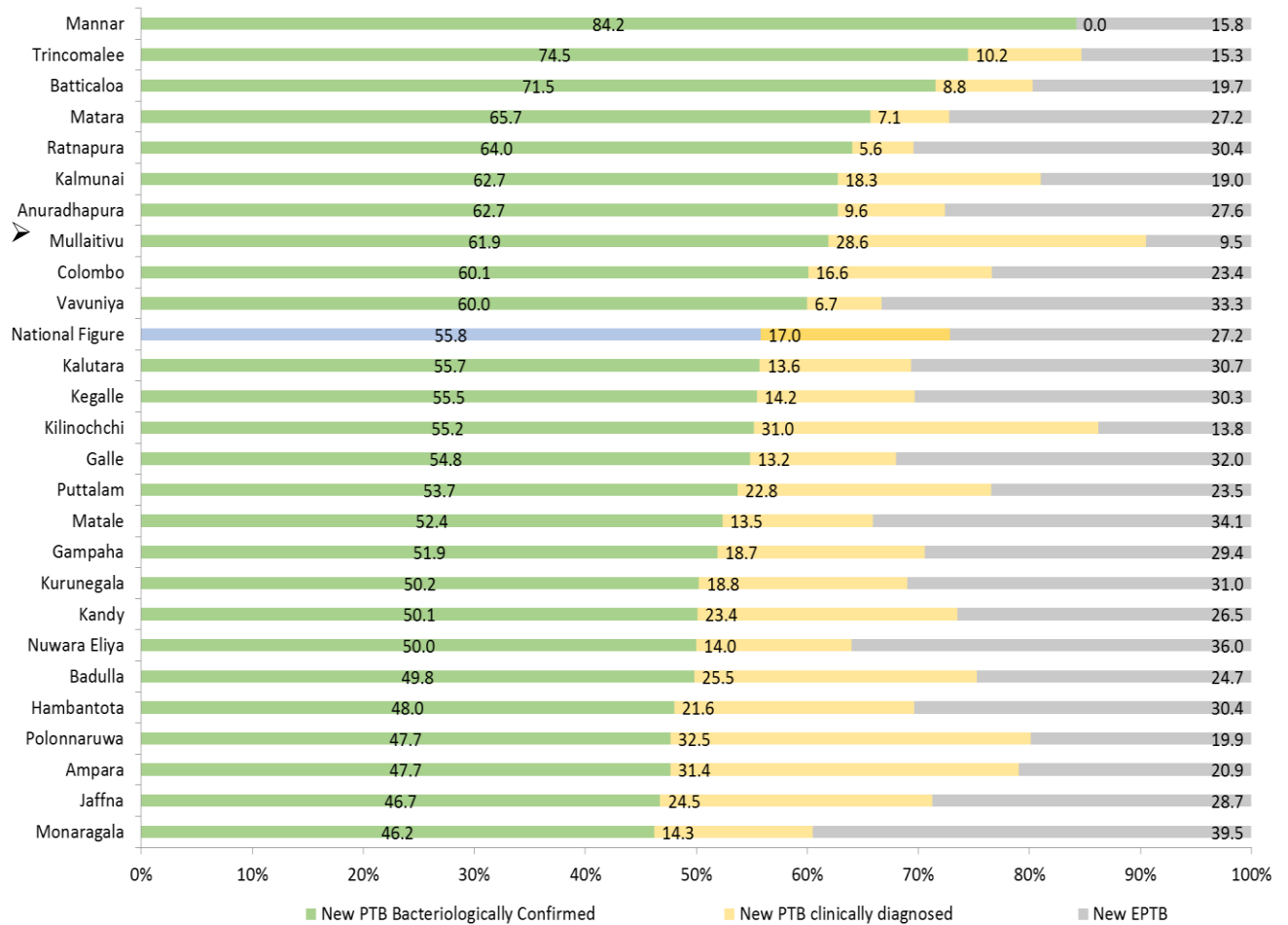


Figure 7: Percentage Distribution of New Cases of TB by Type and District in 2019

➤ **Bacteriology confirmed New Pulmonary TB cases**

The highest number of bacteriologically confirmed pulmonary TB cases 1088 (45 per 100,000 population) was reported from Colombo district. Second highest number, 517 of bacteriologically confirmed pulmonary TB cases was reported from Gampaha district and the district rate is less than half of that of Colombo district (Figure 8).

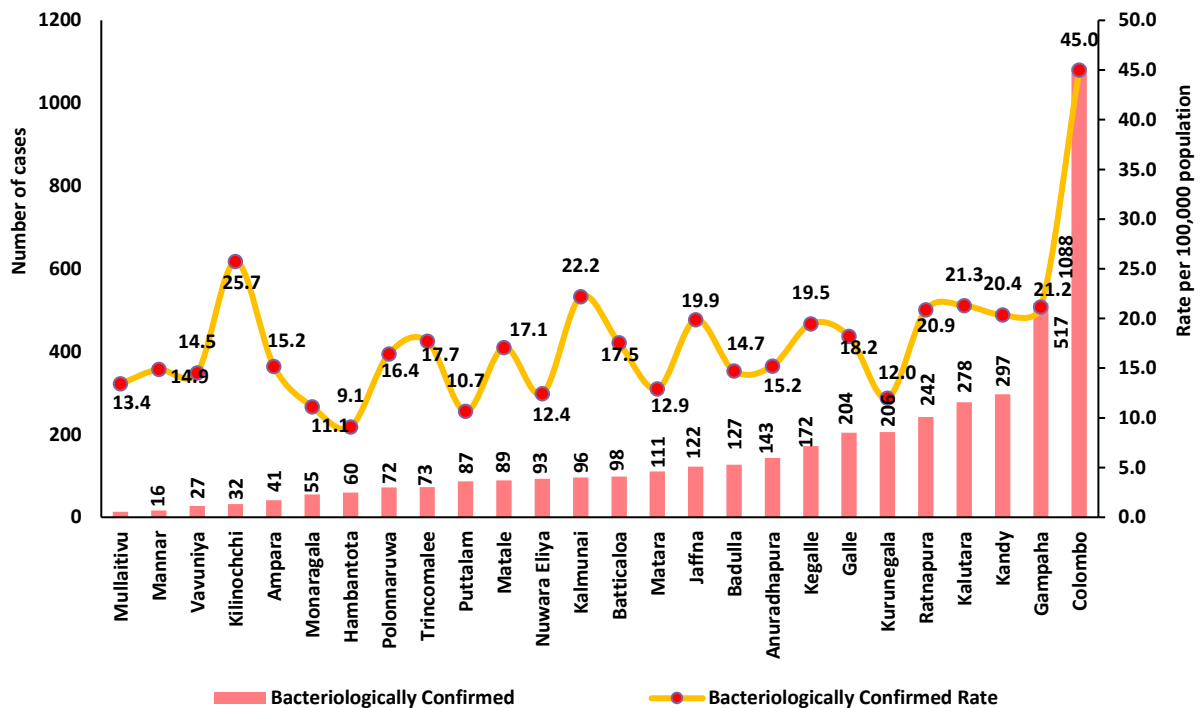


Figure 8: Distribution of Bacteriology confirmed New Pulmonary TB case detection by Districts - 2018

Clinically Diagnosed New Pulmonary TB

A total of 1330 new TB cases were clinically diagnosed in 2019. The highest number of clinically diagnosed cases was reported from Colombo district (n=300) with a rate of 12.4 per 100,000 population. However, the highest rate of clinically diagnosed patients were reported from Kilinochchi (14.5 per 100,000 population) (Figure 9).

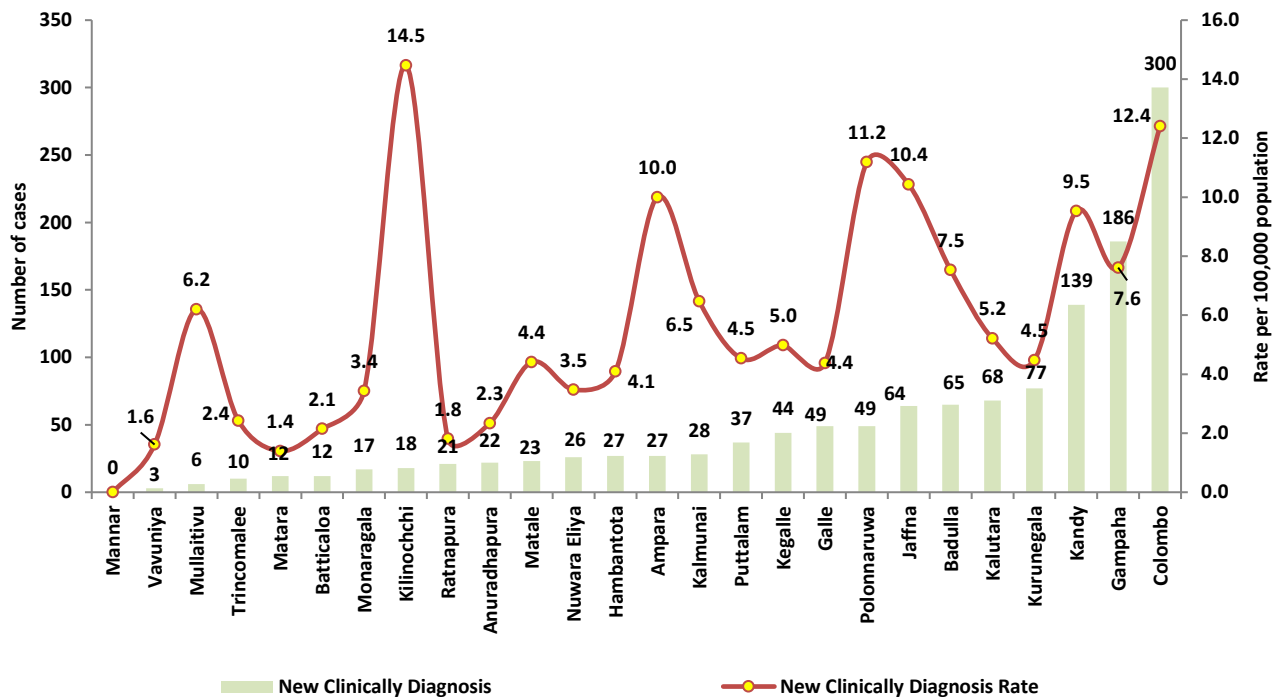


Figure 9: Distribution of Clinically Diagnosed New PTB Cases Detection by Districts in 2018

➤ Age and Sex Distribution of New TB Cases

The highest number, 1599 (20.5%) of new TB cases was in 55-64 age group. The lowest number was in 0-14 age group (n=234, 2.9 %). Out of 7812 new cases, 4286 (54.9%) were in the economically productive age group of 15-54. The number of males with TB (n=5070, 64.9%) were as twice as the number among females (n=2741, 35.0%). The highest number of new TB cases among both sexes were reported in the age group of 55-64 years. In contrast, more female TB patients were reported than males among the younger age groups of 0-14 and 15 – 24 years (figure 10).

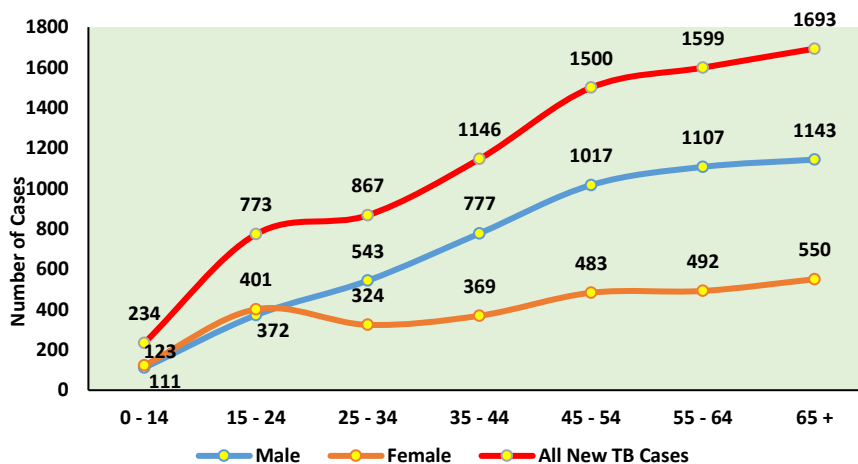


Figure 10: Distribution of All New Cases of TB by Age Groups and Sex in 2019

Extra Pulmonary TB

New EPTB Case Detection

A total of 2123 new EPTB cases were reported in 2019. Colombo District accounted for the highest number (n=423), followed by Gampaha district (n=293) and Kandy district (n=157). The highest rate (20.0 per 100,000 population) of EPTB was reported from Colombo district. The lowest numbers of 2 and 3 EPTB cases were reported from the districts of Mullaitivu and Mannar, respectively (Figure 11).

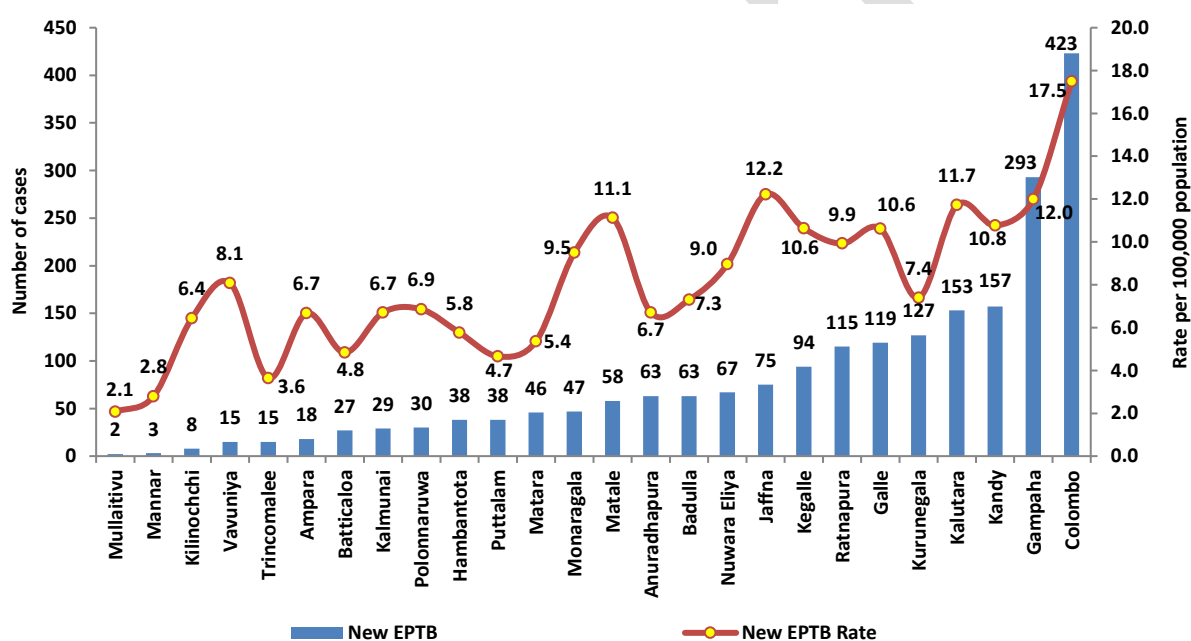


Figure 11: Distribution of New Extra Pulmonary TB Cases of New Extra Detection by Districts in 2019

Sites of EPTB Cases

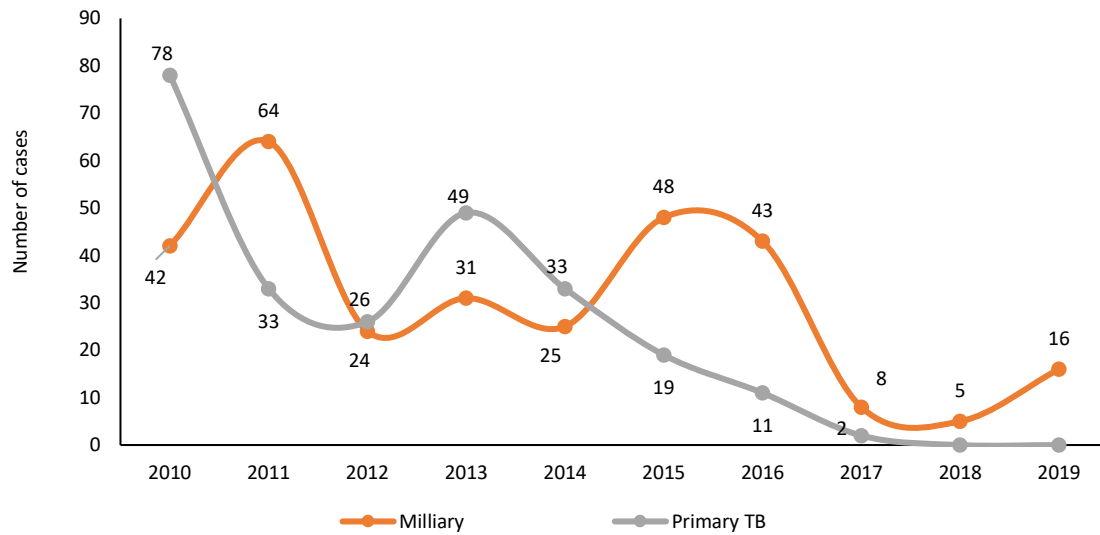
Out of all EPTB cases, TB of respiratory tract confirmed by bacteriologically and histologically (ICD code A 15), accounted for 247 cases (11.3%). TB respiratory tract, not confirmed by bacteriologically or histologically (ICD code A16) were 550 (25.2%). In addition, there were 145 (6.6%) cases of nervous system TB, 1010 (46.2%) cases of TB of other organs (Table 2).

Table 2: Distribution of All Cases of Extra Pulmonary Tuberculosis by Site in 2019

ICD-10 Code	Site	Number of Cases	Percentage
A15: Respiratory tuberculosis, bacteriologically and histologically confirmed		247	11.3
A15.4	Tuberculosis of intrathoracic lymph nodes	87	4.0
A15.6	Tuberculous pleurisy	157	7.2
A15.8	Other respiratory tuberculosis (mediastinal, nasopharyngeal, nose, sinus [any nasal])	3	0.1
A15.9	Respiratory tuberculosis unspecified	0	0.0
A16: Respiratory tuberculosis, not confirmed bacteriologically or histologically		550	25.2
A16.3	Tuberculosis of intrathoracic lymph nodes	117	5.4
A16.4	Tuberculosis of larynx, trachea and bronchus	53	2.4
A16.5	Tuberculous pleurisy	373	17.1
A16.8	Other respiratory tuberculosis (mediastinal, nasopharyngeal, nose, sinus [any nasal])	3	0.1
A16.9	Respiratory tuberculosis unspecified	4	0.2
A17: Tuberculosis of nervous system		145	6.6
A17.0	Tuberculous meningitis	112	5.1
A17.1	Meningeal tuberculoma	5	0.2
A17.8	Other tuberculosis of nervous system	12	0.5
A17.9	Tuberculosis of nervous system, unspecified	16	0.7
A18: Tuberculosis of other organs		1010	46.2
Tuberculosis of bones and joints		208	9.5
A18.0	Spinal TB (Includes Vertebral Column - M49.0*)	52	2.4
	Tuberculosis of other bones and joints (Excluding spinal TB)	38	1.7
	Tuberculosis of genitourinary system	438	20.1
A18.1	Tuberculosis of genitourinary system	438	20.1
A18.2	Tuberculous peripheral lymphadenopathy (TB adenitis)	110	5.0
A18.3	Tuberculosis of intestines, peritoneum and mesenteric glands	58	2.7
A18.4	Tuberculosis of skin and subcutaneous tissue	102	4.7
A18.5	Tuberculosis of eye	1	0.0
A18.6	Tuberculosis of ear	3	0.1
A18.7	Tuberculosis of adrenal glands	0	0.0
A18.8 Tuberculosis of other specified organs		232	10.6
18.8	Pericardium	27	1.2
	Disaminated	40	1.8
	Site not specified	59	2.7
	Brest	9	0.4
	Other	97	4.4
Total		2184	100.0

Milliary TB

Figure 12 depicts the distribution of Primary and Milliary TB cases over the years, from 2010 – 2019.



➤ **Figure 12: Distribution of Milliary and Primary TB cases from 2010-2019**

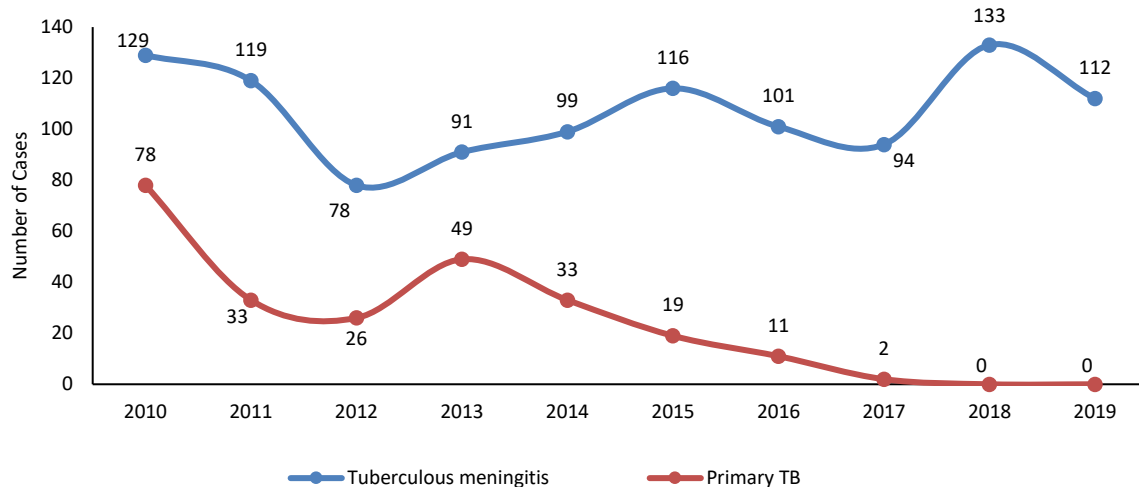


Figure 12: Distribution of Meningitis and Primary TB cases from 2010-2019

Previously treated TB Cases

In 2019, 604 (7.7%) re-treatment cases were reported. This consisted of 374 relapses (61.9%), 110 (18.2%) treatment after failure, 105 (17.4%) treatment after lost to follow up, and 15 (2.5%) other previously treated cases (Table 9).

The highest numbers of re-treatment cases were reported from Colombo district (n=199) and Gampaha district (n=73). The total number of retreatment cases is more than that reported in the previous year of 2018. 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 13).

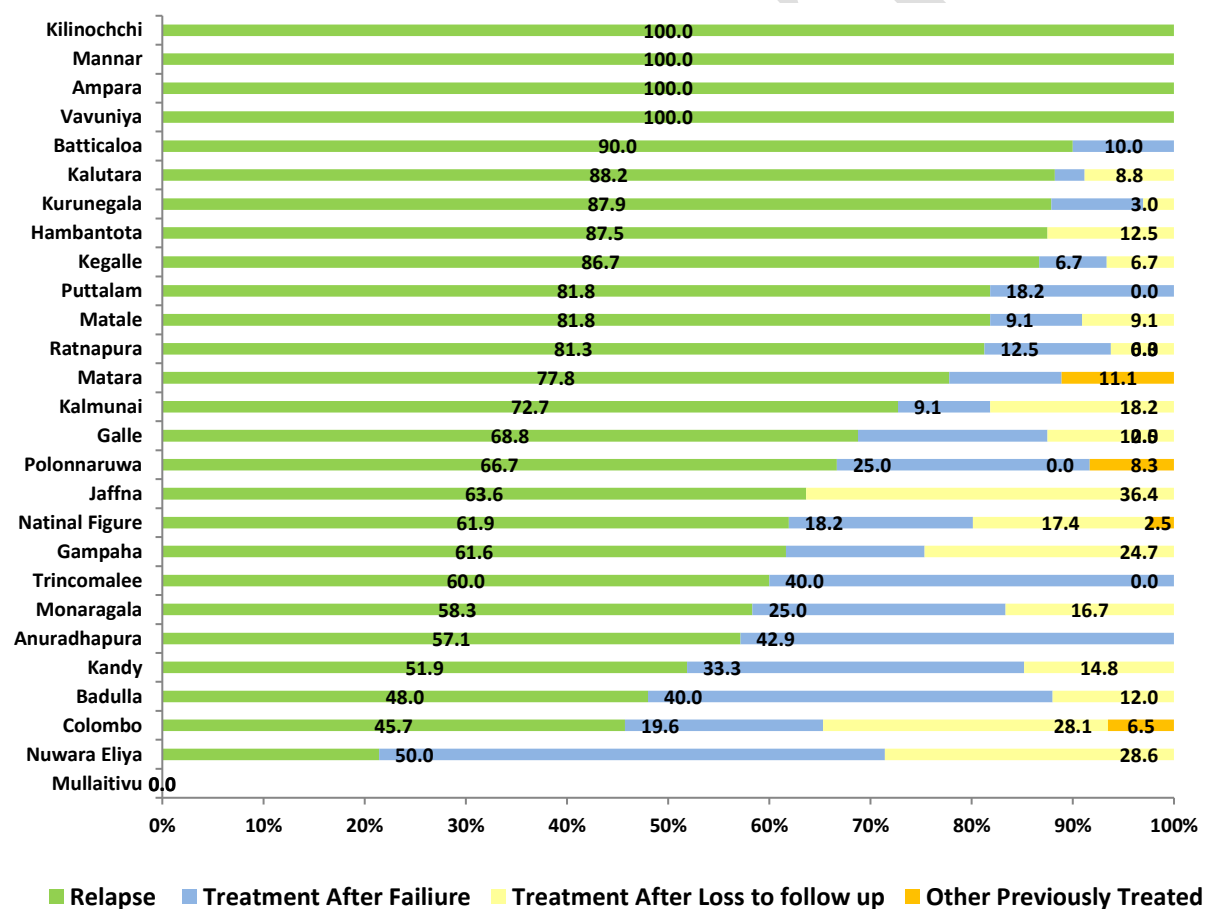


Figure 13: Proportion of Re-Treatment Categories by District in 2019

Multi Drug Resistant Tuberculosis (MDR-TB)

The incidence of MDR-TB is low in Sri Lanka when compared to other countries in the SEARO region. Twenty-one cases of MDR-TB were reported in year 2019 and all 21 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.

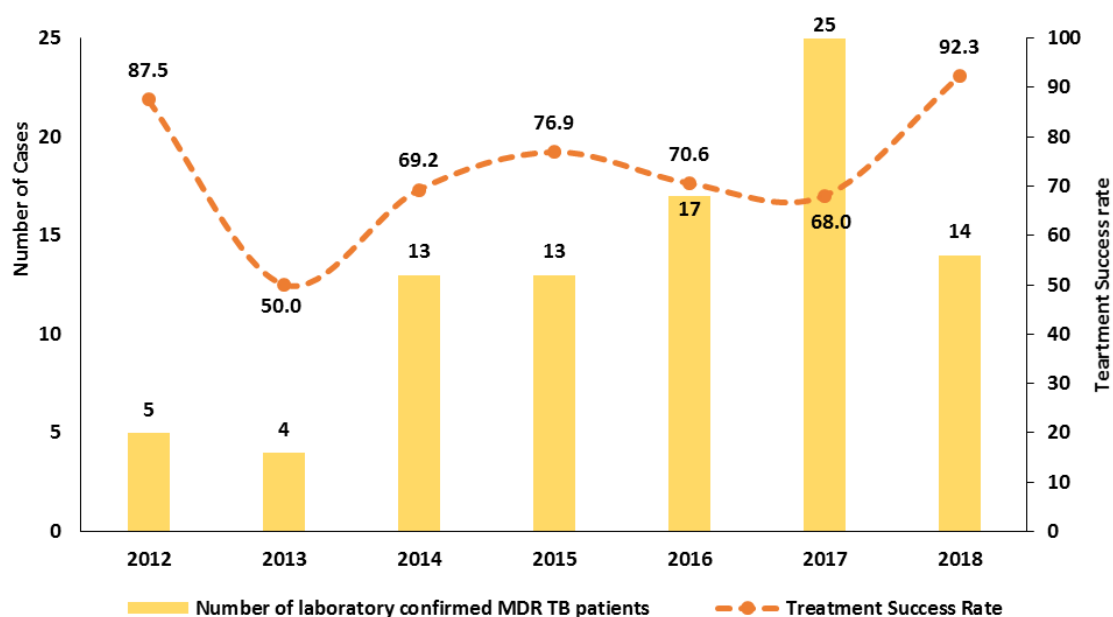
Table 3 describes the number of confirmed patients reported during 2010-2019 period and the proportion of patients enrolled in treatment.

Table 3: MDR patients reported and their treatment enrollment 2010 - 2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of laboratories that confirmed MDRTB patients	8	12	5	4	13	13	17	25	14	21
Number enrolled in treatment in the same year	4	5	4	4	11	13	17	24	13	21
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%	21 100%

Outcome of MDR-TB for previous years

Year	Total Registered	Treatment Started	Cured	Cure Rate	Deaths	Death Rate	Failure / Rx with held	Faliure Rate	Lost to Follow up	Lost to Follow up Rate	Not Started
2013	4	4	2	50.0	1	25.0	1	25.0	0	0.0	0
2014	13	11	9	69.2	2	15.4	0	0.0	2	15.4	0
2015	13	13	10	76.9	2	15.4	0	0.0	1	7.7	0
2016	17	17	11	70.6	4	23.5	2	11.8	0	0.0	0
2017	25	25	17	68.0	6	24.0	0	0.0	1	4.0	1
2018	13	13	12	92.3	0	0.0	1	7.7	0	0.0	0



As illustrated in Figure 14 the highest numbers of MDR-TB cases are reported from the districts of Colombo, Gampaha, Ratnapura, Kalutara and Kegalle in 2019.

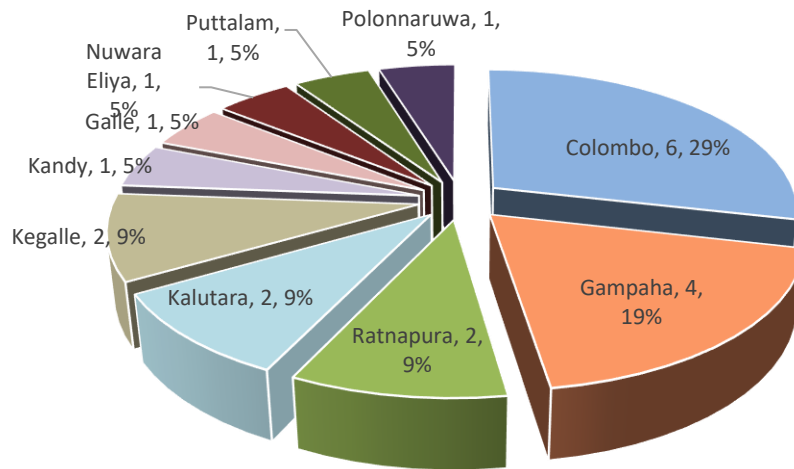


Figure 14: District distribution of Multi Drug Resistant Tuberculosis by District in 2019

TB/HIV Co-Infection

HIV testing of all TB patients was made mandatory in 2013. In 2019, 7690 (91.2%) TB patients were screened for HIV (figure 15). 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.

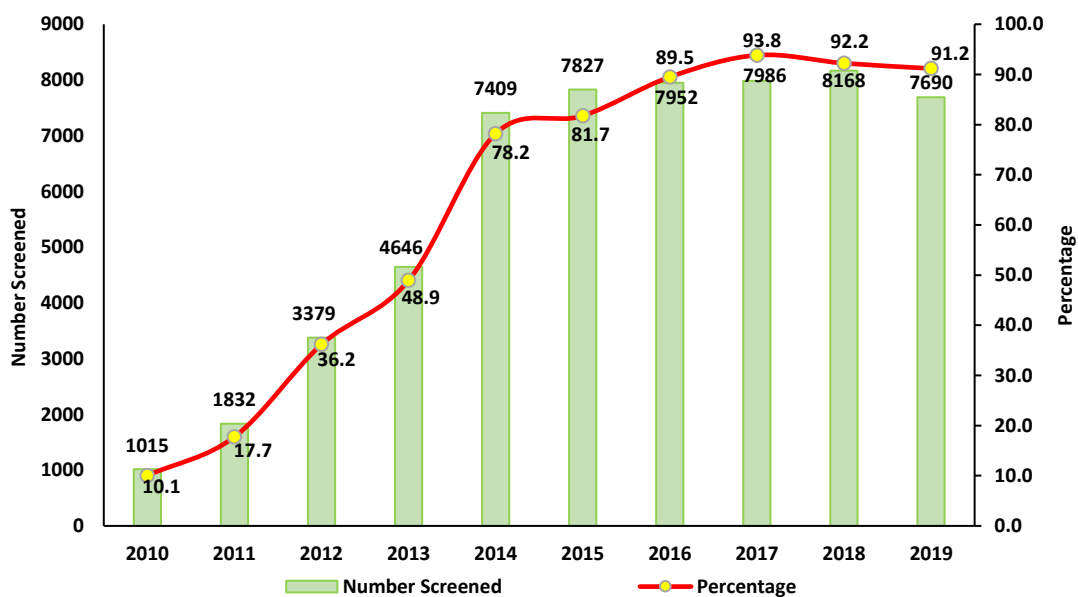


Figure 15: Percentages and Numbers of TB/HIV screening 2010-2019

Outcome for HIV/TB from WHO report

TB Among Health Care Workers

In 2019, 75 health care workers had been diagnosed with TB. The number for 2018 was 76. Majority of them (16, 21.3%) were reported from Kandy District, followed by Colombo (14, 18.6%) District (figure 16).

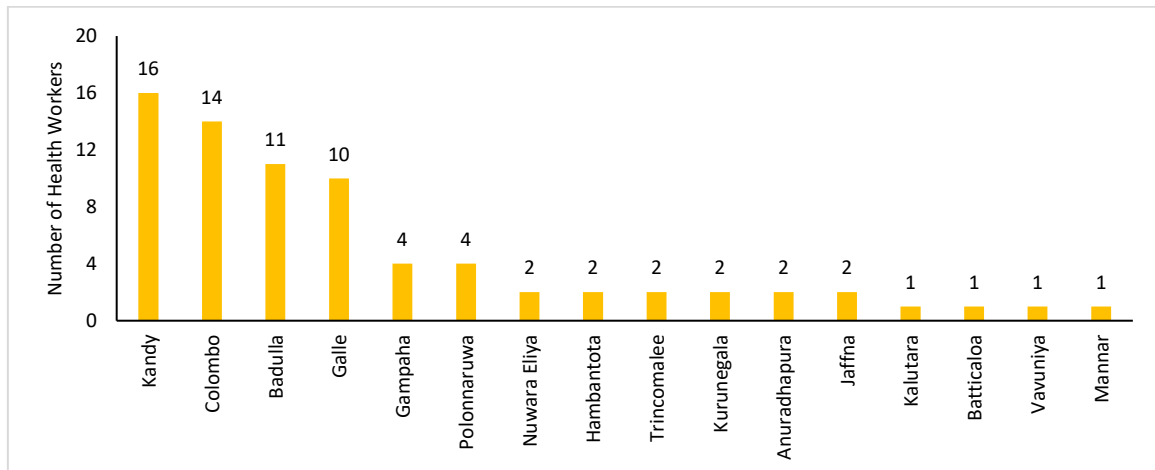


Figure 16: Percentages and Numbers of TB/HIV screening 2010-2019

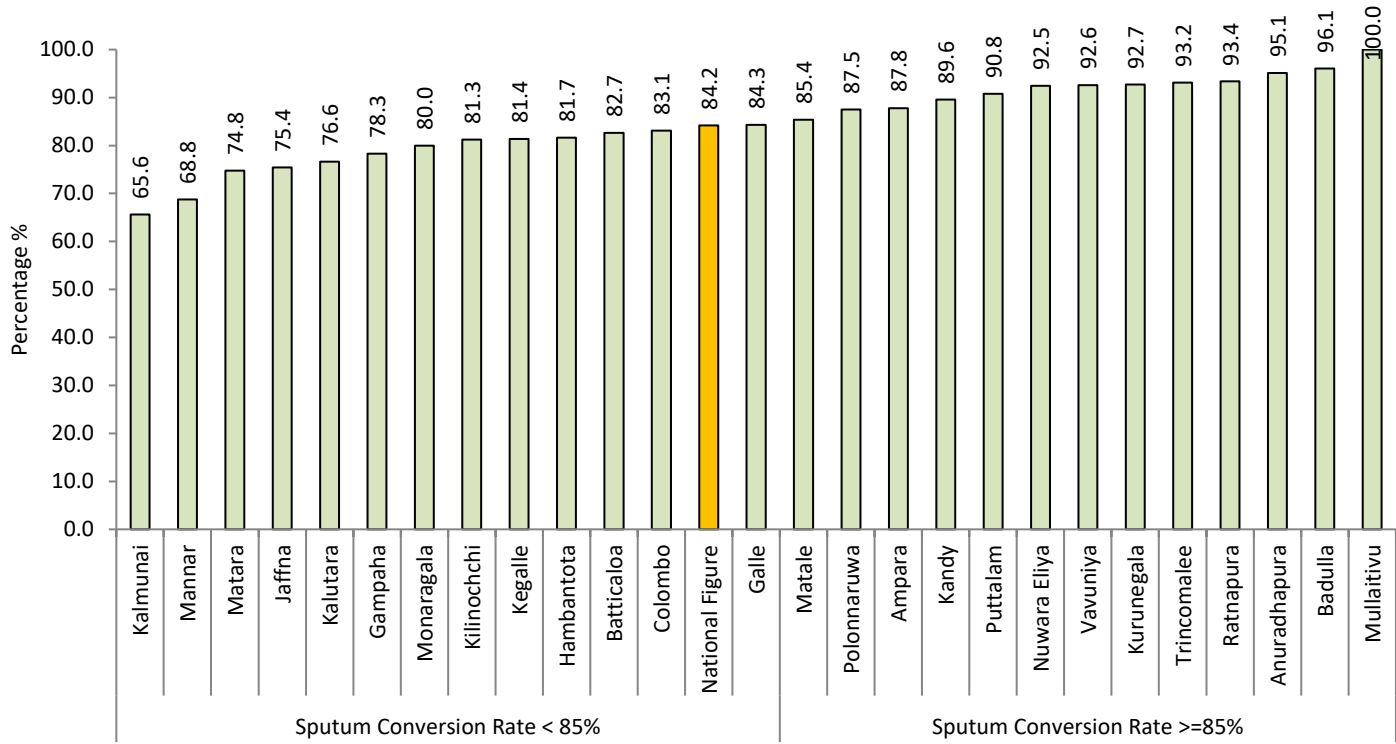
TB Among Foreign Nationals

In 2019, 12 foreign nationals with TB were reported to NPTCCD from Colombo (8), Gampaha (1), Galle (1), Batticaloa (1) and Anuradhapura (1) districts.

Outcomes get from districts

Conversion of sputum positives

At the end of intensive phase for new (2/3 months), previously treated (3/4 months)



DR

Treatment Outcome

As it takes more than one year to declare outcome status for some EPTB cases, outcome data are typically presented for two years previous to the current year. In this report, outcome data are presented for the cohort of patients registered in 2018.

Treatment Outcome of All Forms TB Cases (pulmonary & extra pulmonary TB)

Total number of cases registered for treatment in 2018 was 8613. Out of this, outcome of 394 (4.6%) patients was not evaluated. Outcome of rest of the patients is illustrated in figure 17.

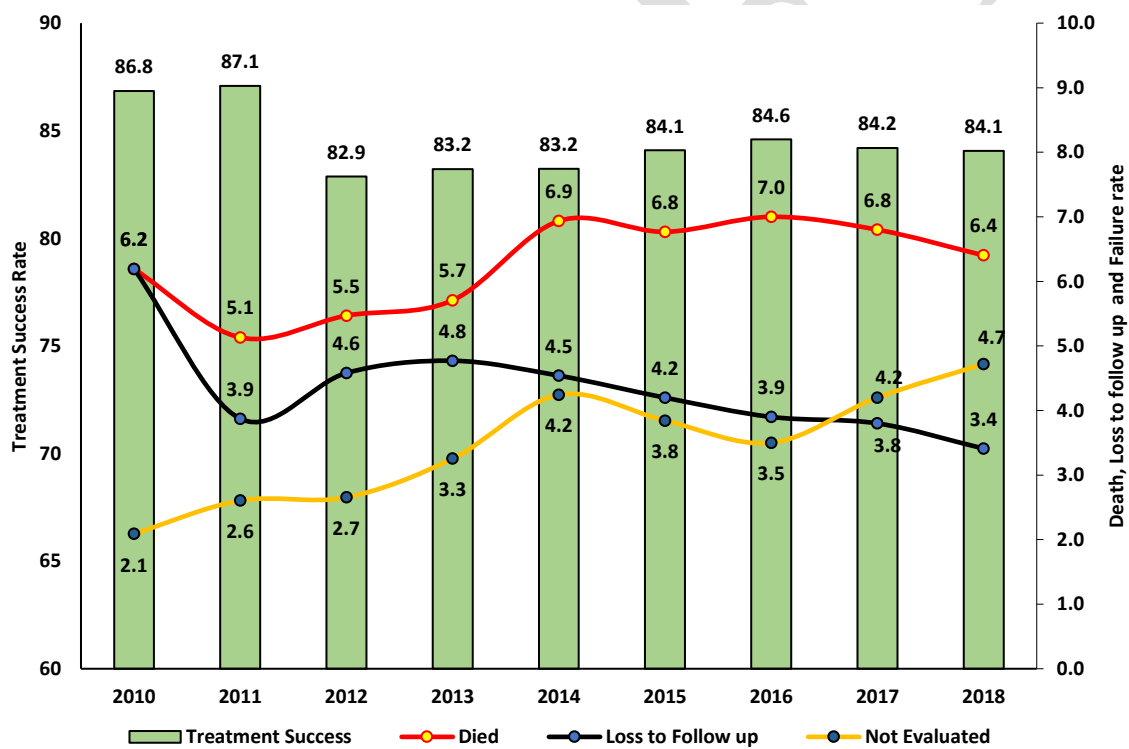


Figure 17: Treatment Success Rate of All Forms of TB According by Districts in 2018

➤ Treatment Success Rate

The cure rate among registered cases was 41.4% (3563 cases) and a further 43.2% (3721 cases) completed treatment, accounting for an overall treatment success rate of 84.1% (7284 cases). This national figure is below the global target of 85% for treatment success rate. 2018 rate is a 0.1% drop from the rate reported for the year 2017, which was 84.2%.

There is a greater variation in treatment success rate among the districts, as depicted in Figure 15. Anuradhapura district reports the highest treatment success rate of 94.4%, while the lowest of 78.0% was reported from Kalutara (figure 18).

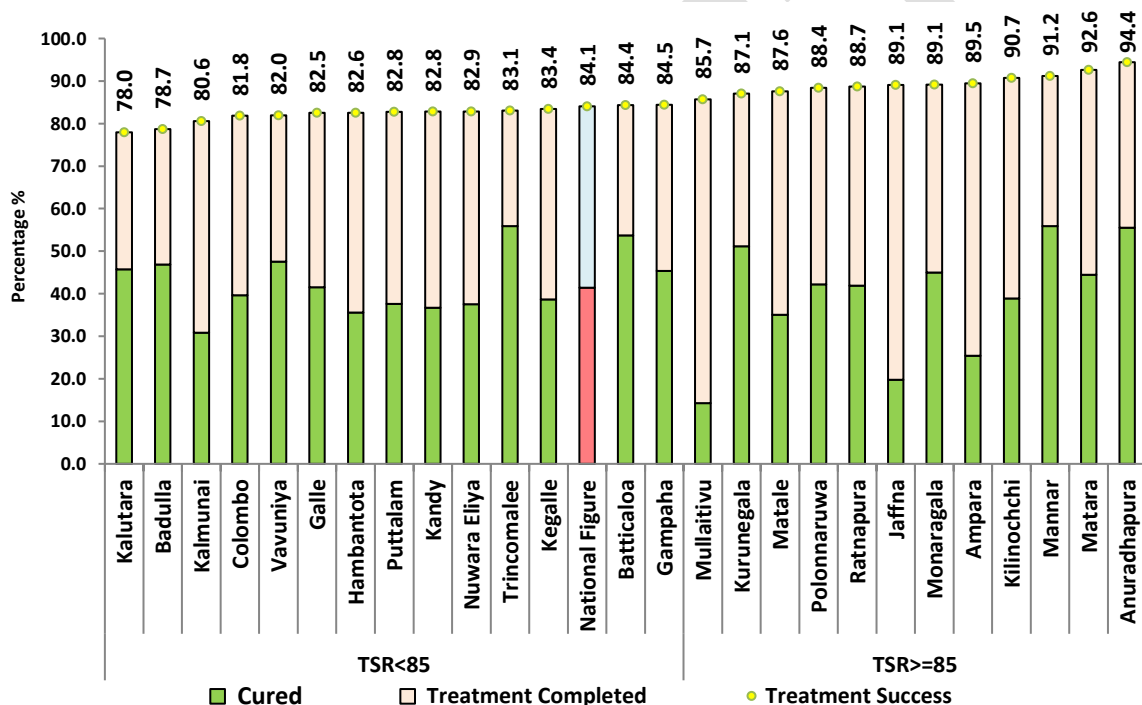


Figure 18: Treatment Success Rate of All Forms of TB by Districts in 2018

Treatment Failure Rate

The treatment failure rate was 1.3% (n=111) in 2018. There is a marginal increase in treatment failure rate observed compared to 2017, which was 1.0%. Vavuniya (4.9%, n=3) and Badulla (4.7%, n=12) districts accounted for the highest failure rates. Colombo district reported 40 patients with treatment failure among their 2088 total cases, giving a treatment failure rate of 1.9%. There were no patients with treatment failure in the districts of Matale (total cases=177), Hambanthota (total cases=132), Ampara (total cases=114), Ratnapura (total cases=434), Mannar (total cases = 34), Mullaitivu (total cases=28), and Killinochchi (total cases=54) in the year 2018 (Table 17).

➤ Lost to Follow Up Rate

In 2018, the Lost to Follow Up rate was 3.4%, marginally less than 3.9% figure for the previous year. The highest Lost to Follow Up rate, 12.2%, was reported in Kalmunai, which was the highest calculated Lost to Follow Up rate within the last five years. The next highest rate of 6.0% was reported from Colombo district, and Gampaha reported a rate of 5%. Matara, Vavuniya, Ampara, Anuradhapura, Polonnaruwa, Killinochchi and Mullaitivu reported zero cases of Lost to Follow Up (Table 18).

➤ Death Rate

Altogether, 567 deaths were reported among the patients with TB registered during the year 2018. However, the contribution of TB to the death was ruled out in 218 of reported 567 deaths. Among the rest 349, highest numbers were reported from Colombo (n=97), Gampaha (n=48) and Kandy (n=39) districts. Leaving aside the deaths confirmed as not due to TB, the highest rates of 'all other deaths' were reported from the districts of Hambanthota (7.6%), Kegalle (6.9%), Batticaloa (6.8%) and Kandy (6.4%) (Table x).

Add a table on outcomes

	New TB	Previously treated TB
Rx success rate	84.9	72.4
Failure rate	1.3	2.7
Death rate	6.4	7.1
Lost to follow up	3.1	7.6
Not evaluated	4.3	10.2

Treatment Outcome of PTB Cases

This section focuses on the treatment outcome rates among pulmonary TB (PTB) patients registered in 2018. In 2018, 5827 new PTB cases were registered for treatment. These patients' outcomes fell into following categories.

- **Cured (n= 3373,57.9%)**
- **Treatment completed (n= 1505, 25.8%)**
- **Lost to follow up (n=207, 3.6%)**
- **Treatment failure (n=101, 1.7%)**
- **Died and confirmed as not due to TB (n=142, 2.5%)**
- **Died and not confirmed as not due to TB (n=255, 4.4%)**
- **Still on treatment/ diagnosis changed/ other (n= 238, 4.1%)**

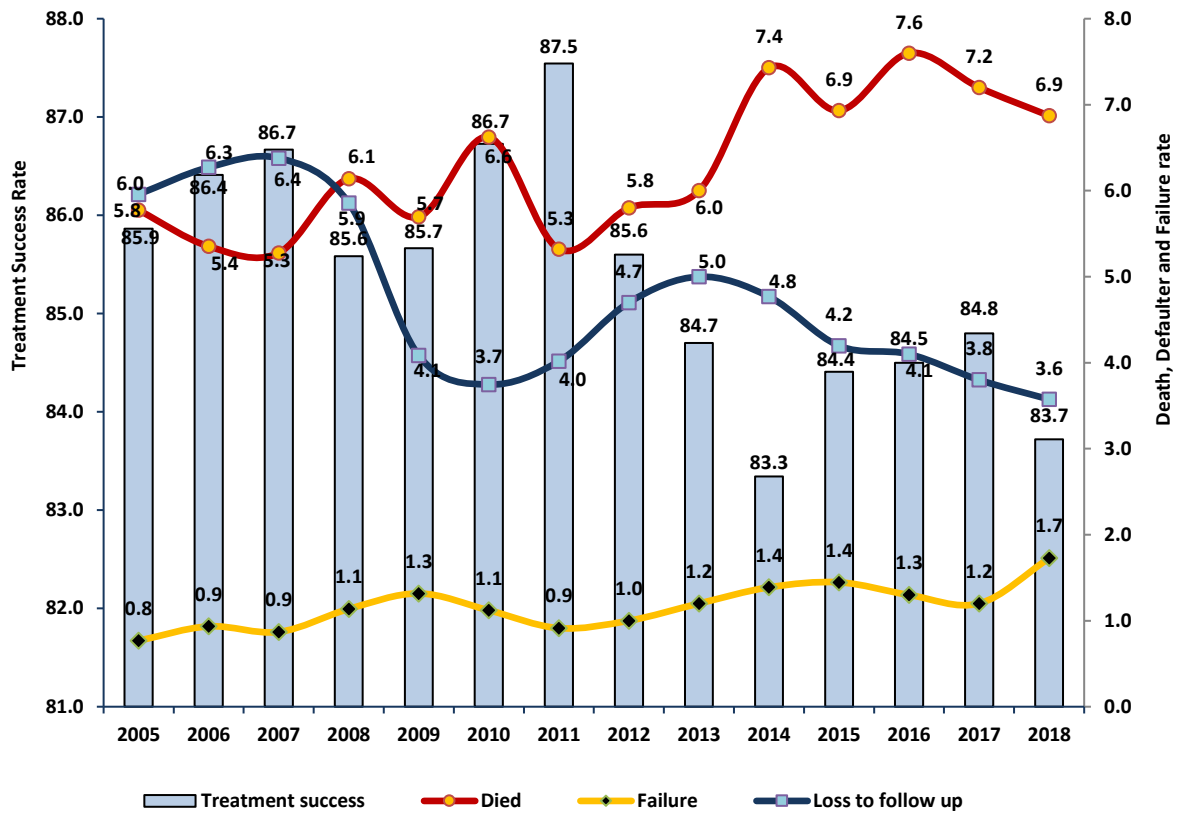


Figure 19: Treatment Outcome of Pulmonary TB Cases from 2005-2018

➤
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➤ **Treatment Success Rate**

Altogether, 3373 patients were cured and another 1505 completed their treatment within the due period. This gives an overall treatment success rate of 83.7%. This is a reduction from the figure of the previous year, 84.8% (figure 16). Major contribution to the cure rates is from the districts of Anuradhapura (80.2%), Mannar (78.9%), Batticaloa 75.0%), Matara (71.2%) and Trincomalee (71.1%).

➤ **Treatment Failure Rate**

Of all registered PTB patients in 2018, treatment has failed among 101 patients, giving a failure rate of 1.7%, which is an increase from the previous year figure of 1.2%. highest failure rate of 12.8% was reported from Badulla district. None of the patients registered in Matale, Hambanthota, Ampara, Kalmunai, Puttlam, Ratnapura, Mannar, Mullaitivu, and Kilinochchi districts were reported treatment failures (Table x).

➤ **Lost to Follow Up Rate**

The Lost to Follow Up rate among PTB patients was 3.6 % (n=207) in 2018. The highest Lost to Follow Up case rate was reported from Kalmunai district (10.9%, n-14), and the highest caseload of Lost to Follow Up was reported from Colombo district (n=89, 6.2%). Galle, Hambanthota, and Mannar also reported rates above the global target for Lost to Follow Up of 5.0% (Table 20).

➤ **Death Rate**

From those who were registered as PTB patients in 2018, a total of 403 (6.9%) patients had died. Among those 403, TB was excluded from the cause of death in 148 patients. The rest 255 patients gave a death rate of 4.4% (Table X).

Treatment Outcome of New Bacteriology confirmed PTB cases

Treatment outcomes were separately analyzed for the reported bacteriologically confirmed PTB cases. This number was 4265 for the year 2018.

➤ Treatment Success Rate

Of the 4265 cases, 3373 were cured after treatment, and further 208 completed the course of treatment within the due period. Altogether, this gives a treatment success rate of 3581 (84.0%). This is a reduction from the previous year figure of 85.6%. District variations in the treatment success rate is illustrated in the figure 20.

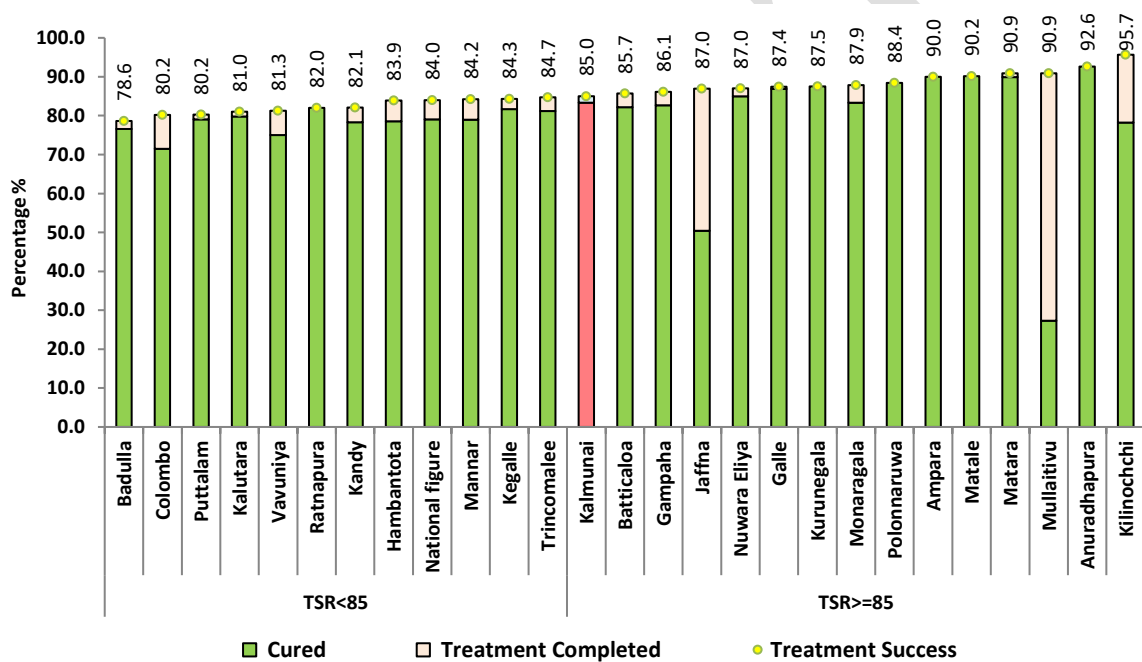


Figure 20: Treatment Success Rates of New Bacteriologically confirmed PTB Cases by Districts in 2018

-
-

Treatment failure was reported among 95 of these patients (2.2%), while Lost to Follow Up was seen among 159 (3.7%) patients. Another 142 patients fell into 'still on treatment/ changed diagnosis' category,

Treatment Outcome of previously treated Patients

In addition to the newly diagnosed TB patients, there were 604 patients who were diagnosed with TB previously but the condition relapsed or the due treatment course could not be completed within the due time period. The highest number of 199 was reported from Colombo district, followed by Gampaha (n=73) and Kalutara (n=34) districts (Table x).

Of these 604, 355 patients were reported as relapses. Of these 355, 190 (53.5%) were cured following re-treatment and another 83 (23.4%) completed their treatment course, bringing the treatment success rate among the relapse category of patients to 76.9%. altogether, 15 (3.1%) were reported as Lost to Follow Up, and another 36 (10.1%) fell into the 'outcome not evaluated' category (table x).

Treatment Outcome of Sputum Negative and Culture Positive Cases

In 2018, there were 181 new PTB cases whose sputum smear was negative but culture was positive. The cure rate among these cases registered for treatment was 134 (70.6%) and a further 21 (11.6%) completed treatment within due period. Thus, the overall treatment success rate among sputum negative, culture positive category was 82.2% (table x).

Figures 21-24 illustrates the treatment outcomes of different categories of TB patients in the year 2018.

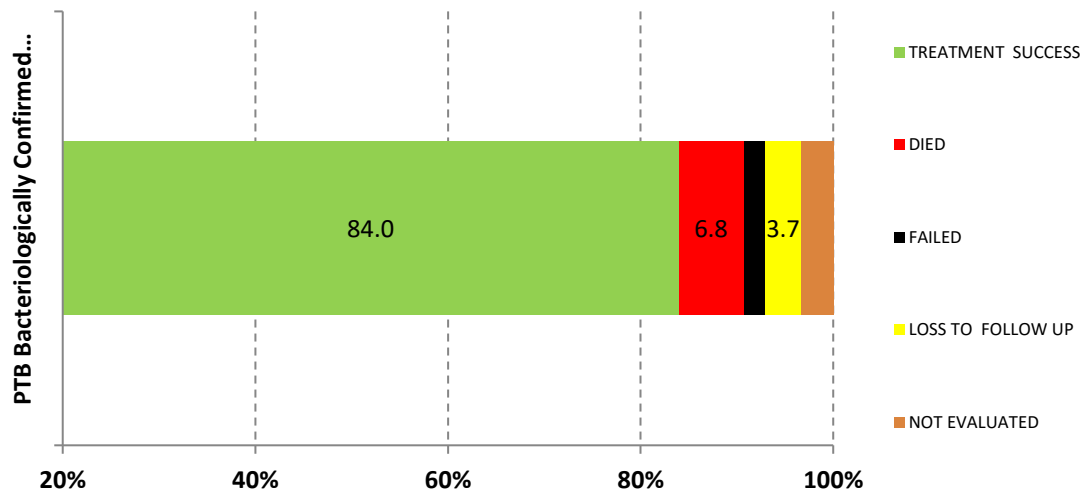


Figure 21: Treatment Outcome Summary of Bacteriologically Diagnosed TB Patients in 2018

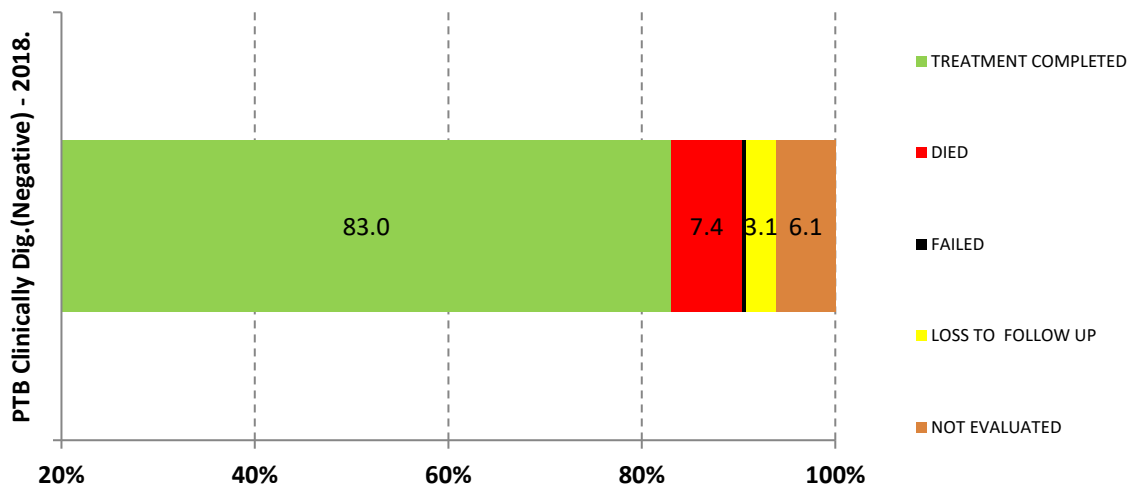


Figure 22: Treatment Outcome Summary of Clinically Diagnosed TB Patients in 2018

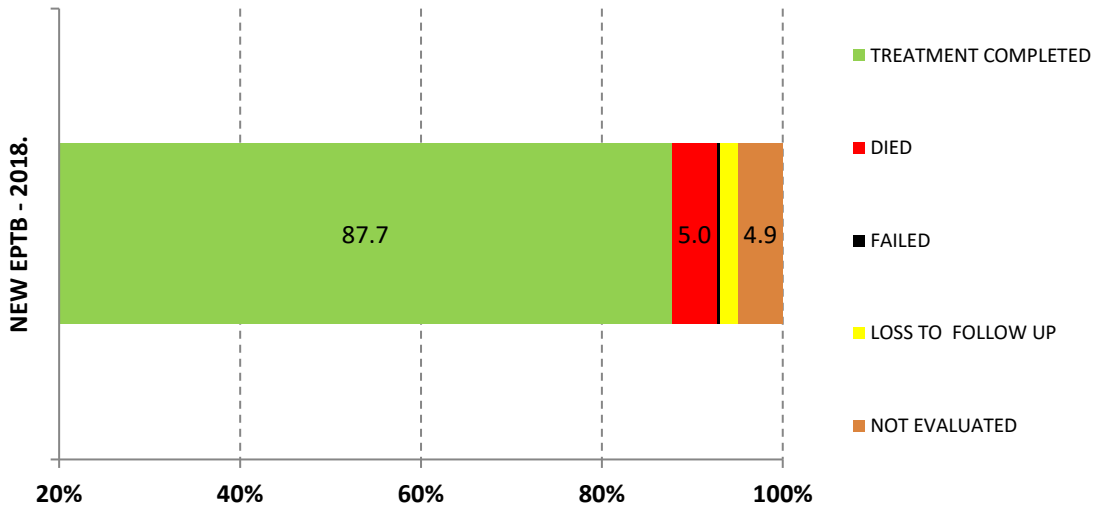


Figure 23: Treatment Outcome Summary of Extra Pulmonary TB Patients in 2018

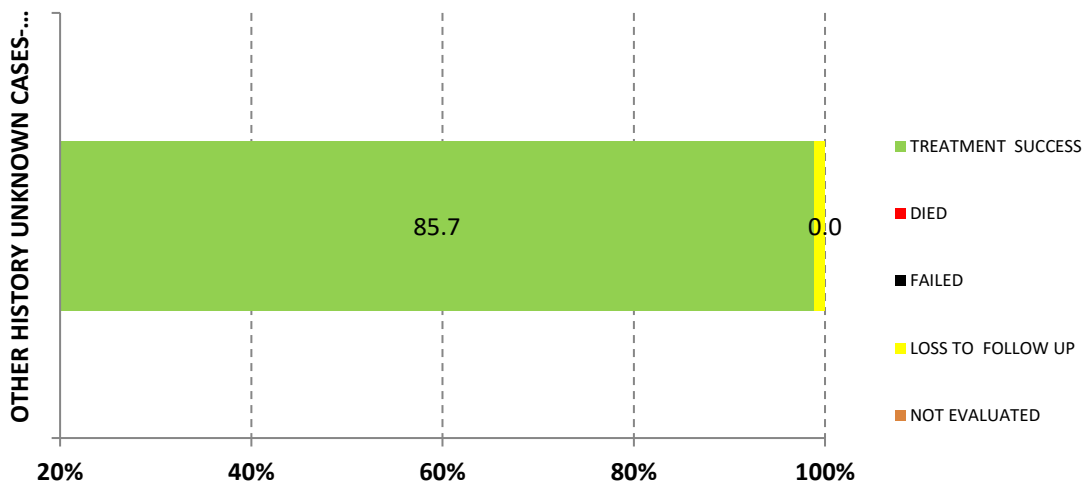


Figure 24: Treatment Outcome Summary of Treatment History Unknown TB Patients in 2018

DOTS Coverage

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

Year	District Covered	Cumulative DOTS Population Coverage
1997	Galle	5.40%
1998	Kandy	12.90%
1999	Colombo	32.80%
	Matara	
	Anuradhapura	
2000	Kalutara	55.40%
	Ratnapura	
	Kurunegala	
	Puttalam	
2001	Gampaha	73.10%
	Hambantota	
	Kegalle	
	Polonnaruwa	
2002	–	73.10%
2003	–	74.20%
2004	Matale	87.30%
	Nuwara Eliya	
	Badulla	
	Monaragala	
	Vavuniya	
2005	Ampara	97.50%
	Kalmunai	
	Batticaloa	
	Trincomalee	
	Jaffna	
2006	–	97.60%
2007	–	
2008	–	
2009	–	
2010	Mannar	100.00%
	Mullaitivu	
	Kilinochchi	

PART II
ACTIVITY REPORT

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Important activities were carried out in 2019 in view of improving the quality of services provided by the NPTCCD:

- Sri Lanka has committed to achieve the WHO 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 midterm review conducted in July 2017, NPTCCD introduced a pilot district programme that include rigorous actions to overcome the challenges identified in eliminating TB. The pilot programme was initiated by recruiting Kalutara, Kegalle, and Gampaha districts in 2018. It was expanded in 2019 to include Kurunegala, Rathnapura Kandy Badulla and Monaragala. In 2020, Matara, Matale, Puttlum, Nuwaraeliya, Polonnaruwa, Ampara, Vavuniya, and Jaffna has been introduced as pilot districts. This will be expanded and all 25 districts will be covered in 2021
-
- Decentralization of diagnostic services beyond DCC was done by establishing microscopic centers
-
- Introducing presumptive TB register at the OPD setting to enhance case detection.
-
- In addition to the routine screening activities, a mobile screening team involved in the screening activities. NPTCCD provided mobile x-ray facility for community screening and awareness programmes. Nine programmes completed successfully.
-
- Midterm review also revealed that prison inmates were a key high risk group in Sri Lanka. Hence mass screening programme conducted for all prison inmates, 48 programmes conducted island-wide.
-
- Conducted a workshop to review infection control policy, guideline, and training materials.
-
- Latent TB guideline was prepared in order to roll out recommendations of WHO latent TB
-

- NPTCCD procured Line Probe Assay machine and Liquid culture (BACTEC MGIT) machine in order to increase the diagnostic capacity and enhance the TB case detection rate.
-
- NPTCCD received national and international technical assistance to review the current TB situation and the progress of TB control activities. Recommendations provided are in use for further strengthening of the TB control activities
- Commemoration of World TB day was held on 24th march 2019 in Colombo.
- In order to overcome the drawbacks incorporated in the paper-based information management system, NPTCCD launched an electronic information management system (e-PIMS). Training programmes carried out for DTCOs in optimizing aggregated and case based electronic recording and reporting system, and another training programme conducted on lab module at NTRL
- The key staff of NPTCCD attended several international meetings and conferences. In addition, consultant community physician, medical officers attached to NPTCCD and other staff including regional director of health services participated in international training programmes and workshops
- NPTCCD coordinated SAARC Regional Training of Trainers on “Diagnosis, Management and Prevention of paediatric TB” with the participation of foreign and local delegates in April 2019.
- SAARC Regional meeting of Managers of National TB and HIV/AIDS Control Programmes held in June 2019.
- two research studies were carried out;
- 1. Proportion of TB patients attending diabetic clinic at NHSL.
 - 2. Care pathway & care delay of TB patients attending District Chest Clinics in Sri Lanka.
-
-
- Regular supervisory visits were conducted from the central level to monitor the progress of the TB control activities and to identify the issues and constraints for the provision of diagnostic, curative and preventive care services

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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. Screening of foreigners who are coming for short term stay in Sri Lanka
4. Strengthening early detection of TB cases and further improvement in treatment sustainability.
 -
5. Low detection of pediatric TB cases.
 -
6. Maintaince of low incidence of Muti-drug resistant TB cases.
 -
7. Increasing case finding.
 -
8. Reduction of OPD referral's.
 -
9. Achieving coverage of TB services in hard to reach populations
10. Overcoming the TB-related stigma.
 -
11. Lack of funds to do a continuous mass media programme to increase awareness of TB.
 -
12. Reduction of TB deaths
13. Provision of social benefits and nutritional support for TB patients and their families.
 -

14. Lack of integration of Social Services Department and NPTCCD.



15. Maintaining financial sustainability of the National Programme for Tuberculosis Control and Chest Diseases.



16. Addressing the social determinants of health.



17. No proper vehicles to provide care and supervisory visits at National level



18. No proper vehicles to provide care & Supervisory visits at National

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 2020, 202,951 new patients were registered at District Chest Clinics. Out of these patients, (86,440 ,42.6%) were self-referrals. Others included referrals from general health institutions or private practitioners (44,417,21.9%), contacts of TB patients (15,325, 7.6%) and persons came for medical examinations (56,769, 28%).

In addition to National Hospital for Respiratory Diseases, there are several chest wards situated in different types of hospitals in the country which provide inward care for TB & non TB respiratory 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 smear-negative 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 2019.

Year	Laboratory	Number of Gene X pert tests performed	Number of specimens with +ve results
2019	NTRL	8761	1413
	All Districts	28743	3848

Table 5: Testing By WHO recommended Rapid Diagnostics in 2019

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.

The number of X-ray films of the three types consumed in 2019 at the Chest Clinics were as follows.

- **Number of Micro Films** : 12,456
- **Number of Large Films** : 88,257
- **Total** : 1,00,713
- **Digital Films** : 48,011

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 Millitary 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 1685 revaccinations carried out in chest clinics.

Detailed Tables

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

Year	Mortality	
	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

Source: Health 814

Table 9: Distribution Rates of all TB cases by District of Residence in 2019

District	Estimated Mid-Year Population	No. of Cases Detected	No. of Cases Per 100,000 Population
Colombo	2,418,358	2024	83.7
Gampaha	2,442,858	1070	43.8
Kalutara	1,305,749	533	40.8
Kandy	1,458,265	620	42.5
Matale	521,107	181	34.7
Nuwara Eliya	748,492	200	26.7
Galle	1,120,832	404	36.0
Matara	858,331	178	20.7
Hambantota	659,469	133	20.2
Jaffna	613,766	272	44.3
Vavuniya	185,665	52	28.0
Batticaloa	558,521	147	26.3
Ampara	269,939	91	33.7
Kalmunai	432,624	164	37.9
Trincomalee	412,077	108	26.2
Kurunegala	1,718,900	443	25.8
Puttalam	815,649	173	21.2
Anuradhapura	939,438	242	25.8
Polonnaruwa	437,836	163	37.2
Badulla	863,086	280	32.4
Moneragala	495,156	131	26.5
Ratnapura	1,159,063	394	34.0
Kegalle	883,662	325	36.8
Mannar	107,565	22	20.5
Mullaitivu	96,794	23	23.8
Kilinochchi	124,382	61	49.0
Total	21,647,582	8,434	39.0

Table 10: All TB Case Detection by District of Registration in 2019

District	New Cases				Retreatment Cases																				Grand Total				
					Relapse				Treatment After Failure				Lost to Follow up				Other Previously Treated				Total Retreatment Cases					Treatment History unknown			
	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total	PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total		PTB Bacteriologically Confirmed (Positive)	PTB Clinically Dig.(Negative)	EPTB	Total
Colombo	1088	300	423	1811	71	8	12	91	37	0	2	39	45	10	1	56	11	0	2	13	164	18	17	199	10	2	2	14	2024
Gampaha	517	186	293	996	32	5	8	45	8	1	1	10	14	3	1	18	0	0	0	0	54	9	10	73	1	0	0	1	1070
Kalutara	278	68	153	499	24	2	4	30	1	0	0	1	3	0	0	3	0	0	0	0	28	2	4	34	0	0	0	0	533
Kandy	297	139	157	593	8	3	3	14	7	1	1	9	1	3	0	4	0	0	0	0	16	7	4	27	0	0	0	0	620
Matale	89	23	58	170	6	0	3	9	1	0	0	1	1	0	0	1	0	0	0	0	8	0	3	11	0	0	0	0	181
Nuwara Eliya	93	26	67	186	2	0	1	3	7	0	0	7	2	0	2	4	0	0	0	0	11	0	3	14	0	0	0	0	200
Galle	204	49	119	372	14	4	4	22	5	1	0	6	4	0	0	4	0	0	0	0	23	5	4	32	0	0	0	0	404
Matara	111	12	46	169	5	1	1	7	1	0	0	1	0	0	0	0	1	0	0	1	7	1	1	9	0	0	0	0	178
Hambantota	60	27	38	125	5	1	1	7	0	0	0	0	1	0	0	1	0	0	0	0	6	1	1	8	0	0	0	0	133
Jaffna	122	64	75	261	5	1	1	7	0	0	0	0	2	2	0	4	0	0	0	0	7	3	1	11	0	0	0	0	272
Vavuniya	27	3	15	45	5	0	2	7	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	7	0	0	0	0	52
Batticaloa	98	12	27	137	9	0	0	9	1	0	0	1	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	147
Ampara	41	27	18	86	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5	0	0	0	0	91
Kalmunai	96	28	29	153	8	0	0	8	1	0	0	1	2	0	0	2	0	0	0	0	11	0	0	11	0	0	0	0	164
Trincomalee	73	10	15	98	6	0	0	6	4	0	0	4	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	108
Kurunegala	206	77	127	410	18	3	8	29	2	0	1	3	0	0	1	1	0	0	0	0	20	3	10	33	0	0	0	0	443
Puttalam	87	37	38	162	7	0	2	9	1	1	0	2	0	0	0	0	0	0	0	0	8	1	2	11	0	0	0	0	173
Anuradhapura	143	22	63	228	7	0	1	8	6	0	0	6	0	0	0	0	0	0	0	0	13	0	1	14	0	0	0	0	242
Polonnaruwa	72	49	30	151	4	4	0	8	2	0	1	3	0	0	0	0	0	0	1	1	6	4	2	12	0	0	0	0	163
Badulla	127	65	63	255	9	1	2	12	9	1	0	10	3	0	0	3	0	0	0	0	21	2	2	25	0	0	0	0	280
Monaragala	55	17	47	119	4	3	0	7	2	1	0	3	2	0	0	2	0	0	0	0	8	4	0	12	0	0	0	0	131
Ratnapura	242	21	115	378	8	1	4	13	1	1	0	2	1	0	0	1	0	0	0	0	10	2	4	16	0	0	0	0	394
Kegalle	172	44	94	310	10	1	2	13	0	0	1	1	0	0	1	1	0	0	0	0	10	1	4	15	0	0	0	0	325
Mannar	16	0	3	19	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	1	22
Mullaitivu	13	6	2	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	23
Kilinochchi	32	18	8	58	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	61
Total	4359	1330	2123	7812	276	39	59	374	96	7	7	110	81	18	6	105	12	0	3	15	465	64	75	604	14	2	2	18	8434

Table 11: Distribution of New Cases of TB by Province in 2019

Province	Number of Patients													
	PTB Bacteriologically Confirmed	Rate	PTB Clinically Dig	Rate	EPTB	Rate	All New	Rate	Re-treatment	Rate	Previous Treatment History Unknown	Rate	All TB	Rate
Western	1883	30.5	554	9.0	869	14.1	3306	53.6	306	5.0	15	0.2	3627	58.8
Central	479	17.6	188	6.9	282	10.3	949	34.8	52	1.9	0	0.0	1001	36.7
Sabaragamuwa	414	20.3	65	3.2	209	10.2	688	33.7	31	1.5	0	0.0	719	35.2
Sorthern	375	14.2	88	3.3	203	7.7	666	25.2	49	1.9	0	0.0	715	27.1
North Western	293	11.6	114	4.5	165	6.5	572	22.6	44	1.7	0	0.0	616	24.3
Eastern	308	18.4	77	4.6	89	5.3	474	28.3	36	2.2	0	0.0	510	30.5
Northern	210	18.6	91	8.1	103	9.1	404	35.8	23	2.0	3	0.3	430	38.1
North Central	215	15.6	71	5.2	93	6.8	379	27.5	26	1.9	0	0.0	405	29.4
Uva	182	13.4	82	6.0	110	8.1	374	27.5	37	2.7	0	0.0	411	30.3
Total	4359	20.1	1330	6.1	2123	9.8	7812	36.1	604	2.8	18	0.1	8434	39.0

Table 12: Distribution of new cases of TB by Age and Type in 2019

Age Group	Number of Patients							
	Smear Positive	Rate	Smear Negative	Rate	EPTB	Rate	All New	Rate
0 - 14	38	0.7	94	1.6	102	1.8	234	4.1
15 - 24	404	10.0	104	2.6	265	6.6	773	19.2
25 - 34	461	13.0	93	2.6	313	8.8	867	24.5
35 - 44	670	23.9	129	4.6	347	12.4	1146	40.9
45 - 54	949	55.1	205	11.9	346	20.1	1500	87.2
55 - 64	931	82.5	289	25.6	379	33.6	1599	141.8
65 +	906	33.7	416	15.5	371	13.8	1693	63.0
Total	4359	20.1	1330	6.1	2123	9.8	7812	36.1

Table 13: Distribution of New Cases of TB by Age and Sex in 2019

Age Group	Male			Female			All New Cases		
	Estimated Mid-Year Population	No	Rate	Estimated Mid-Year Population	No	Rate	Estimated Mid-Year Population	No	Rate
0 - 14	2,946,236	111	3.8	2,792,538	123	4.4	5,738,774	234	4.1
15 - 24	1,777,740	372	20.9	2,251,348	401	17.8	4,029,088	773	19.2
25 - 34	1,779,431	543	30.5	1,764,278	324	18.4	3,543,709	867	24.5
35 - 44	1,155,981	777	67.2	1,645,216	369	22.4	2,801,197	1146	40.9
45 - 54	876,727	1017	116.0	844,256	483	57.2	1,720,983	1500	87.2
55 - 64	599,638	1107	184.6	528,201	492	93.1	1,127,839	1599	141.8
65 +	1,368,127	1143	83.5	1,317,864	550	41.7	2,685,992	1693	63.0
Total	10,503,880	5070	48.3	11,143,702	2742	24.6	21,647,582	7812	36.1

Table 14: Age and Sex Distribution of All New TB Cases by District in 2019

District	Male										Female										Male	Female	Total
	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			
Colombo	15	20	90	102	185	232	258	154	84	1140	16	16	130	68	82	124	120	82	33	671	1140	671	1811
Gampaha	3	4	32	56	100	158	161	102	39	655	4	10	38	40	48	61	66	53	21	341	655	341	996
Kalutara	2	6	23	30	43	76	67	56	14	317	2	5	32	20	21	30	31	33	8	182	317	182	499
Kandy	6	6	40	30	50	66	79	62	20	359	3	18	35	25	30	34	42	33	14	234	359	234	593
Matale	0	1	8	7	14	15	31	20	8	104	1	3	10	8	9	16	9	6	4	66	104	66	170
Nuwara Eliya	2	3	16	20	24	17	15	15	1	113	0	6	18	12	6	15	12	3	1	73	113	73	186
Galle	1	5	21	47	31	46	46	33	22	252	0	2	14	17	16	22	23	17	9	120	252	120	372
Matara	0	0	7	10	12	24	21	25	12	111	0	1	4	5	7	6	15	16	4	58	111	58	169
Hambantota	2	1	2	10	15	14	20	22	7	93	1	1	3	3	3	5	5	11	0	32	93	32	125
Jaffna	0	3	11	15	25	18	32	34	9	147	1	3	5	15	17	13	26	25	9	114	147	114	261
Vavuniya	0	0	2	3	7	7	7	6	2	34	0	0	3	2	1	1	0	3	1	11	34	11	45
Batticaloa	3	2	5	14	12	16	23	19	4	98	3	2	3	4	3	5	9	10	0	39	98	39	137
Ampara	0	0	4	6	10	8	13	9	7	57	1	1	1	1	1	12	4	5	3	29	57	29	86
Kalmunai	1	0	7	5	13	19	20	24	9	98	0	1	7	5	7	14	13	5	3	55	98	55	153
Trincomalee	0	0	8	12	5	12	11	14	2	64	1	2	3	3	5	8	8	2	2	34	64	34	98
Kurunegala	1	4	9	24	42	65	67	65	16	293	1	1	8	12	22	24	24	22	3	117	293	117	410
Puttalam	0	0	9	17	12	31	27	16	7	119	0	2	5	4	7	6	10	8	1	43	119	43	162
Anuradhapura	1	4	6	14	27	40	42	20	8	162	1	3	9	10	10	9	11	8	5	66	162	66	228
Polonnaruwa	2	4	5	5	11	18	27	29	5	106	1	1	1	11	10	4	4	9	4	45	106	45	151
Badulla	2	1	17	22	26	30	29	18	3	148	1	5	16	16	17	18	17	12	5	107	148	107	255
Monaragala	0	2	4	10	17	15	14	13	9	84	1	0	8	2	2	12	1	6	3	35	84	35	119
Ratnapura	1	0	19	41	51	44	46	37	14	253	1	0	17	15	23	23	27	16	3	125	253	125	378
Kegalle	0	3	21	32	36	35	40	19	9	195	0	1	24	21	17	18	13	15	6	115	195	115	310
Mannar	0	0	1	3	0	4	4	3	0	15	0	0	0	2	0	1	0	1	0	4	15	4	19
Mullaitivu	0	0	3	3	1	2	4	3	0	16	0	0	2	0	2	0	0	1	0	5	16	5	21
Kilinochchi	0	0	2	5	8	5	3	10	4	37	0	0	5	3	3	2	2	6	0	21	37	21	58
Total	42	69	372	543	777	1017	1107	828	315	5070	39	84	401	324	369	483	492	408	142	2742	5070	2742	7812

Table 15: Age and Sex Distribution of Smear Positive New TB Cases by District in 2019

District	Male										Female										Male	Female	Total
	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			
Colombo	0	2	42	63	132	172	184	103	40	738	0	7	55	30	41	86	72	42	17	350	738	350	1088
Gampaha	0	1	15	32	64	105	86	50	19	372	1	3	18	16	20	25	30	22	10	145	372	145	517
Kalutara	0	1	14	13	26	47	40	37	12	190	0	0	16	9	10	16	15	17	5	88	190	88	278
Kandy	0	1	17	18	31	46	49	35	8	205	0	4	23	14	12	12	13	10	4	92	205	92	297
Matale	0	0	5	3	6	9	19	9	4	55	0	2	7	5	4	8	3	3	2	34	55	34	89
Nuwara Eliya	0	2	12	9	16	12	7	9	1	68	0	1	9	6	2	5	2	0	0	25	68	25	93
Galle	0	1	17	25	20	31	27	16	9	146	0	0	7	13	6	12	8	8	4	58	146	58	204
Matara	0	0	2	8	10	18	15	19	7	79	0	1	2	2	3	5	8	10	1	32	79	32	111
Hambantota	0	0	1	6	6	8	12	11	3	47	0	1	2	2	0	3	3	2	0	13	47	13	60
Jaffna	0	1	10	9	12	11	16	14	6	79	0	0	1	8	6	4	10	10	4	43	79	43	122
Vavuniya	0	0	1	0	5	4	4	6	1	21	0	0	2	1	1	1	0	1	0	6	21	6	27
Batticaloa	0	0	4	9	10	12	19	18	3	75	0	0	3	2	1	4	4	9	0	23	75	23	98
Ampara	0	0	2	2	5	3	4	6	4	26	0	0	0	1	1	5	3	2	3	15	26	15	41
Kalmunai	0	0	4	3	7	15	14	15	5	63	0	0	5	2	3	11	7	2	3	33	63	33	96
Trincomalee	0	0	7	9	3	10	9	11	2	51	0	0	2	1	5	5	7	0	2	22	51	22	73
Kurunegala	0	1	4	12	27	33	44	30	10	161	0	0	4	6	5	12	7	9	2	45	161	45	206
Puttalam	0	0	4	9	9	19	17	10	2	70	0	0	2	2	4	3	4	2	0	17	70	17	87
Anuradhapura	1	0	3	10	19	26	37	10	5	111	0	2	4	5	5	6	4	3	3	32	111	32	143
Polonnaruwa	0	0	4	4	7	13	12	13	1	54	1	0	0	4	3	3	2	3	2	18	54	18	72
Badulla	0	0	6	12	18	20	17	5	1	79	0	2	8	5	9	12	6	4	2	48	79	48	127
Monaragala	0	0	0	4	11	10	7	10	5	47	0	0	1	0	1	3	0	2	1	8	47	8	55
Ratnapura	0	0	11	26	32	34	29	26	11	169	0	0	12	6	14	10	17	13	1	73	169	73	242
Kegalle	0	1	14	14	20	18	22	13	6	108	0	1	12	12	7	12	10	8	2	64	108	64	172
Mannar	0	0	1	2	0	4	2	3	0	12	0	0	0	2	0	1	0	1	0	4	12	4	16
Mullaitivu	0	0	2	1	1	2	2	2	0	10	0	0	2	0	1	0	0	0	0	3	10	3	13
Kilinochchi	0	0	1	2	6	1	1	4	2	17	0	0	4	2	3	2	1	3	0	15	17	15	32
Total	1	11	203	305	503	683	695	485	167	3053	2	24	201	156	167	266	236	186	68	1306	3053	1306	4359

Table 16: Age and Sex Distribution of Smear Negative New TB Cases by District in 2019

District	Male										Female										Male	Female	Total
	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			
Colombo	9	6	18	13	23	28	36	19	27	179	13	3	16	7	13	9	22	30	8	121	179	121	300
Gampaha	2	2	5	5	7	18	37	30	12	118	1	3	4	8	3	12	15	16	6	68	118	68	186
Kalutara	0	1	1	3	5	15	7	8	0	40	0	2	4	2	1	3	7	8	1	28	40	28	68
Kandy	4	3	6	4	4	14	16	14	7	72	2	11	5	4	6	7	11	14	7	67	72	67	139
Matale	0	0	1	0	4	0	4	5	1	15	0	1	1	0	1	2	2	0	1	8	15	8	23
Nuwara Eliya	2	1	0	2	3	1	3	1	0	13	0	0	2	0	2	2	5	1	1	13	13	13	26
Galle	0	2	1	3	2	8	7	6	7	36	0	0	1	1	4	2	3	1	1	13	36	13	49
Matara	0	0	1	0	1	1	1	1	3	8	0	0	0	0	0	0	0	4	0	4	8	4	12
Hambantota	1	0	0	1	3	4	2	6	3	20	0	0	1	0	0	0	2	4	0	7	20	7	27
Jaffna	0	0	1	0	7	4	8	11	3	34	0	1	2	2	2	3	8	10	2	30	34	30	64
Vavuniya	0	0	0	1	0	0	1	0	0	2	0	0	0	0	0	0	0	1	0	1	2	1	3
Batticaloa	3	1	1	0	0	1	1	0	0	7	3	0	0	0	0	1	1	0	0	5	7	5	12
Ampara	0	0	0	2	2	3	5	3	2	17	1	0	0	0	0	7	0	2	0	10	17	10	27
Kalmunai	0	0	1	0	4	1	5	7	2	20	0	0	1	1	0	1	4	1	0	8	20	8	28
Trincomalee	0	0	1	0	2	2	2	2	0	9	0	1	0	0	0	0	0	0	0	1	9	1	10
Kurunegala	0	1	1	4	6	13	9	18	4	56	0	0	1	2	2	6	5	4	1	21	56	21	77
Puttalam	0	0	1	3	0	7	5	3	5	24	0	0	1	1	1	2	4	3	1	13	24	13	37
Anuradhapura	0	0	1	1	1	3	3	5	3	17	0	0	2	1	0	0	1	0	1	5	17	5	22
Polonnaruwa	1	2	1	0	2	2	10	13	3	34	0	1	1	2	3	1	2	3	2	15	34	15	49
Badulla	1	1	4	3	4	4	7	8	2	34	1	3	5	4	3	2	6	5	2	31	34	31	65
Monaragala	0	1	0	0	0	4	3	1	4	13	1	0	1	0	0	0	0	2	0	4	13	4	17
Ratnapura	1	0	0	0	1	1	6	2	0	11	1	0	4	1	1	1	1	0	1	10	11	10	21
Kegalle	0	0	4	8	4	6	7	4	2	35	0	0	2	2	0	2	0	1	2	9	35	9	44
Mannar	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	1	0	0	2	1	0	4	0	0	0	0	1	0	0	1	0	2	4	2	6
Kilinochchi	0	0	1	1	1	2	2	6	2	15	0	0	0	0	0	0	1	2	0	3	15	3	18
Total	24	21	50	55	86	142	189	174	92	833	23	26	54	38	43	63	100	113	37	497	833	497	1330

Table 17: Age and Sex Distribution of All New PTB Cases by District in 2019

District	Male										Female										Male	Female	Total
	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			
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

Table 18: Age and Sex Distribution of New EPTB Cases by District in 2019

District	Male										Female										Male	Female	Total
	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			
Colombo	6	12	30	26	30	32	38	32	17	223	3	6	59	31	28	29	26	10	8	200	223	200	423
Gampaha	1	1	12	19	29	35	38	22	8	165	2	4	16	16	25	24	21	15	5	128	165	128	293
Kalutara	2	4	8	14	12	14	20	11	2	87	2	3	12	9	10	11	9	8	2	66	87	66	153
Kandy	2	2	17	8	15	6	14	13	5	82	1	3	7	7	12	15	18	9	3	75	82	75	157
Matale	0	1	2	4	4	6	8	6	3	34	1	0	2	3	4	6	4	3	1	24	34	24	58
Nuwara Eliya	0	0	4	9	5	4	5	5	0	32	0	5	7	6	2	8	5	2	0	35	32	35	67
Galle	1	2	3	19	9	7	12	11	6	70	0	2	6	3	6	8	12	8	4	49	70	49	119
Matara	0	0	4	2	1	5	5	5	2	24	0	0	2	3	4	1	7	2	3	22	24	22	46
Hambantota	1	1	1	3	6	2	6	5	1	26	1	0	0	1	3	2	0	5	0	12	26	12	38
Jaffna	0	2	0	6	6	3	8	9	0	34	1	2	2	5	9	6	8	5	3	41	34	41	75
Vavuniya	0	0	1	2	2	3	2	0	1	11	0	0	1	1	0	0	0	1	1	4	11	4	15
Batticaloa	0	1	0	5	2	3	3	1	1	16	0	2	0	2	2	0	4	1	0	11	16	11	27
Ampara	0	0	2	2	3	2	4	0	1	14	0	1	1	0	0	0	1	1	0	4	14	4	18
Kalmunai	1	0	2	2	2	3	1	2	2	15	0	1	1	2	4	2	2	2	0	14	15	14	29
Trincomalee	0	0	0	3	0	0	0	1	0	4	1	1	1	2	0	3	1	2	0	11	4	11	15
Kurunegala	1	2	4	8	9	19	14	17	2	76	1	1	3	4	15	6	12	9	0	51	76	51	127
Puttalam	0	0	4	5	3	5	5	3	0	25	0	2	2	1	2	1	2	3	0	13	25	13	38
Anuradhapura	0	4	2	3	7	11	2	5	0	34	1	1	3	4	5	3	6	5	1	29	34	29	63
Polonnaruwa	1	2	0	1	2	3	5	3	1	18	0	0	0	5	4	0	0	3	0	12	18	12	30
Badulla	1	0	7	7	4	6	5	5	0	35	0	0	3	7	5	4	5	3	1	28	35	28	63
Monaragala	0	1	4	6	6	1	4	2	0	24	0	0	6	2	1	9	1	2	2	23	24	23	47
Ratnapura	0	0	8	15	18	9	11	9	3	73	0	0	1	8	8	12	9	3	1	42	73	42	115
Kegalle	0	2	3	10	12	11	11	2	1	52	0	0	10	7	10	4	3	6	2	42	52	42	94
Mannar	0	0	0	1	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0	3
Mullaitivu	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	2
Kilinochchi	0	0	0	2	1	2	0	0	0	5	0	0	1	1	0	0	0	1	0	3	5	3	8
Total	17	37	119	183	188	192	223	169	56	1184	14	34	146	130	159	154	156	109	37	939	1184	939	2123

Table 19: Distribution of Treatment Outcome of All forms of TB by Districts in 2018

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died						Failure		Lost to Follow up		Not Evaluated		Total
		No	Rate	No	Rate	No	Rate	Confirmed as not due to TB		All Other Deaths		All TB Deaths		No	Rate	No	Rate	No	Rate	
								No	Rate	No	Rate	No	Rate							
Colombo	2088	827	39.6	882	42.2	1709	81.8	33	1.6	97	4.6	130	6.2	40	1.9	125	6.0	84	4.0	2088
Gampaha	1139	517	45.4	445	39.1	962	84.5	37	3.2	48	4.2	85	7.5	14	1.2	57	5.0	21	1.8	1139
Kalutara	617	282	45.7	199	32.3	481	78.0	10	1.6	17	2.8	27	4.4	1	0.2	3	0.5	105	17.0	617
Kandy	605	222	36.7	279	46.1	501	82.8	14	2.3	39	6.4	53	8.8	13	2.1	7	1.2	31	5.1	605
Matale	177	62	35.0	93	52.5	155	87.6	3	1.7	6	3.4	9	5.1	0	0.0	7	4.0	6	3.4	177
Nuwara Eliya	245	92	37.6	111	45.3	203	82.9	18	7.3	2	0.8	20	8.2	3	1.2	11	4.5	8	3.3	245
Galle	412	171	41.5	169	41.0	340	82.5	8	1.9	12	2.9	20	4.9	4	1.0	22	5.3	26	6.3	412
Matara	216	96	44.4	104	48.1	200	92.6	0	0.0	9	4.2	9	4.2	4	1.9	0	0.0	3	1.4	216
Hambantota	132	47	35.6	62	47.0	109	82.6	0	0.0	10	7.6	10	7.6	0	0.0	4	3.0	9	6.8	132
Jaffna	303	60	19.8	210	69.3	270	89.1	6	2.0	15	5.0	21	6.9	1	0.3	9	3.0	2	0.7	303
Vavuniya	61	29	47.5	21	34.4	50	82.0	6	9.8	2	3.3	8	13.1	3	4.9	0	0.0	0	0.0	61
Batticaloa	147	79	53.7	45	30.6	124	84.4	4	2.7	10	6.8	14	9.5	2	1.4	2	1.4	5	3.4	147
Ampara	114	29	25.4	73	64.0	102	89.5	2	1.8	1	0.9	3	2.6	0	0.0	0	0.0	9	7.9	114
Kalmunai	175	54	30.9	87	49.7	141	80.6	4	2.3	3	1.7	7	4.0	1	0.6	22	12.6	4	2.3	175
Trincomalee	136	76	55.9	37	27.2	113	83.1	8	5.9	2	1.5	10	7.4	5	3.7	1	0.7	7	5.1	136
Kurunegala	387	198	51.2	139	35.9	337	87.1	6	1.6	12	3.1	18	4.7	2	0.5	14	3.6	16	4.1	387
Puttalam	186	70	37.6	84	45.2	154	82.8	8	4.3	10	5.4	18	9.7	4	2.2	2	1.1	8	4.3	186
Anuradhapura	270	150	55.6	105	38.9	255	94.4	4	1.5	1	0.4	5	1.9	7	2.6	0	0.0	3	1.1	270
Polonnaruwa	147	62	42.2	68	46.3	130	88.4	4	2.7	8	5.4	12	8.2	3	2.0	0	0.0	2	1.4	147
Badulla	258	121	46.9	82	31.8	203	78.7	6	2.3	11	4.3	17	6.6	12	4.7	8	3.1	18	7.0	258
Monaragala	129	58	45.0	57	44.2	115	89.1	4	3.1	2	1.6	6	4.7	2	1.6	1	0.8	5	3.9	129
Ratnapura	434	182	41.9	203	46.8	385	88.7	11	2.5	6	1.4	17	3.9	0	0.0	2	0.5	30	6.9	434
Kegalle	362	140	38.7	162	44.8	302	83.4	16	4.4	25	6.9	41	11.3	3	0.8	4	1.1	12	3.3	362
Mannar	34	19	55.9	12	35.3	31	91.2	1	2.9	1	2.9	2	5.9	0	0.0	1	2.9	0	0.0	34
Mullaitivu	28	4	14.3	20	71.4	24	85.7	4	14.3	0	0.0	4	14.3	0	0.0	0	0.0	0	0.0	28
Kilinochchi	54	21	38.9	28	51.9	49	90.7	1	1.9	0	0.0	1	1.9	0	0.0	0	0.0	4	7.4	54
Total	8856	3668	41.4	3777	42.6	7445	84.1	218	2.5	349	3.9	567	6.4	124	1.4	302	3.4	418	4.7	8856

Table 20: Distribution of Treatment Outcome of All Forms of New (PTB and EPTB) Cases by District in 2018

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
		No	Rate	No	Rate	No	Rate	Confirmed as not due to TB		All Other Deaths		No	Rate	No	Rate	No	Rate	No	Rate	
								No	Rate	No	Rate									
Colombo	1912	761	39.8	821	42.9	1582	82.7	31	1.6	93	4.9	124	6.5	34	1.8	103	5.4	69	3.6	1912
Gampaha	1054	476	45.2	431	40.9	907	86.1	35	3.3	38	3.6	73	6.9	11	1.0	46	4.4	17	1.6	1054
Kalutara	579	265	45.8	196	33.9	461	79.6	9	1.6	15	2.6	24	4.1	1	0.2	3	0.5	90	15.5	579
Kandy	578	206	35.6	276	47.8	482	83.4	13	2.2	35	6.1	48	8.3	13	2.2	6	1.0	29	5.0	578
Matale	164	55	33.5	91	55.5	146	89.0	3	1.8	6	3.7	9	5.5	0	0.0	5	3.0	4	2.4	164
Nuwara Eliya	232	85	36.6	105	45.3	190	81.9	18	7.8	2	0.9	20	8.6	3	1.3	11	4.7	8	3.4	232
Galle	378	159	42.1	160	42.3	319	84.4	6	1.6	11	2.9	17	4.5	4	1.1	18	4.8	20	5.3	378
Matara	206	89	43.2	104	50.5	193	93.7	0	0.0	7	3.4	7	3.4	4	1.9	0	0.0	2	1.0	206
Hambantota	125	44	35.2	58	46.4	102	81.6	0	0.0	10	8.0	10	8.0	0	0.0	4	3.2	9	7.2	125
Jaffna	282	58	20.6	192	68.1	250	88.7	5	1.8	15	5.3	20	7.1	1	0.4	9	3.2	2	0.7	282
Vavuniya	55	24	43.6	20	36.4	44	80.0	6	10.9	2	3.6	8	14.5	3	5.5	0	0.0	0	0.0	55
Batticaloa	131	69	52.7	43	32.8	112	85.5	3	2.3	8	6.1	11	8.4	2	1.5	1	0.8	5	3.8	131
Ampara	108	27	25.0	73	67.6	100	92.6	2	1.9	1	0.9	3	2.8	0	0.0	0	0.0	5	4.6	108
Kalmunai	167	50	29.9	86	51.5	136	81.4	4	2.4	3	1.8	7	4.2	1	0.6	19	11.4	4	2.4	167
Trincomalee	124	69	55.6	35	28.2	104	83.9	8	6.5	2	1.6	10	8.1	3	2.4	1	0.8	6	4.8	124
Kurunegala	365	182	49.9	135	37.0	317	86.8	6	1.6	12	3.3	18	4.9	2	0.5	14	3.8	14	3.8	365
Puttalam	174	64	36.8	84	48.3	148	85.1	7	4.0	9	5.2	16	9.2	0	0.0	2	1.1	8	4.6	174
Anuradhapura	252	138	54.8	102	40.5	240	95.2	3	1.2	1	0.4	4	1.6	7	2.8	0	0.0	1	0.4	252
Polonnaruwa	145	61	42.1	68	46.9	129	89.0	4	2.8	8	5.5	12	8.3	3	2.1	0	0.0	1	0.7	145
Badulla	244	111	45.5	82	33.6	193	79.1	6	2.5	11	4.5	17	7.0	11	4.5	6	2.5	17	7.0	244
Monaragala	126	55	43.7	57	45.2	112	88.9	4	3.2	2	1.6	6	4.8	2	1.6	1	0.8	5	4.0	126
Ratnapura	414	164	39.6	203	49.0	367	88.6	11	2.7	6	1.4	17	4.1	0	0.0	2	0.5	28	6.8	414
Kegalle	336	125	37.2	157	46.7	282	83.9	16	4.8	21	6.3	37	11.0	3	0.9	4	1.2	10	3.0	336
Mannar	29	15	51.7	11	37.9	26	89.7	1	3.4	1	3.4	2	6.9	0	0.0	1	3.4	0	0.0	29
Mullaitivu	27	3	11.1	20	74.1	23	85.2	4	14.8	0	0.0	4	14.8	0	0.0	0	0.0	0	0.0	27
Kilinochchi	51	18	35.3	28	54.9	46	90.2	1	2.0	0	0.0	1	2.0	0	0.0	0	0.0	4	7.8	51
Total	8258	3373	40.8	3638	44.1	7011	84.9	206	2.5	319	3.9	525	6.4	108	1.3	256	3.1	358	4.3	8258

Table 21: Distribution of Treatment Outcome of All New PTB Cases by District in 2018

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
		No	Rate	No	Rate	No	Rate	Confirmed as not due to TB		All Other Deaths		No	Rate	No	Rate	No	Rate	No	Rate	
								No	Rate	No	Rate									
Colombo	1429	761	53.3	395	27.6	1156	80.9	26	1.8	73	5.1	99	6.9	32	2.2	89	6.2	53	3.7	1429
Gampaha	778	476	61.2	187	24.0	663	85.2	22	2.8	34	4.4	56	7.2	11	1.4	33	4.2	15	1.9	778
Kalutara	421	265	62.9	73	17.3	338	80.3	8	1.9	13	3.1	21	5.0	1	0.2	3	0.7	58	13.8	421
Kandy	384	206	53.6	104	27.1	310	80.7	9	2.3	28	7.3	37	9.6	13	3.4	4	1.0	20	5.2	384
Matale	101	55	54.5	36	35.6	91	90.1	1	1.0	2	2.0	3	3.0	0	0.0	4	4.0	3	3.0	101
Nuwara Eliya	141	85	60.3	29	20.6	114	80.9	15	10.6	1	0.7	16	11.3	3	2.1	6	4.3	2	1.4	141
Galle	254	159	62.6	54	21.3	213	83.9	6	2.4	9	3.5	15	5.9	4	1.6	13	5.1	9	3.5	254
Matara	125	89	71.2	27	21.6	116	92.8	0	0.0	5	4.0	5	4.0	3	2.4	0	0.0	1	0.8	125
Hambantota	76	44	57.9	15	19.7	59	77.6	0	0.0	8	10.5	8	10.5	0	0.0	4	5.3	5	6.6	76
Jaffna	192	58	30.2	110	57.3	168	87.5	3	1.6	12	6.3	15	7.8	1	0.5	7	3.6	1	0.5	192
Vavuniya	40	24	60.0	9	22.5	33	82.5	3	7.5	1	2.5	4	10.0	3	7.5	0	0.0	0	0.0	40
Batticaloa	92	69	75.0	10	10.9	79	85.9	2	2.2	6	6.5	8	8.7	2	2.2	1	1.1	2	2.2	92
Ampara	76	27	35.5	42	55.3	69	90.8	2	2.6	1	1.3	3	3.9	0	0.0	0	0.0	4	5.3	76
Kalmunai	128	50	39.1	54	42.2	104	81.3	3	2.3	3	2.3	6	4.7	0	0.0	14	10.9	4	3.1	128
Trincomalee	97	69	71.1	13	13.4	82	84.5	8	8.2	2	2.1	10	10.3	3	3.1	1	1.0	1	1.0	97
Kurunegala	268	182	67.9	49	18.3	231	86.2	4	1.5	9	3.4	13	4.9	2	0.7	13	4.9	9	3.4	268
Puttalam	117	64	54.7	31	26.5	95	81.2	6	5.1	8	6.8	14	12.0	0	0.0	2	1.7	6	5.1	117
Anuradhapura	172	138	80.2	22	12.8	160	93.0	3	1.7	1	0.6	4	2.3	7	4.1	0	0.0	1	0.6	172
Polonnaruwa	111	61	55.0	37	33.3	98	88.3	3	2.7	7	6.3	10	9.0	2	1.8	0	0.0	1	0.9	111
Badulla	183	111	60.7	35	19.1	146	79.8	6	3.3	8	4.4	14	7.7	11	6.0	6	3.3	6	3.3	183
Monaragala	94	55	58.5	27	28.7	82	87.2	3	3.2	2	2.1	5	5.3	2	2.1	1	1.1	4	4.3	94
Ratnapura	245	164	66.9	45	18.4	209	85.3	5	2.0	6	2.4	11	4.5	0	0.0	2	0.8	23	9.4	245
Kegalle	225	125	55.6	67	29.8	192	85.3	7	3.1	15	6.7	22	9.8	1	0.4	3	1.3	7	3.1	225
Mannar	19	15	78.9	1	5.3	16	84.2	1	5.3	1	5.3	2	10.5	0	0.0	1	5.3	0	0.0	19
Mullaitivu	21	3	14.3	16	76.2	19	90.5	2	9.5	0	0.0	2	9.5	0	0.0	0	0.0	0	0.0	21
Kilinochchi	38	18	47.4	17	44.7	35	92.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	7.9	38
Total	5827	3373	57.9	1505	25.8	4878	83.7	148	2.5	255	4.4	403	6.9	101	1.7	207	3.6	238	4.1	5827

Table 22: Distribution of Treatment Outcome of New Sputum Positive PTB Cases by District in 2018

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
		No	Rate	No	Rate	No	Rate	Confirmed as not due to TB		All Other Deaths		No	Rate	No	Rate	No	Rate	No	Rate	
								No	Rate	No	Rate									
Colombo	1065	761	71.5	93	8.7	854	80.2	16	1.5	59	5.5	75	7.0	29	2.7	73	6.9	34	3.2	1065
Gampaha	576	476	82.6	20	3.5	496	86.1	9	1.6	25	4.3	34	5.9	11	1.9	25	4.3	10	1.7	576
Kalutara	332	265	79.8	4	1.2	269	81.0	6	1.8	10	3.0	16	4.8	1	0.3	0	0.0	46	13.9	332
Kandy	263	206	78.3	10	3.8	216	82.1	6	2.3	20	7.6	26	9.9	12	4.6	4	1.5	5	1.9	263
Matale	61	55	90.2	0	0.0	55	90.2	1	1.6	1	1.6	2	3.3	0	0.0	4	6.6	0	0.0	61
Nuwara Eliya	100	85	85.0	2	2.0	87	87.0	6	6.0	1	1.0	7	7.0	2	2.0	4	4.0	0	0.0	100
Galle	183	159	86.9	1	0.5	160	87.4	3	1.6	5	2.7	8	4.4	4	2.2	9	4.9	2	1.1	183
Matara	99	89	89.9	1	1.0	90	90.9	0	0.0	5	5.1	5	5.1	3	3.0	0	0.0	1	1.0	99
Hambantota	56	44	78.6	3	5.4	47	83.9	0	0.0	5	8.9	5	8.9	0	0.0	2	3.6	2	3.6	56
Jaffna	115	58	50.4	42	36.5	100	87.0	1	0.9	10	8.7	11	9.6	0	0.0	4	3.5	0	0.0	115
Vavuniya	32	24	75.0	2	6.3	26	81.3	2	6.3	1	3.1	3	9.4	3	9.4	0	0.0	0	0.0	32
Batticaloa	84	69	82.1	3	3.6	72	85.7	2	2.4	6	7.1	8	9.5	2	2.4	1	1.2	1	1.2	84
Ampara	30	27	90.0	0	0.0	27	90.0	2	6.7	1	3.3	3	10.0	0	0.0	0	0.0	0	0.0	30
Kalmunai	60	50	83.3	1	1.7	51	85.0	1	1.7	1	1.7	2	3.3	0	0.0	7	11.7	0	0.0	60
Trincomalee	85	69	81.2	3	3.5	72	84.7	7	8.2	1	1.2	8	9.4	3	3.5	1	1.2	1	1.2	85
Kurunegala	208	182	87.5	0	0.0	182	87.5	4	1.9	8	3.8	12	5.8	2	1.0	12	5.8	0	0.0	208
Puttalam	81	64	79.0	1	1.2	65	80.2	0	0.0	8	9.9	8	9.9	0	0.0	2	2.5	6	7.4	81
Anuradhapura	149	138	92.6	0	0.0	138	92.6	3	2.0	0	0.0	3	2.0	7	4.7	0	0.0	1	0.7	149
Polonnaruwa	69	61	88.4	0	0.0	61	88.4	2	2.9	4	5.8	6	8.7	2	2.9	0	0.0	0	0.0	69
Badulla	145	111	76.6	3	2.1	114	78.6	5	3.4	6	4.1	11	7.6	11	7.6	5	3.4	4	2.8	145
Monaragala	66	55	83.3	3	4.5	58	87.9	3	4.5	1	1.5	4	6.1	2	3.0	1	1.5	1	1.5	66
Ratnapura	200	164	82.0	0	0.0	164	82.0	5	2.5	6	3.0	11	5.5	0	0.0	2	1.0	23	11.5	200
Kegalle	153	125	81.7	4	2.6	129	84.3	4	2.6	13	8.5	17	11.1	1	0.7	2	1.3	4	2.6	153
Mannar	19	15	78.9	1	5.3	16	84.2	1	5.3	1	5.3	2	10.5	0	0.0	1	5.3	0	0.0	19
Mullaitivu	11	3	27.3	7	63.6	10	90.9	1	9.1	0	0.0	1	9.1	0	0.0	0	0.0	0	0.0	11
Kilinochchi	23	18	78.3	4	17.4	22	95.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.3	23
Total	4265	3373	79.1	208	4.9	3581	84.0	90	2.1	198	4.6	288	6.8	95	51.8263	159	3.7	142	59.5411	4265

Table 23: Distribution of Treatment Outcome of New Sputum Negative PTB Cases by District in 2018

District	Total Number Registered	Treatment Completed		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
				Confirmed as not due to TB		All Other Deaths										
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	364	302	83.0	10	2.7	14	3.8	24	6.6	3	0.8	16	4.4	19	5.2	364
Gampaha	202	167	82.7	13	6.4	9	4.5	22	10.9	0	0.0	8	4.0	5	2.5	202
Kalutara	89	69	77.5	2	2.2	3	3.4	5	5.6	0	0.0	3	3.4	12	13.5	89
Kandy	121	94	77.7	3	2.5	8	6.6	11	9.1	1	0.8	0	0.0	15	12.4	121
Matale	40	36	90.0	0	0.0	1	2.5	1	2.5	0	0.0	0	0.0	3	7.5	40
Nuwara Eliya	41	27	65.9	9	22.0	0	0.0	9	22.0	1	2.4	2	4.9	2	4.9	41
Galle	71	53	74.6	3	4.2	4	5.6	7	9.9	0	0.0	4	5.6	7	9.9	71
Matara	26	26	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	26
Hambantota	20	12	60.0	0	0.0	3	15.0	3	15.0	0	0.0	2	10.0	3	15.0	20
Jaffna	77	68	88.3	2	2.6	2	2.6	4	5.2	1	1.3	3	3.9	1	1.3	77
Vavuniya	8	7	87.5	1	12.5	0	0.0	1	12.5	0	0.0	0	0.0	0	0.0	8
Batticaloa	8	7	87.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	12.5	8
Ampara	46	42	91.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	8.7	46
Kalmunai	68	53	77.9	2	2.9	2	2.9	4	5.9	0	0.0	7	10.3	4	5.9	68
Trincomalee	12	10	83.3	1	8.3	1	8.3	2	16.7	0	0.0	0	0.0	0	0.0	12
Kurunegala	60	49	81.7	0	0.0	1	1.7	1	1.7	0	0.0	1	1.7	9	15.0	60
Puttalam	36	30	83.3	6	16.7	0	0.0	6	16.7	0	0.0	0	0.0	0	0.0	36
Anuradhapura	23	22	95.7	0	0.0	1	4.3	1	4.3	0	0.0	0	0.0	0	0.0	23
Polonnaruwa	42	37	88.1	1	2.4	3	7.1	4	9.5	0	0.0	0	0.0	1	2.4	42
Badulla	38	32	84.2	1	2.6	2	5.3	3	7.9	0	0.0	1	2.6	2	5.3	38
Monaragala	28	24	85.7	0	0.0	1	3.6	1	3.6	0	0.0	0	0.0	3	10.7	28
Ratnapura	45	45	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	45
Kegalle	72	63	87.5	3	4.2	2	2.8	5	6.9	0	0.0	1	1.4	3	4.2	72
Mannar	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Mullaitivu	10	9	90.0	1	10.0	0	0.0	1	10.0	0	0.0	0	0.0	0	0.0	10
Kilinochchi	15	13	86.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	13
Total	1562	1297	83.0	58	3.7	57	3.6	115	7.4	6	0.4	48	3.1	96	6.1	1562

Table 24: Distribution of Treatment Outcome of EPTB Cases by District in 2018

District	Total Number Registered	Treatment Completed		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
				Confirmed as not due to TB		All Other Deaths										
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	483	426	88.2	5	1.0	20	4.1	25	5.2	2	0.4	14	2.9	16	3.3	483
Gampaha	276	244	88.4	13	4.7	4	1.4	17	6.2	0	0.0	13	4.7	2	0.7	276
Kalutara	158	123	77.8	1	0.6	2	1.3	3	1.9	0	0.0	0	0.0	32	20.3	158
Kandy	194	172	88.7	4	2.1	7	3.6	11	5.7	0	0.0	2	1.0	9	4.6	194
Matale	63	55	87.3	2	3.2	4	6.3	6	9.5	0	0.0	1	1.6	1	1.6	63
Nuwara Eliya	91	76	83.5	3	3.3	1	1.1	4	4.4	0	0.0	5	5.5	6	6.6	91
Galle	124	106	85.5	0	0.0	2	1.6	2	1.6	0	0.0	5	4.0	11	8.9	124
Matara	81	77	95.1	0	0.0	2	2.5	2	2.5	1	1.2	0	0.0	1	1.2	81
Hambantota	49	43	87.8	0	0.0	2	4.1	2	4.1	0	0.0	0	0.0	4	8.2	49
Jaffna	90	82	91.1	2	2.2	3	3.3	5	5.6	0	0.0	2	2.2	1	1.1	90
Vavuniya	15	11	73.3	3	20.0	1	6.7	4	26.7	0	0.0	0	0.0	0	0.0	15
Batticaloa	39	33	84.6	1	2.6	2	5.1	3	7.7	0	0.0	0	0.0	3	7.7	39
Ampara	32	31	96.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.1	32
Kalmunai	39	32	82.1	1	2.6	0	0.0	1	2.6	1	2.6	5	12.8	0	0.0	39
Trincomalee	27	22	81.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	18.5	27
Kurunegala	97	86	88.7	2	2.1	3	3.1	5	5.2	0	0.0	1	1.0	5	5.2	97
Puttalam	57	53	93.0	1	1.8	1	1.8	2	3.5	0	0.0	0	0.0	2	3.5	57
Anuradhapura	80	80	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	80
Polonnaruwa	34	31	91.2	1	2.9	1	2.9	2	5.9	1	2.9	0	0.0	0	0.0	34
Badulla	61	47	77.0	0	0.0	3	4.9	3	4.9	0	0.0	0	0.0	11	18.0	61
Monaragala	32	30	93.8	1	3.1	0	0.0	1	3.1	0	0.0	0	0.0	1	3.1	32
Ratnapura	169	158	93.5	6	3.6	0	0.0	6	3.6	0	0.0	0	0.0	5	3.0	169
Kegalle	111	90	81.1	9	8.1	6	5.4	15	13.5	2	1.8	1	0.9	3	2.7	111
Mannar	10	10	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	10
Mullaitivu	6	4	66.7	2	33.3	0	0.0	2	33.3	0	0.0	0	0.0	0	0.0	6
Kilinochchi	13	11	84.6	1	7.7	0	0.0	1	7.7	0	0.0	0	0.0	1	7.7	13
Total	2431	2133	87.7	58	2.4	64	2.6	122	5.0	7	0.3	49	2.0	120	4.9	2431

Table 25: Distribution of Treatment Outcome of Re-Treatment TB Cases by District in 2018

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
		No	Rate	No	Rate	No	Rate	Confirmed as not due to TB		All Other Deaths		No	Rate	No	Rate	No	Rate	No	Rate	
								No	Rate	No	Rate									
Colombo	169	62	36.7	59	34.9	121	71.6	2	1.2	4	2.4	6	3.6	6	3.6	21	12.4	15	8.9	169
Gampaha	85	41	48.2	14	16.5	55	64.7	2	2.4	10	11.8	12	14.1	3	3.5	11	12.9	4	4.7	85
Kalutara	38	17	44.7	3	7.9	20	52.6	1	2.6	2	5.3	3	7.9	0	0.0	0	0.0	15	39.5	38
Kandy	27	16	59.3	3	11.1	19	70.4	1	3.7	4	14.8	5	18.5	0	0.0	1	3.7	2	7.4	27
Matale	13	7	53.8	2	15.4	9	69.2	0	0.0	0	0.0	0	0.0	0	0.0	2	15.4	2	15.4	13
Nuwara Eliya	13	7	53.8	6	46.2	13	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	13
Galle	34	12	35.3	9	26.5	21	61.8	2	5.9	1	2.9	3	8.8	0	0.0	4	11.8	6	17.6	34
Matara	10	7	70.0	0	0.0	7	70.0	0	0.0	2	20.0	2	20.0	0	0.0	0	0.0	1	10.0	10
Hambantota	7	3	42.9	4	57.1	7	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7
Jaffna	21	2	9.5	18	85.7	20	95.2	1	4.8	0	0.0	1	4.8	0	0.0	0	0.0	0	0.0	21
Vavuniya	6	5	83.3	1	16.7	6	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6
Batticaloa	16	10	62.5	2	12.5	12	75.0	1	6.3	2	12.5	3	18.8	0	0.0	1	6.3	0	0.0	16
Ampara	6	2	33.3	0	0.0	2	33.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	66.7	6
Kalmunai	8	4	50.0	1	12.5	5	62.5	0	0.0	0	0.0	0	0.0	0	0.0	3	37.5	0	0.0	8
Trincomalee	12	7	58.3	2	16.7	9	75.0	0	0.0	0	0.0	0	0.0	2	16.7	0	0.0	1	8.3	12
Kurunegala	22	16	72.7	4	18.2	20	90.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	9.1	22
Puttalam	12	6	50.0	0	0.0	6	50.0	1	8.3	1	8.3	2	16.7	4	33.3	0	0.0	0	0.0	12
Anuradhapura	18	12	66.7	3	16.7	15	83.3	1	5.6	0	0.0	1	5.6	0	0.0	0	0.0	2	11.1	18
Polonnaruwa	2	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	2
Badulla	14	10	71.4	0	0.0	10	71.4	0	0.0	0	0.0	0	0.0	1	7.1	2	14.3	1	7.1	14
Monaragala	3	3	100.0	0	0.0	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3
Ratnapura	20	18	90.0	0	0.0	18	90.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	10.0	20
Kegalle	26	15	57.7	5	19.2	20	76.9	0	0.0	4	15.4	4	15.4	0	0.0	0	0.0	2	7.7	26
Mannar	5	4	80.0	1	20.0	5	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5
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	3	3	100.0	0	0.0	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3
Total	591	291	49.2	137	23.2	428	72.4	12	2.0	30	5.1	42	7.1	16	2.7	45	7.6	60	10.2	591

Table 26: Distribution of Treatment Outcome of Other TB Cases by District in 2018

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
		No	Rate	No	Rate	No	Rate	Confirmed as not due to TB		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
								No	Rate											
Colombo	8	2	25.0	4	50.0	6	75.0	0	0.0	0	0.0	0	0.0	0	0.0	2	25.0	0	0.0	8
Gampaha	5	1	20.0	4	80.0	5	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5
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	3	2	66.7	0	0.0	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	33.3	3
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	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
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	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	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	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	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	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	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	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	1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	1
Kegalle	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
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	18	5	27.8	9	50.0	14	77.8	0	0.0	0	0.0	0	0.0	0	0.0	2	11.1	2	11.1	18

Table 26: Distribution of Sputum Conversion of New PTB Cases at the End of the Intensive Phase by District in 2019

District	Total Number Registered	Negative		Positive		Died		Defaulted		Transferred out		No result		Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	1088	904	83.1	11	1.0	59	5.4	31	2.8	2	0.2	81	7.4	1088
Gampaha	517	405	78.3	24	4.6	14	2.7	16	3.1	0	0.0	58	11.2	517
Kalutara	278	213	76.6	1	0.4	7	2.5	15	5.4	0	0.0	42	15.1	278
Kandy	297	266	89.6	9	3.0	11	3.7	5	1.7	0	0.0	6	2.0	297
Matale	89	76	85.4	5	5.6	6	6.7	0	0.0	0	0.0	2	2.2	89
Nuwara Eliya	93	86	92.5	1	1.1	5	5.4	0	0.0	0	0.0	1	1.1	93
Galle	204	172	84.3	3	1.5	11	5.4	5	2.5	0	0.0	13	6.4	204
Matara	111	83	74.8	3	2.7	3	2.7	0	0.0	0	0.0	22	19.8	111
Hambantota	60	49	81.7	3	5.0	4	6.7	2	3.3	0	0.0	2	3.3	60
Jaffna	122	92	75.4	1	0.8	8	6.6	0	0.0	0	0.0	21	17.2	122
Vavuniya	27	25	92.6	1	3.7	1	3.7	0	0.0	0	0.0	0	0.0	27
Batticaloa	98	81	82.7	1	1.0	8	8.2	0	0.0	0	0.0	8	8.2	98
Ampara	41	36	87.8	0	0.0	3	7.3	0	0.0	0	0.0	2	4.9	41
Kalmunai	96	63	65.6	5	5.2	3	3.1	0	0.0	0	0.0	25	26.0	96
Trincomalee	73	68	93.2	0	0.0	4	5.5	0	0.0	0	0.0	1	1.4	73
Kurunegala	206	191	92.7	0	0.0	9	4.4	0	0.0	0	0.0	6	2.9	206
Puttalam	87	79	90.8	2	2.3	3	3.4	0	0.0	0	0.0	3	3.4	87
Anuradhapura	143	136	95.1	4	2.8	3	2.1	0	0.0	0	0.0	0	0.0	143
Polonnaruwa	72	63	87.5	3	4.2	6	8.3	0	0.0	0	0.0	0	0.0	72
Badulla	127	122	96.1	1	0.8	4	3.1	0	0.0	0	0.0	0	0.0	127
Monaragala	55	44	80.0	4	7.3	4	7.3	0	0.0	0	0.0	3	5.5	55
Ratnapura	242	226	93.4	1	0.4	11	4.5	1	0.4	0	0.0	3	1.2	242
Kegalle	172	140	81.4	1	0.6	20	11.6	0	0.0	0	0.0	11	6.4	172
Mannar	16	11	68.8	0	0.0	1	6.3	0	0.0	0	0.0	4	25.0	16
Mullaitivu	13	13	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	13
Kilinochchi	32	26	81.3	1	3.1	3	9.4	0	0.0	0	0.0	2	6.3	32
Total	4359	3670	84.2	85	1.9	211	4.8	75	1.7	2	0.0	316	7.2	4359

Table 26: Distribution of Sputum Conversion of Re-Treatment PTB Cases at the End of the Intensive Phase by District in 2019

District	Total Number Registered	Negative		Positive		Died		Defaulted		Transferred out		No result		Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	164	135	82.3	2	1.2	8	4.9	10	6.1	0	0.0	9	5.5	164
Gampaha	54	33	61.1	3	5.6	6	11.1	2	3.7	0	0.0	9	16.7	53
Kalutara	28	20	71.4	1	3.6	2	7.1	3	10.7	0	0.0	2	7.1	28
Kandy	16	15	93.8	0	0.0	0	0.0	1	6.3	0	0.0	0	0.0	16
Matale	8	6	75.0	0	0.0	0	0.0	0	0.0	0	0.0	2	25.0	8
Nuwara Eliya	11	10	90.9	0	0.0	1	9.1	0	0.0	0	0.0	0	0.0	11
Galle	23	19	82.6	1	4.3	2	8.7	0	0.0	0	0.0	1	4.3	23
Matara	7	6	85.7	0	0.0	0	0.0	0	0.0	0	0.0	1	14.3	7
Hambantota	6	4	66.7	0	0.0	0	0.0	0	0.0	0	0.0	2	33.3	6
Jaffna	7	5	71.4	0	0.0	1	14.3	0	0.0	0	0.0	1	14.3	7
Vavuniya	5	4	80.0	0	0.0	0	0.0	0	0.0	0	0.0	1	20.0	5
Batticaloa	10	8	80.0	0	0.0	0	0.0	0	0.0	0	0.0	2	20.0	10
Ampara	4	3	75.0	1	25.0	0	0.0	0	0.0	0	0.0	0	0.0	4
Kalmunai	11	5	45.5	1	9.1	1	9.1	1	9.1	0	0.0	3	27.3	11
Trincomalee	10	7	70.0	0	0.0	0	0.0	1	10.0	0	0.0	2	20.0	10
Kurunegala	20	16	80.0	0	0.0	0	0.0	2	10.0	0	0.0	2	10.0	20
Puttalam	8	6	75.0	1	12.5	1	12.5	0	0.0	0	0.0	0	0.0	8
Anuradhapura	13	12	92.3	0	0.0	0	0.0	1	7.7	0	0.0	0	0.0	13
Polonnaruwa	6	4	66.7	0	0.0	1	16.7	0	0.0	0	0.0	1	16.7	6
Badulla	21	19	90.5	0	0.0	0	0.0	1	4.8	0	0.0	1	4.8	21
Monaragala	8	5	62.5	1	12.5	0	0.0	0	0.0	0	0.0	2	25.0	8
Ratnapura	10	10	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	10
Kegalle	10	8	80.0	0	0.0	2	20.0	0	0.0	0	0.0	0	0.0	10
Mannar	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
Mullaitivu	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kilinochchi	3	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	1	33.3	3
Total	465	358	77.0	10	2.2	23	4.9	21	4.5	0	0.0	53	11.4	465

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Figure 21

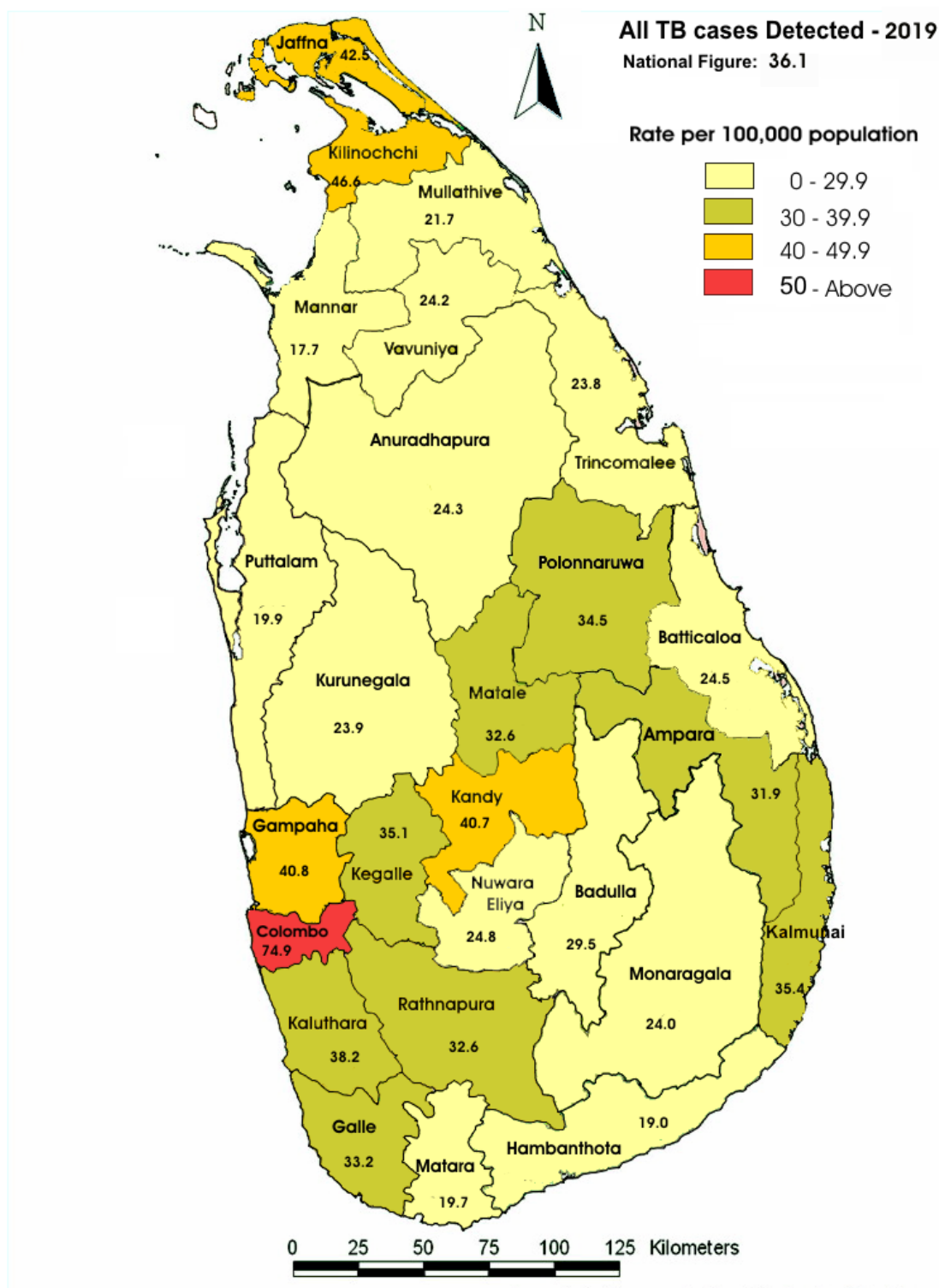


Figure 22

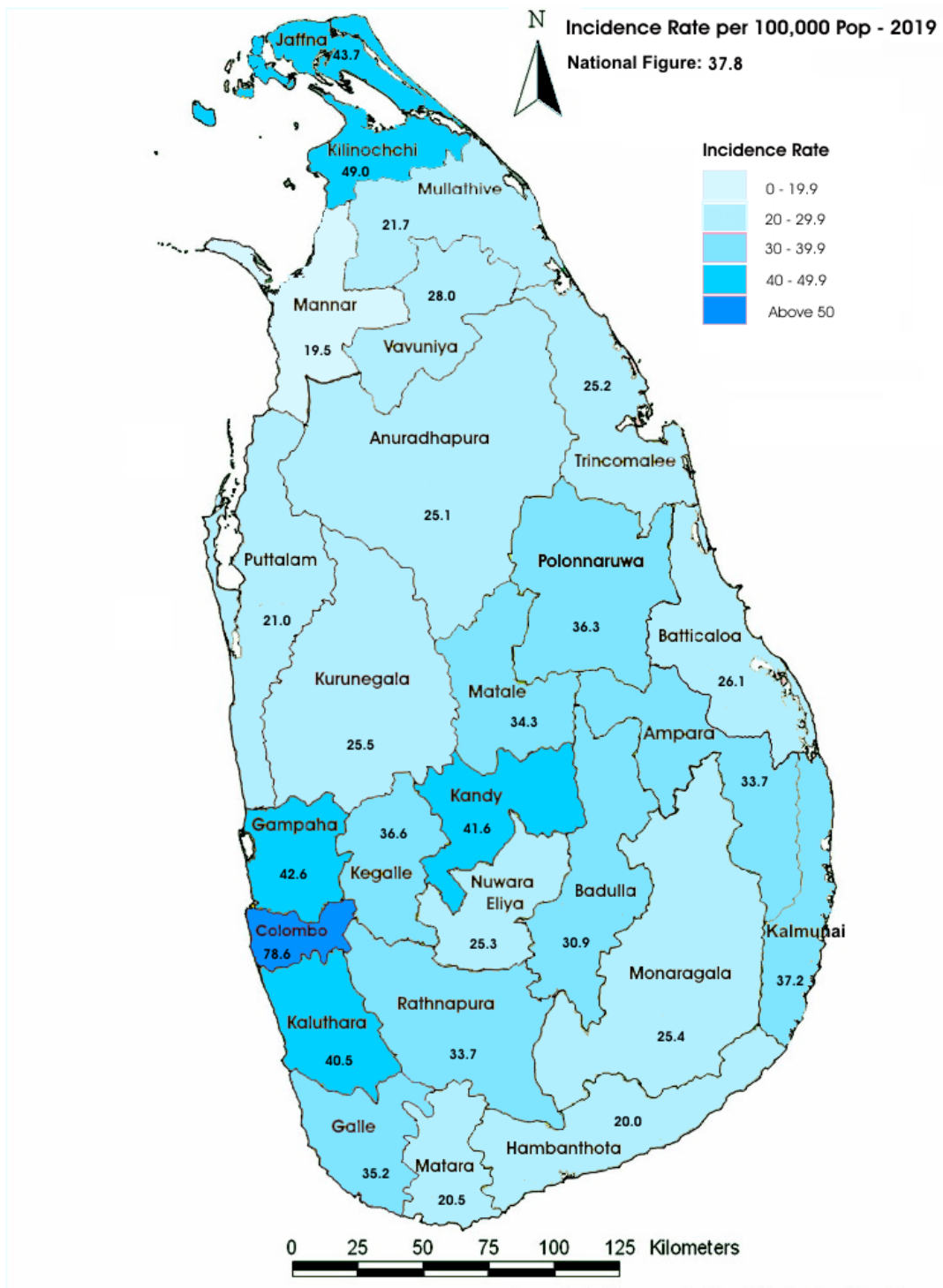


Figure 23

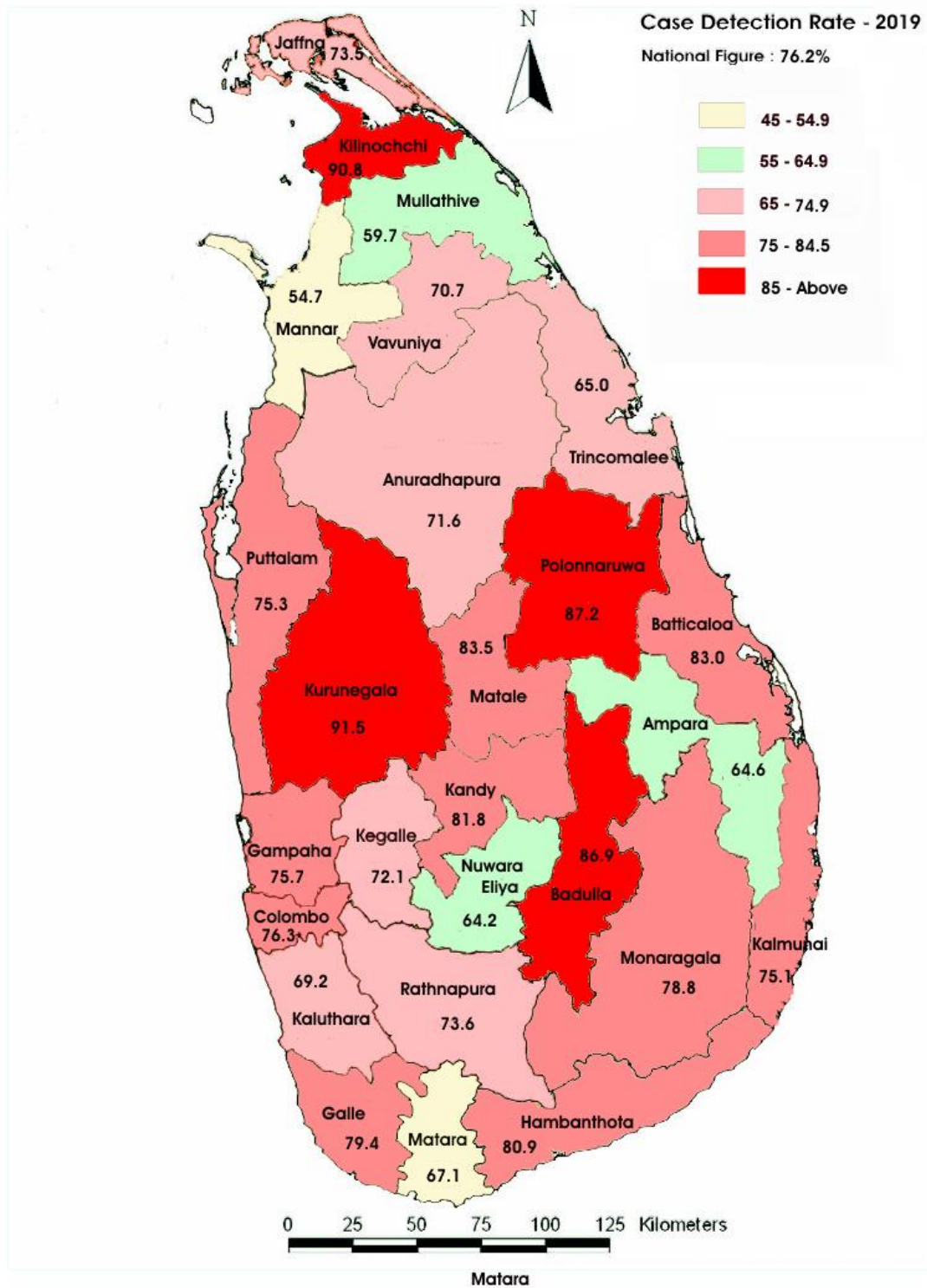
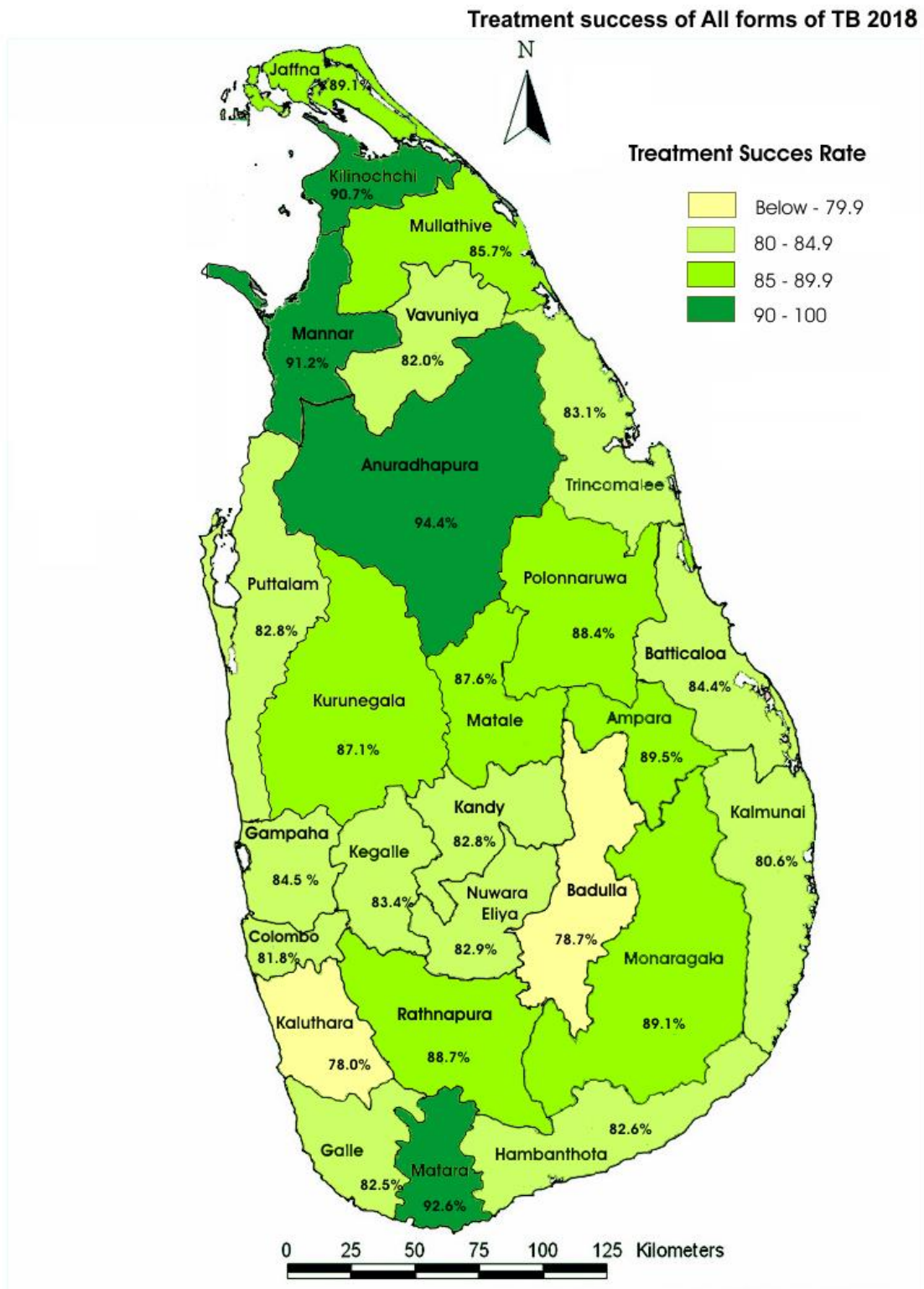
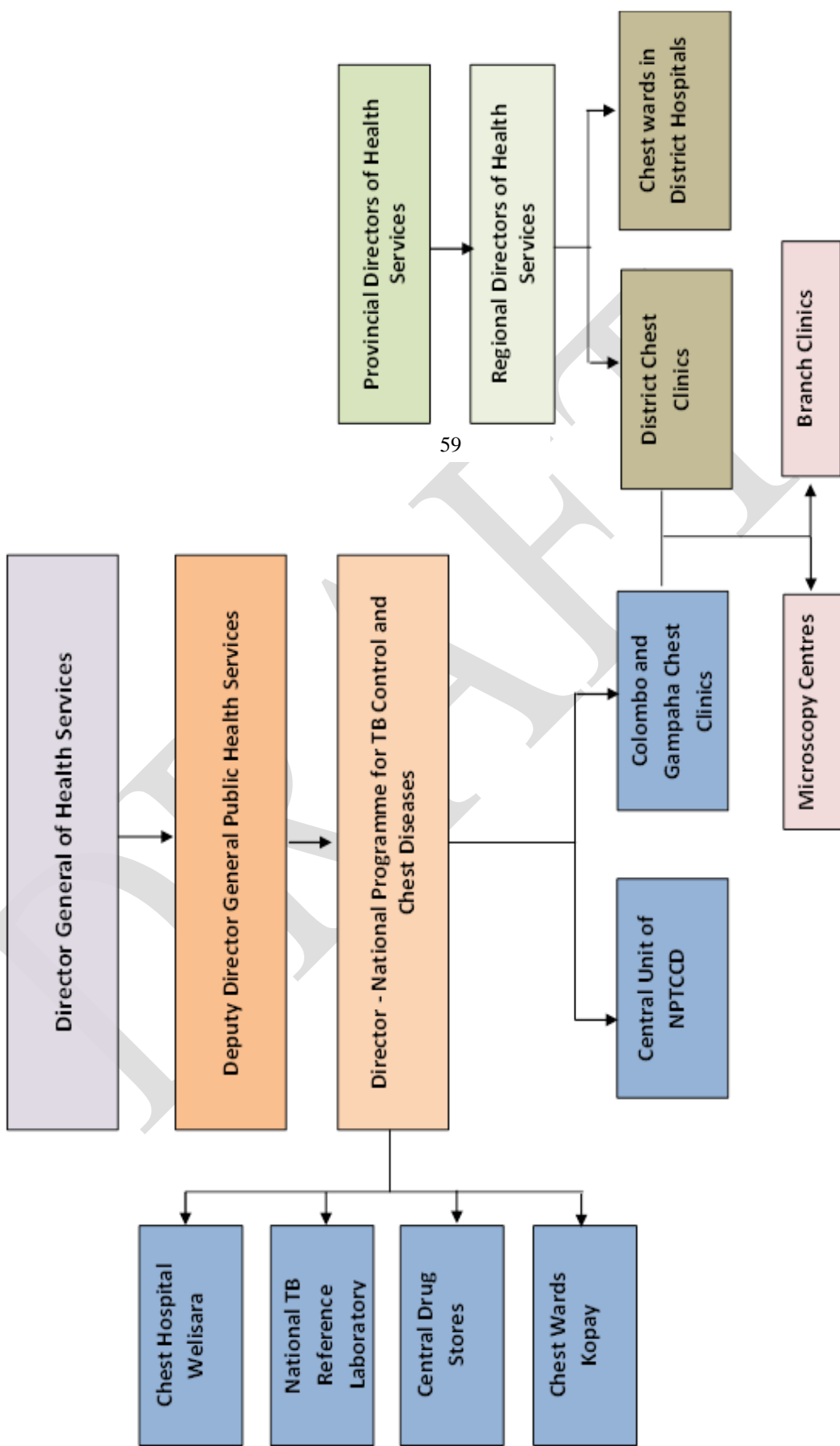


Figure 24





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