ANNUAL REPORT 2020

NATIONAL PROGRAM FOR TUBERCULOSIS CONTROL & CHEST DISEASES

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AFB	Acid Fast Bacilli
AIDS	Acquired Immune Deficiency Syndrome
BCG	Bacillus Calmette–Guérin
DCC	District Chest Clinic
DOTS	Directly Observed Treatment 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

PREFACE

The annual report of National Programme for Tuberculosis Control and Chest Diseases(NPTCCD) is an annual publication on activities and achievements of tuberculosis and chest diseases control in Sri lanka for the year.

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 2020 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 2020 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

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 program 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.

The Central Drug Stores of the NPTCCD is responsible for the 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. The distribution of anti TB drugs to DCC is carried out on a quarterly basis.

TB and respiratory disease control activities at the district level are carried out by 26 DCCs situated in 25 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 the implementation of the TB control activities at the district level.

Moreover, 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 non-governmental 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 focus 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 & 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 into 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 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 the Central Unit of the NPTCCD and to National Epidemiological Surveillance System through the 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 that occurred among TB patients during the period of treatment is collected by form TB 17. Deaths due to TB are also notified to the Registrar General's Department through the 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 consists of five modules. Currently, all districts are entering data to 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.

Moreover, 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 the revised WHO classification of TB – 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 the 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 fulfill 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 the 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 the 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

Indicators

The main indicators 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

$$\frac{\text{Number of all TB cases notified during the year}}{\text{Mid-year population for the same year}} \times 100{,}000 \text{ population}$$

- **Case Detection Rate**

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

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*".

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**

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

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.

- **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 4549 was notified to NPTCCD in 2020. 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 2020, this number was 7258.

➢ TB Death Notification (H 814)

During the year 2020, 602 TB deaths were notified by H814 (Table 18).

Incidence of Tuberculosis

The incidence rate of TB in Sri Lanka for 2020 was 32.2 per 100,000 population. The incidence rate has dropped by 5.6 % compared to the previous year (Figure 1). The proportion of relapse cases among detected TB patients in 2020 (5.1%) shows an increase compared to the same proportion in 2019.

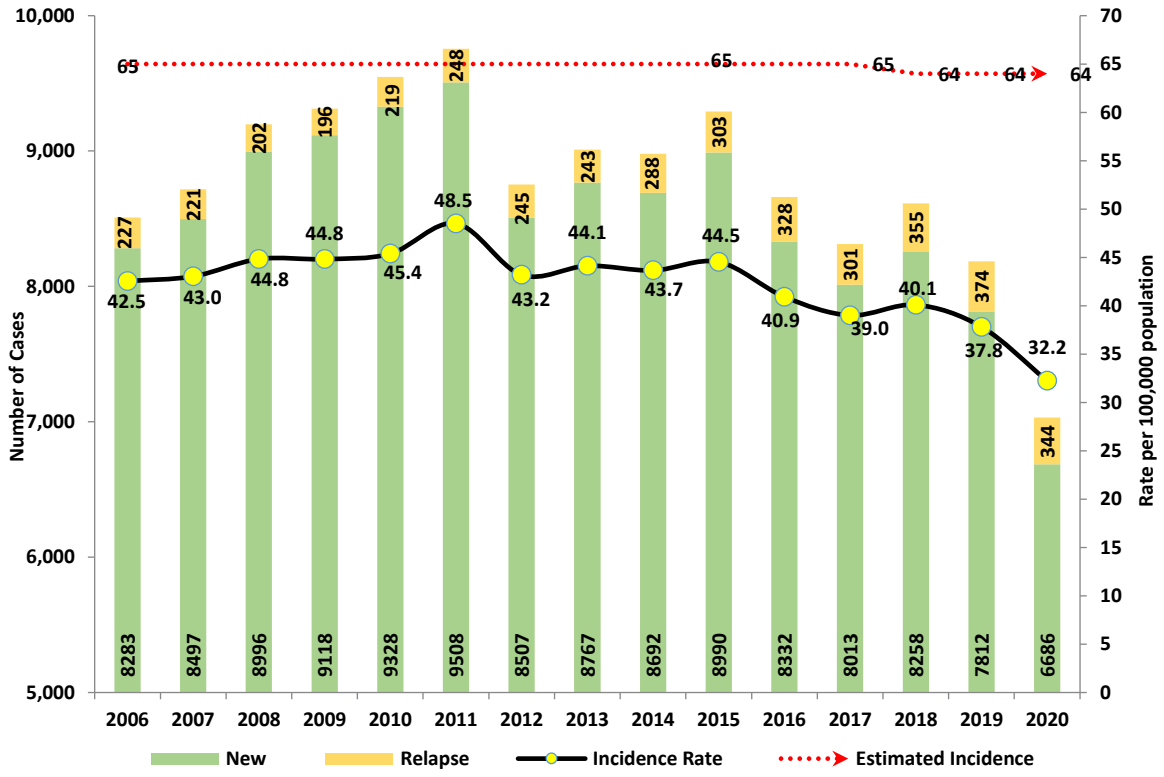


Figure 1: Tuberculosis incidence rates from 2006 to 2020

Case Detection

The total number of all forms of new TB cases reported from DCCs was 7258. This is a reduction from the previous year's total number (Figure 2). Among those, 6686 (92.1%) were new cases, 567 (7.8%) were previously treated cases and 5 (07.%) were cases with unknown treatment history.

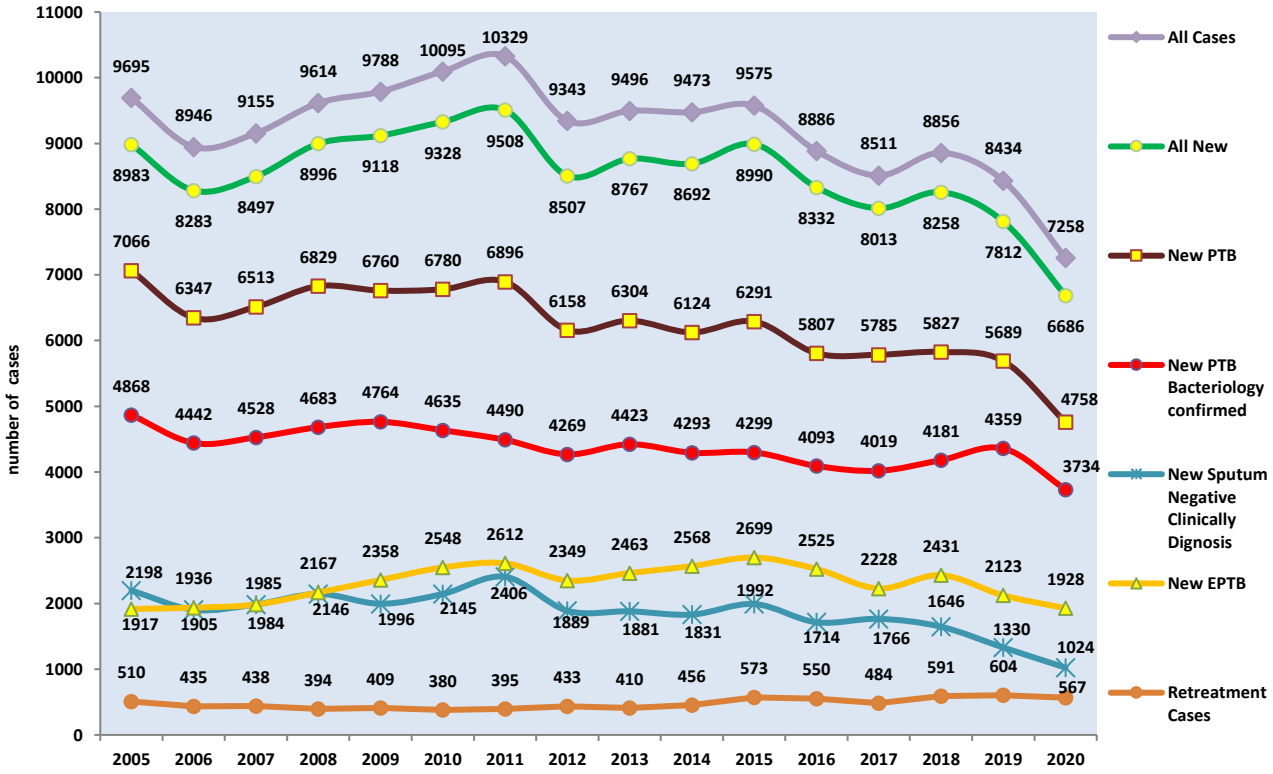


Figure 2: Case Detection of TB by Type in 2005 - 2020

Among the 6686 new TB cases, 4758 (71.2%) were pulmonary TB (PTB) cases and the rest 1928 (28.8%) were extrapulmonary TB (EPTB) cases. Of the 4758 PTB cases, 3734 (78.5%) were bacteriologically diagnosed, while 1024 (21.5%) were clinically diagnosed (Figure 3). Of the 3734 bacteriologically confirmed new PTB cases, 3092 (82.8%) were sputum microscopy positive, 113 (3.0%) were sputum negative culture positive, and 529 (14.2%) were xpert MTF/RI positive cases. Out of the previously treated cases of 567, 432 (76.2%) were bacteriologically confirmed PTB, 56 (9.9 %) were clinically diagnosed PTB and 79 (13.9 %) were EPTB cases (Table 30).

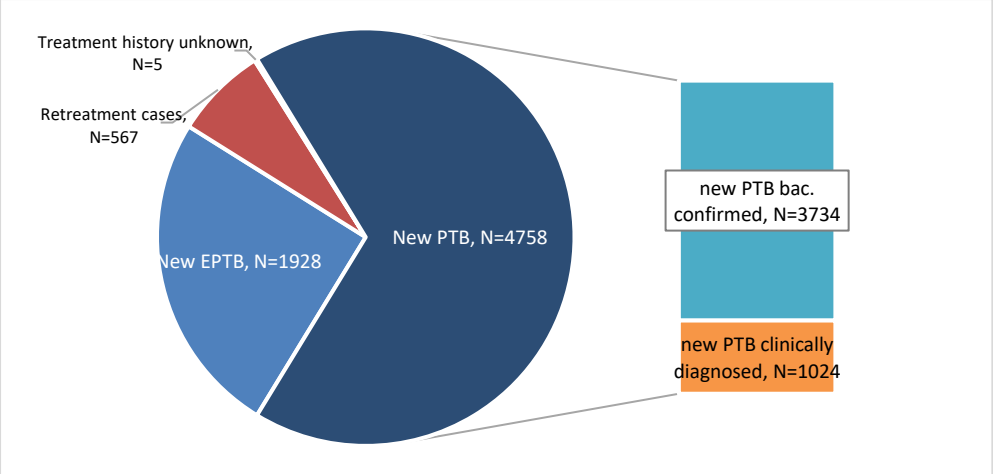


Figure 3: Case Detection of TB by Type in 2020

There was a high disparity of TB case detection among districts (Figure 4). The highest number of TB cases was reported from Colombo (n= 1714, 23.6%), followed by Gampaha (n= 847, 11.7%) and Kalutara (n= 495, 6.8 %).

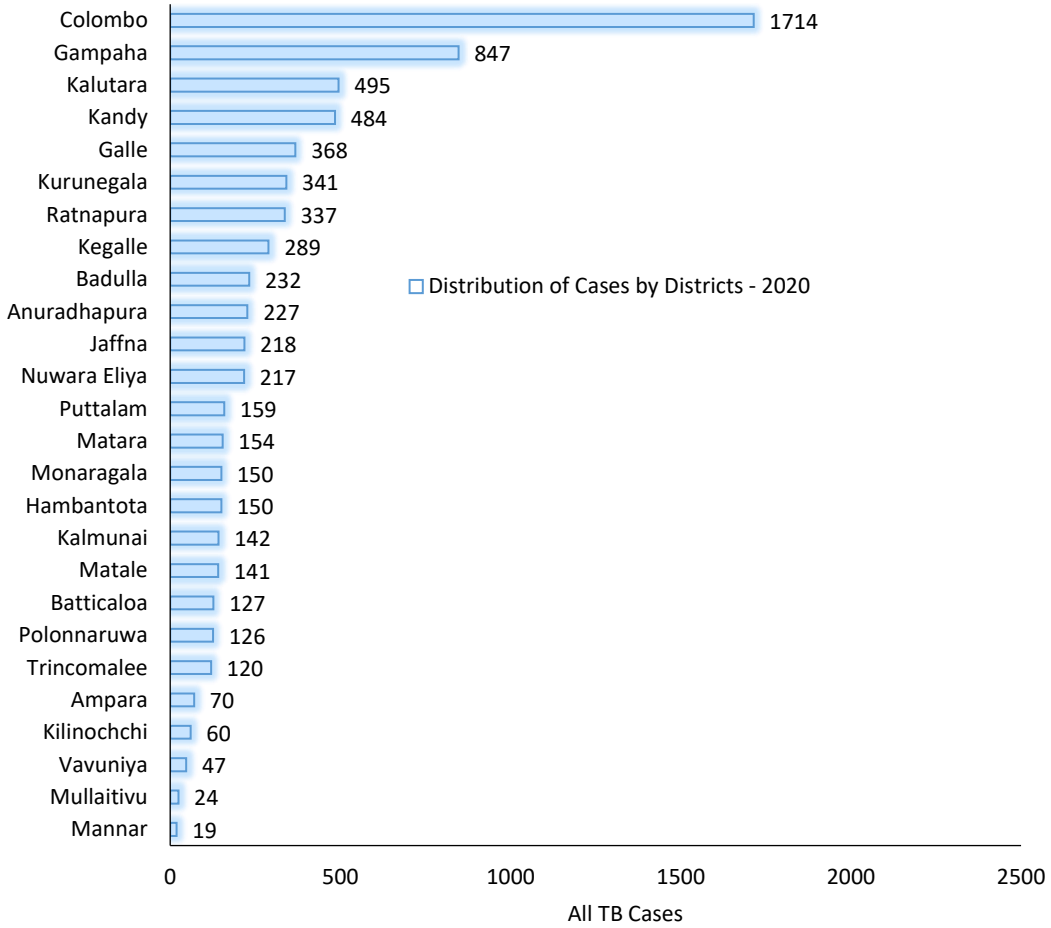


Figure 4: TB Case Detection by District of Registration in 2020

Colombo district also accounted for the highest number of relapse cases of 86, which was 25% of total relapse cases. Colombo also reported the highest number of cases in categories of 'treatment after failures' (n= 34, 32.7%) and lost to follow up cases (n= 39; 43.3%). The lowest numbers of TB cases were reported from the Eastern province, with Mannar district reporting 19 cases (0.3%) and Mullaitivu district reporting 24 cases (0.4%) (Table 9).

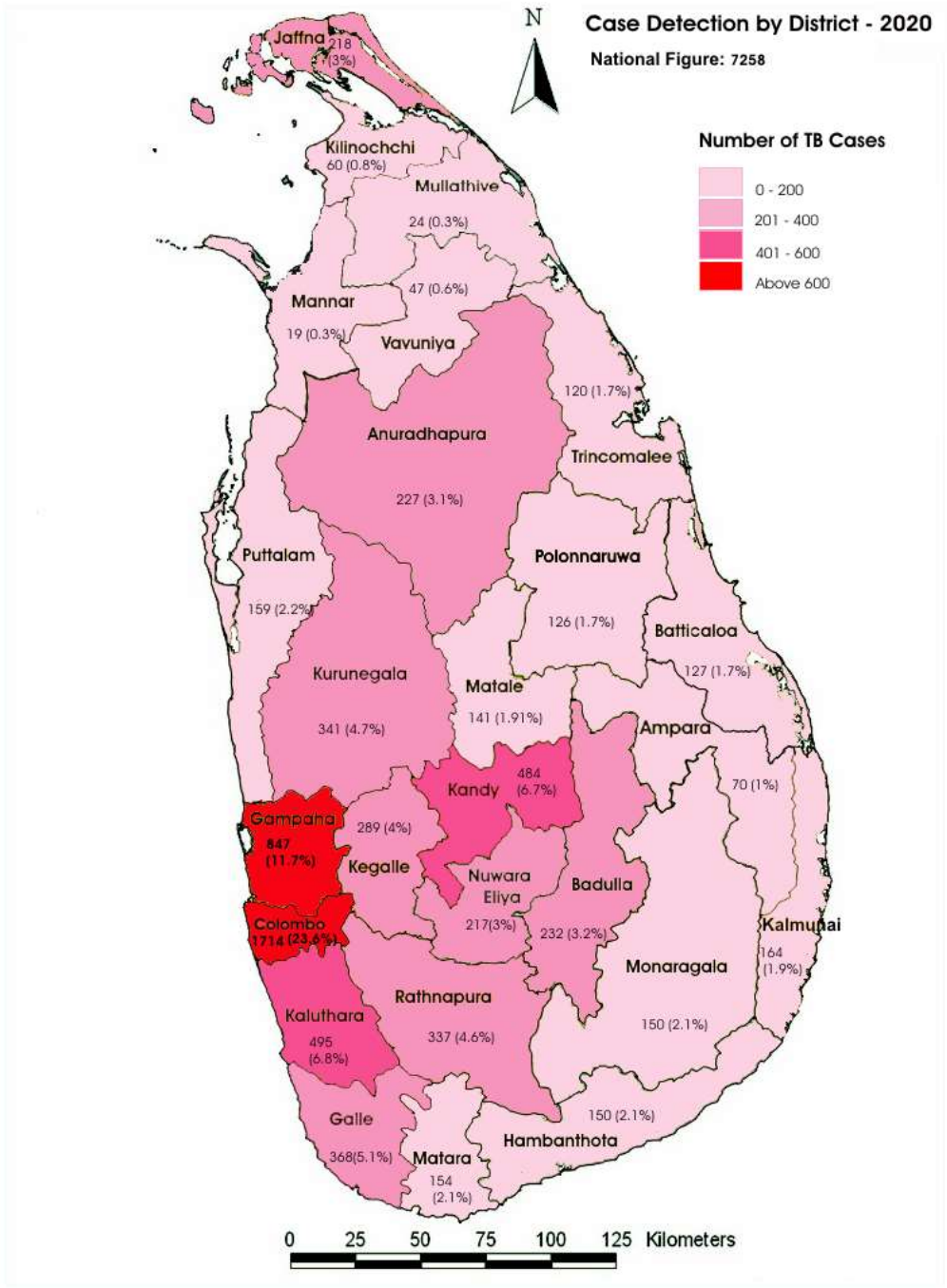


Figure 5: The Map of Sri Lanka with TB Case Detection by District - 2020

➢ 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 76.7% in the Vavuniya district to 41.7% in Mullaitivu and Nuwara Eliya districts. Likewise, the proportion of clinically diagnosed new TB cases ranged from 26.6% in the Polonnaruwa district to 2.1% in the Matara district. The highest proportion of EPTB among the new cases was reported from the Mullaitivu district (50%), while the lowest proportion of 11.6% was reported from the Vavuniya district.

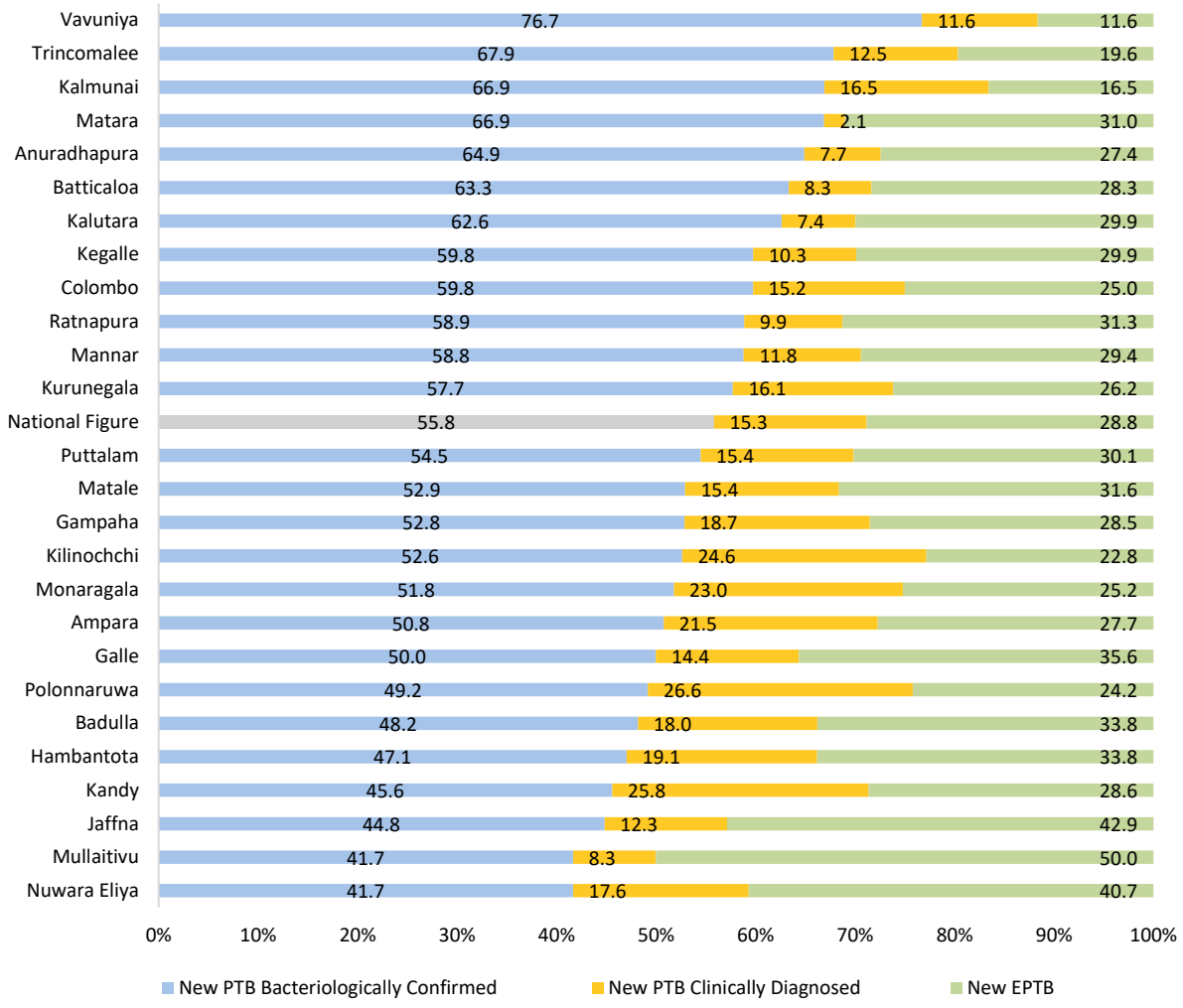


Figure 6: : Percentage Distribution of New Cases of TB by Type and District in 2020

➢ Bacteriology confirmed New Pulmonary TB cases

The highest number of bacteriologically confirmed pulmonary TB cases 913 (37.6 per 100,000 population) was reported from Colombo district. The second highest number, 408 of bacteriologically confirmed pulmonary TB cases was reported from Gampaha district and the district rate is less than half of that of the Colombo district (Figure 7).

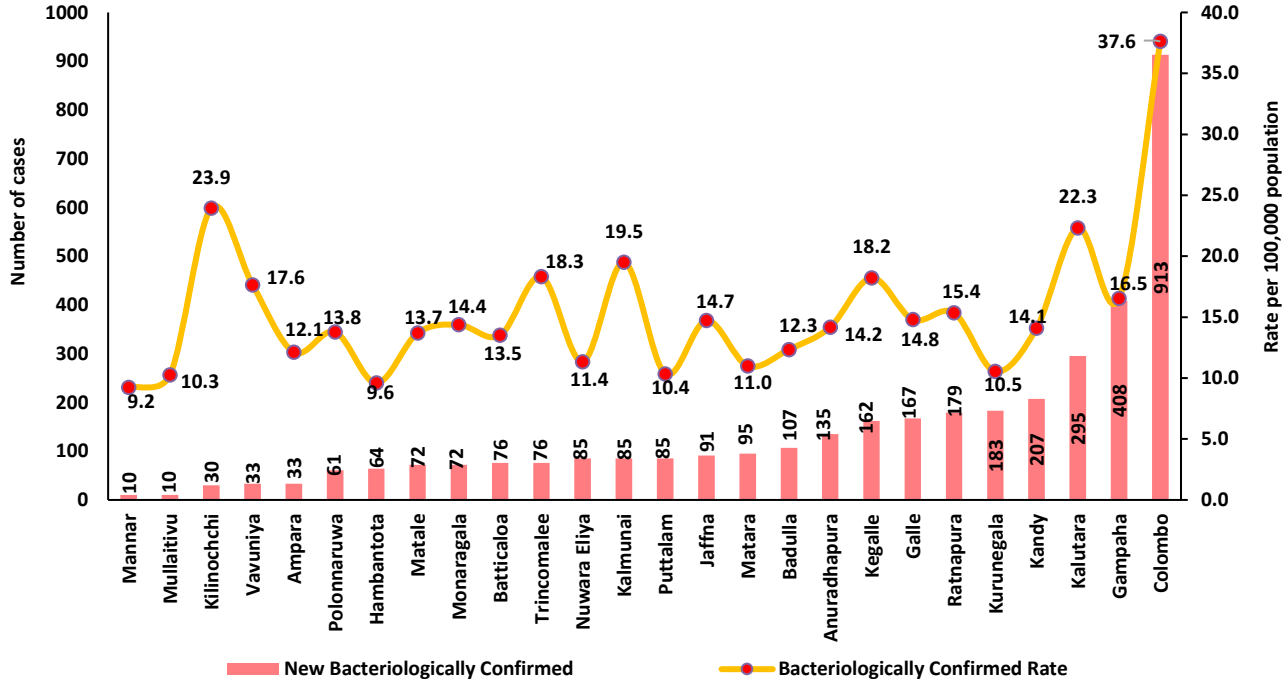


Figure 7: Distribution of Bacteriology confirmed New Pulmonary TB case detection

➢ Clinically Diagnosed New Pulmonary TB

A total of 1024 new TB cases were clinically diagnosed in 2020. The highest number of clinically diagnosed cases was reported from Colombo district (n= 233) with a rate of 9.6 per 100,000 population. However, the highest rate of clinically diagnosed patients was reported from Kilinochchi (11.2 per 100,000 population) (Figure 8).

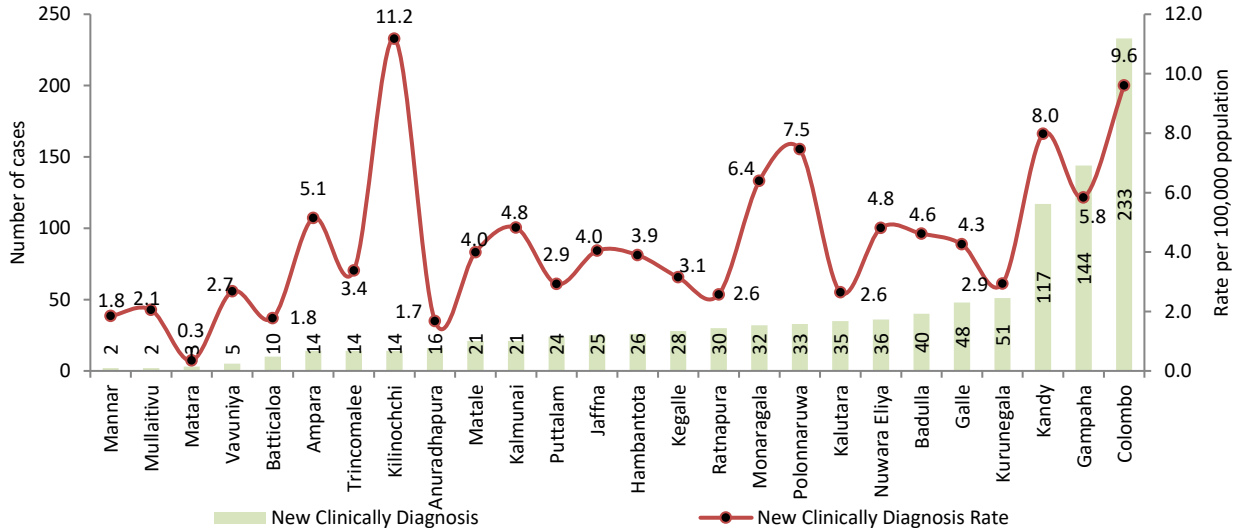


Figure 8: Distribution of Clinically Diagnosed New PTB Cases Detection by Districts in 2020

➢ Age and Sex Distribution of New TB Cases

The highest number, 1433 (21.4%) of new TB cases was the 55-64 age group. The lowest number was in 0-14 age group (n= 186, 2.8 %). Out of 6686 new cases, 3670 (54.9%) were in the economically productive age group of 15-54. The number of males with TB (n= 4292, 64.2%) was as twice as the number among females (n= 2394, 35.8%). 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 9).

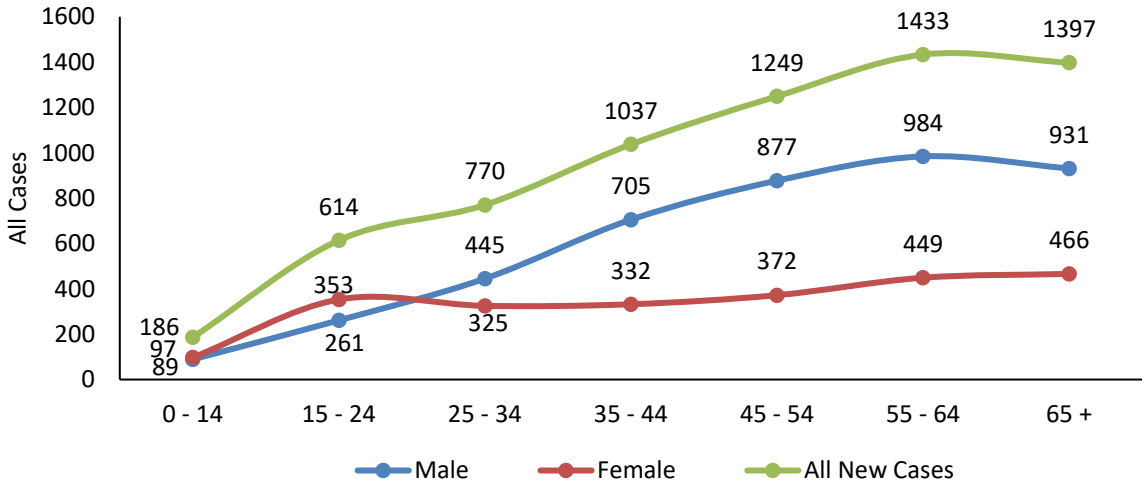


Figure 9: Distribution of All New Cases of TB by Age Groups and Sex in 2020

➢ Extra Pulmonary TB

New EPTB Case Detection

A total of 1928 new EPTB cases were reported in 2020. Colombo District accounted for the highest number (n= 382), followed by Gampaha district (n= 220) and Kalutara district (n= 141). The highest rate (15.7 per 100,000 population) of EPTB was reported from the Colombo district. The lowest number of 5 EPTB cases were reported from both Vavuniya and Mannar districts (Figure 10).

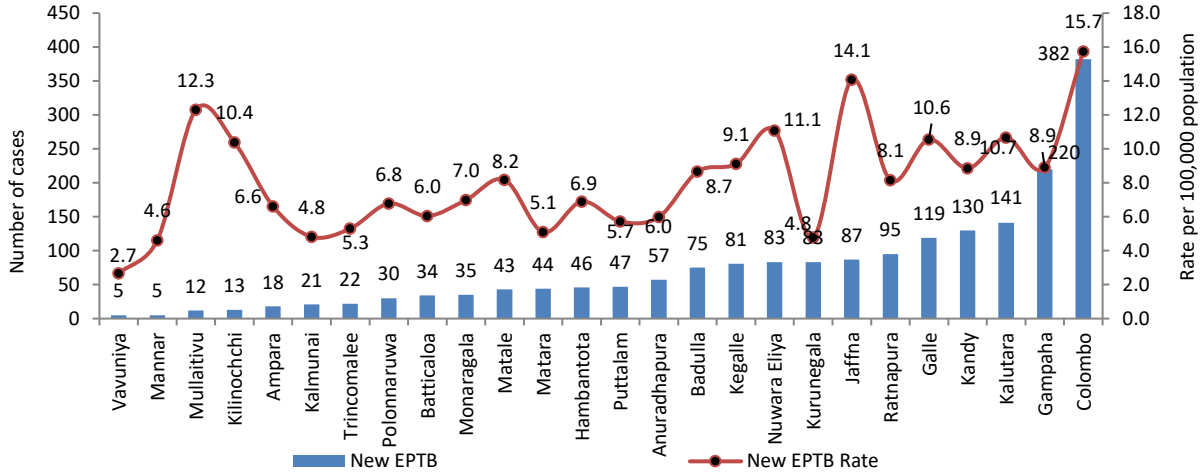


Figure 10: Distribution of New Extra Pulmonary TB Case Detection by Districts in 2020

Sites of EPTB Cases

Out of all EPTB cases, TB of other organs (ICD code A 18), accounted for 44% of EPTB cases followed by respiratory tract tuberculosis not confirmed bacteriologically or histologically (ICD code A 16) (27.5%). According to the site, TB adenitis (ICD code A 18.2) was the commonest site (n=328, 16.4%) followed by Tuberculous pleurisy (ICD code A 16.5) (n=267, 13.3%) (Table 2).

Table 2: Distribution of All Cases of Extra Pulmonary Tuberculosis by Site in 2020

ICD-10 Code	Site	Number of Cases	Percentage
A15: Respiratory tuberculosis, bacteriologically and histologically confirmed		**258**	**12.9**
A15.4	Tuberculosis of intrathoracic lymph nodes	**61**	**3.0**
A15.6	Tuberculous pleurisy	**195**	**9.7**
A15.8	Other respiratory tuberculosis (mediastinal, nasopharyngeal, nose, sinus [any nasal])	**1**	**0.0**
A15.9	Respiratory tuberculosis unspecified	**1**	**0.0**
A16: Respiratory tuberculosis, not confirmed bacteriologically or histologically		**550**	**27.5**
A16.3	Tuberculosis of intrathoracic lymph nodes	**160**	**8.0**
A16.4	Tuberculosis of larynx,trachea and bronchus	**119**	**5.9**
A16.5	Tuberculous pleurisy	**267**	**13.3**
A16.8	Other respiratory tuberculosis (mediastinal, nasopharyngeal, nose, sinus [any nasal])	**3**	**0.1**
A16.9	Respiratory tuberculosis unspecified	**1**	**0.0**
A17: Tuberculosis of nervous system		**140**	**7.0**
A17.0	Tuberculous meningitis	**92**	**4.6**
A17.1	Meningeal tuberculoma	**6**	**0.3**
A17.8	Other tuberculosis of nervous system	**28**	**1.4**
A17.9	Tuberculosis of nervous system, unspecified	**14**	**0.7**
A18: Tuberculosis of other organs		**874**	**43.7**
A18.0	**Tuberculosis of bones and joints**	**0**	**0.0**
	Spinal TB (Includes Vertebral Column - M49.0*)	**169**	**8.4**
	Tuberculosis of other bones and joints (Excluding spinal TB)	**32**	**1.6**
A18.1	Tuberculosis of genitourinary system	**64**	**3.2**
A18.2	Tuberculous peripheral lymphadenopathy (TB adenitis)	**328**	**16.4**
A18.3	Tuberculosis of intestines, peritoneum and mesenteric glands	**95**	**4.7**
A18.4	Tuberculosis of skin and subcutaneous tissue	**93**	**4.6**
A18.5	Tuberculosis of eye	**91**	**4.5**
A18.6	Tuberculosis of ear	**0**	**0.0**
A18.7	Tuberculosis of adrenal glands	**2**	**0.1**
A18.8 Tuberculosis of other specified organs		**180**	**9.0**
18.8	Pericardium	**15**	**0.7**
	Disaminated	**41**	**2.0**
	Site not specified	**41**	**2.0**
	Brest	**14**	**0.7**
	Other	**69**	**3.4**
Total		**2002**	**100.0**

➢ **Miliary TB and Tuberculous Meningitis**

Figure 11 depicts the distribution of Miliary TB and Tuberculous Meningitis cases from 2010 – 2020.

Over the years, the number of Miliary TB cases has shown wide fluctuations with a drastic drop observed in 2017 (n=8). Although cases have increased slightly in 2019 (n=16), 2020 shows a drop in numbers (n=6).

In contrast, the number of Tuberculous Meningitis cases has remained more or less similar with mild dips and peaks, except for a sharp drop observed in 2012 (n=78). The number of cases further dropped in 2020 (n=81).

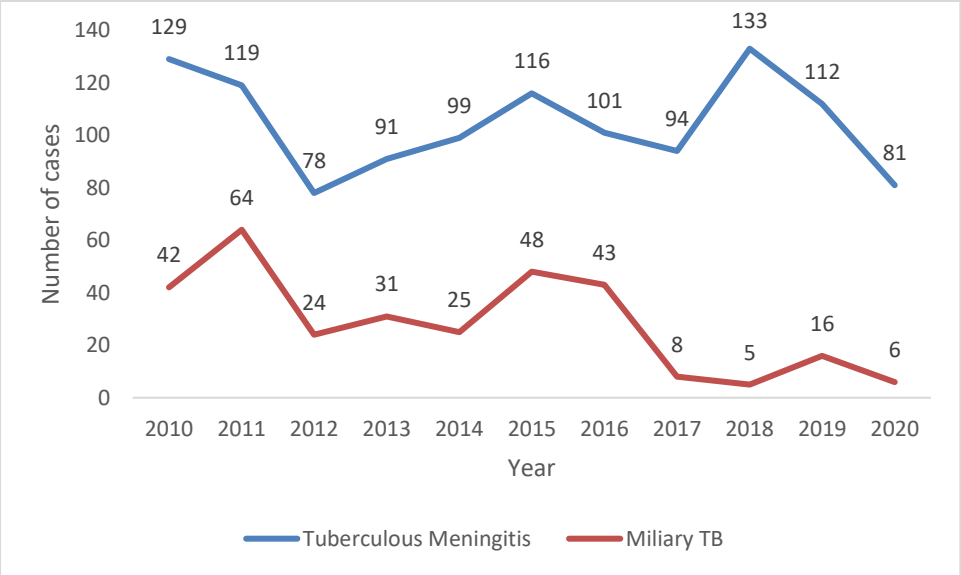


Figure 11: Distribution of All Cases of Extra Pulmonary Tuberculosis by Site in 2020

➢ **Previously treated TB Cases**

In 2020, 567 (7.8%) re-treatment cases were reported. This consisted of 344 relapses (60.7%), 104 (18.3%) treatment after failure, 90 (15.9%) treatment after lost to follow up, and 29 (5.1%) other previously treated cases (Table 9).

The highest numbers of re-treatment cases were reported from Colombo district (n=181) and Gampaha district (n=75). Treatment after failure cases were reported in higher numbers in Colombo (n=34) and Kandy (n=10) districts.

Colombo (n=39, 21.5 %) and Gampaha (n=20, 26.7 %) were the districts that reported higher numbers of treatment after lost to follow-up cases. Colombo (n=86, 47.5%) district reported the highest number of relapse cases contributing a significant number of cases for the national figure (Figure 12).

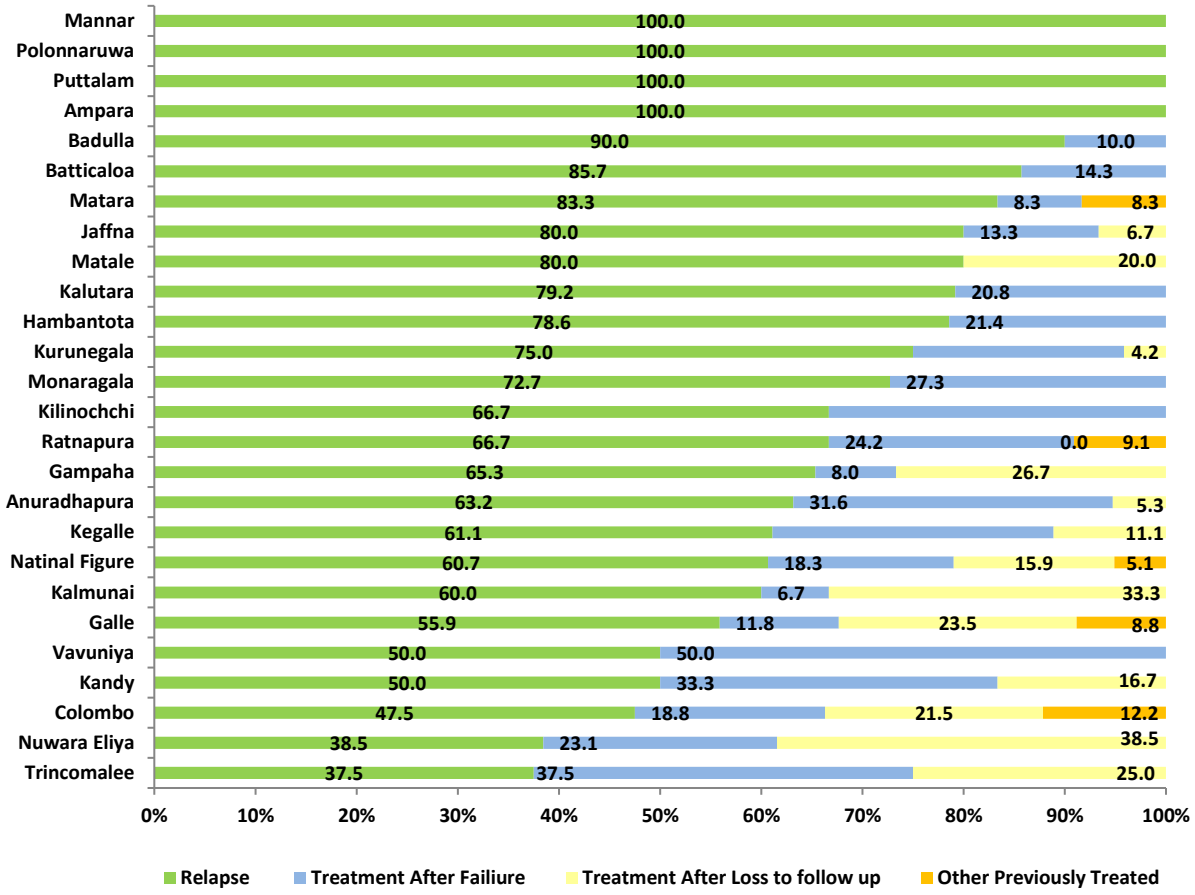


Figure 12: Proportion of Previously Treated Categories by District in 2020

➢ 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. Fourteen cases of MDR-TB were reported in year 2020 and all 14 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 2010-2020 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	2020
Number of laboratories that confirmed MDRTB	8	12	5	4	13	13	17	25	12	21	14
Number enrolled in treatment in the same	4	5	4	4	11	13	17	24	12	21	14
Number enrolled in treatment in the next	1	4	1	-	-		-	-	-	-	-
Total number enrolled in treatment	5 63%	9 75%	5 100%	4 100%	11 85%	13 100%	17 100%	24 96%	12 100%	21 100%	14 100%

The outcome of MDR-TB patients

Table 4 describes the outcomes of MDR-TB patients registered between 2013-2018. Over the years, a vast improvement of the cure rate is observed from 50.0% in 2013 to 91.7% in 2018.

Table 4: Outcome of MDR-TB patients reported from 2013-2018

Year	Total Registered	Treatment Started	Trea-Success	Trea-Success	Deaths	Death Rate	Failure / Rx with held	Faliure Rate	Lost to Follow up	Lost to Follow up Rate	Diag. Change	Diag. Change Rate
2013	**4**	4	2	50.0	1	25.0	1	25.0	0	0.0	0	0.0
2014	**13**	11	9	69.2	2	15.4	0	0.0	2	15.4	0	0.0
2015	**13**	13	10	76.9	2	15.4	0	0.0	1	7.7	0	0.0
2016	**17**	17	11	64.7	4	23.5	2	11.8	0	0.0	0	0.0
2017	**25**	25	17	68.0	6	24.0	0	0.0	1	4.0	1	4.0
2018	**12**	12	11	91.7	0	0.0	1	8.3	0	0.0	0	0.0

Figure 13 depicts the number of laboratory confirmed cases and treatment success rates of MDR TB patients from 2012 to 2018. The number of laboratory confirmed MDR TB patients have improved over the years with a sharp rise seen in 2017 (n=25). The highest treatment success rate was observed in 2018 (91.7%).

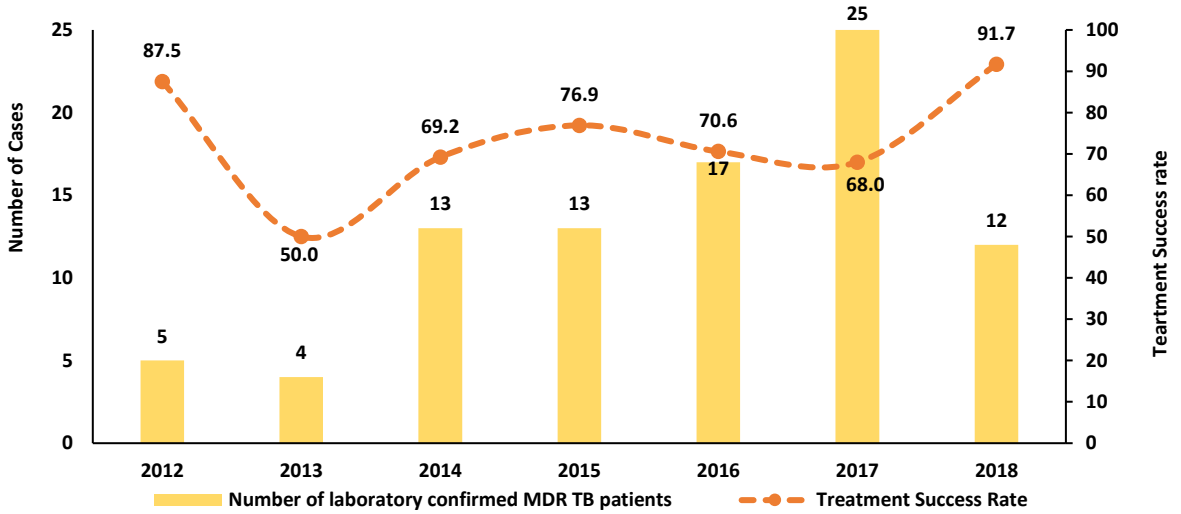


Figure 13: Number of laboratory confirmed cases and Treatment Success Rate of MDR TB patients from 2012-2018

As illustrated in Figure 14 the highest numbers of MDR-TB cases are reported from the districts of Colombo, Gampaha, Kandy and Batticaloa in 2020.

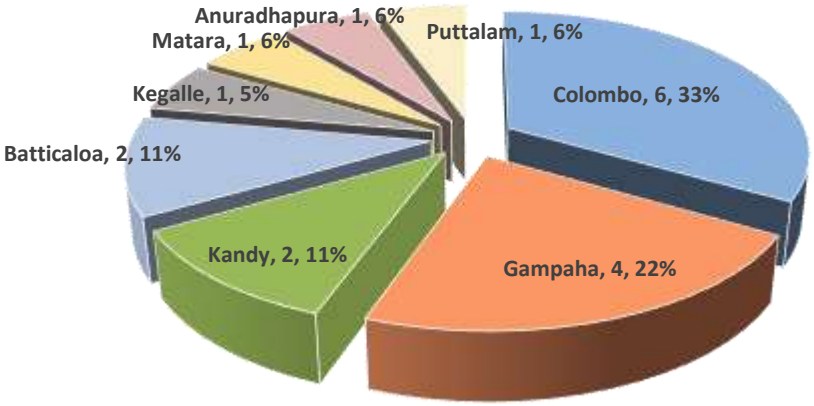


Figure 14: District distribution of Multi Drug Resistant Tuberculosis by District in 2020

➢ TB/HIV Co-Infection

HIV testing of all TB patients was made mandatory in 2013. In 2020, 6679 (92%) TB patients were screened for HIV (figure 15). Of these patients, 13 patients were found HIV positive. In addition, there were 20 patients with known HIV - status diagnosed with TB contributing to the total of 33 patients with HIV/ TB co-infection in 2020.

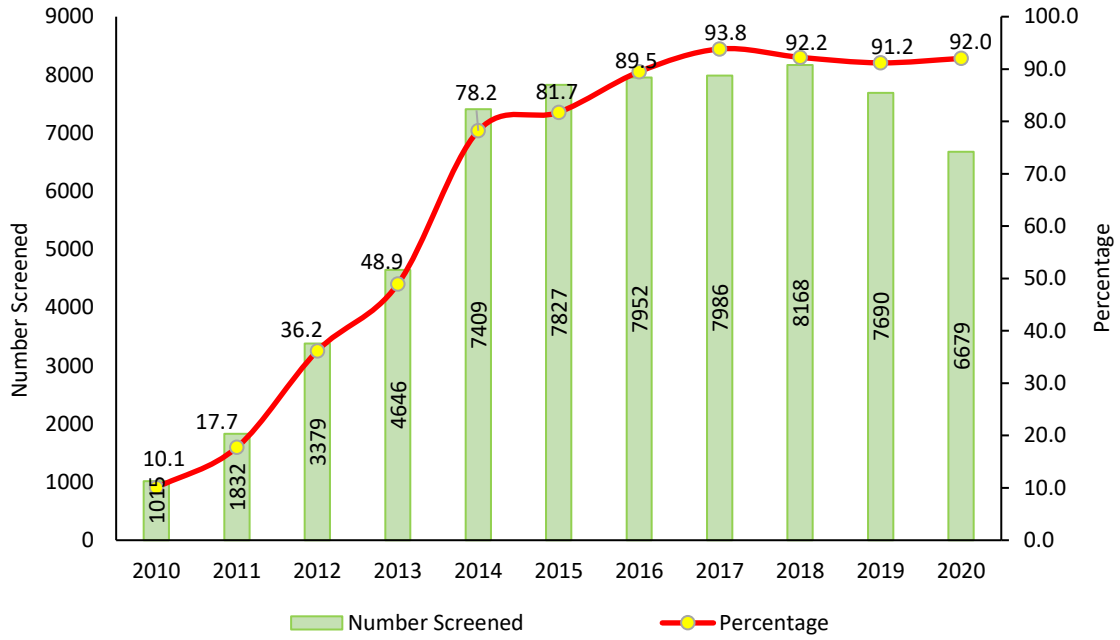


Figure 15: Percentages and Numbers of TB/HIV screening 2010-2020

➢ TB Among Health Care Workers

In 2020, 62 health care workers had been diagnosed with TB. The majority of them (n=18, 29%) were reported from Kandy District, followed by Colombo (13, 21%) District (figure 16).

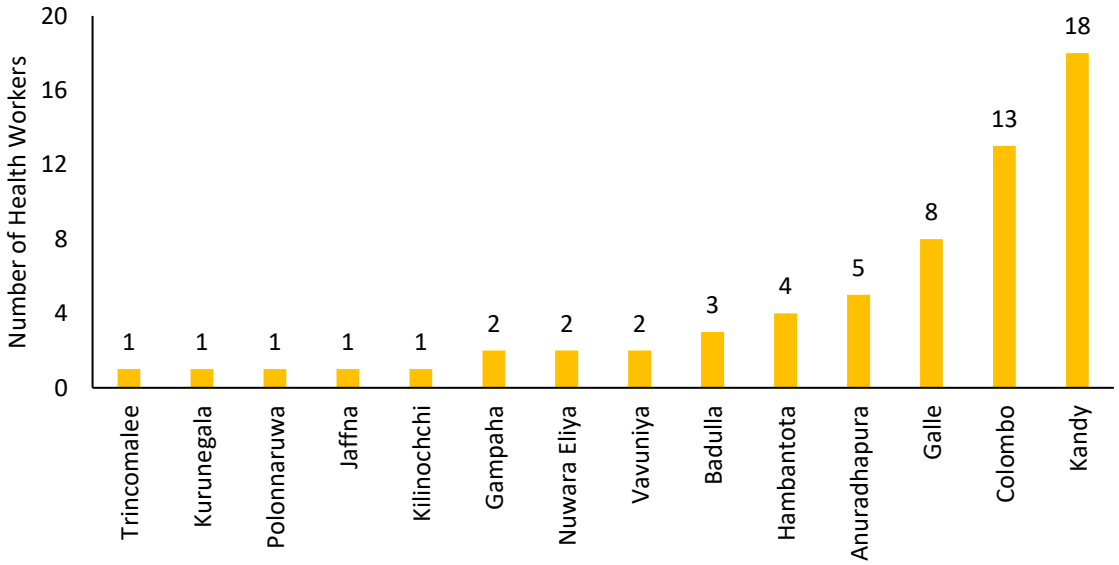


Figure 16: District Distribution of Health Care Workers with TB in 2020

➢ TB Among Foreign Nationals

In 2020, 12 foreign nationals with TB were reported to NPTCCD from Colombo (8), Gampaha (1), Galle (1), Batticaloa (1) and Anuradhapura (1) districts.

Conversion of sputum positives

Sputum microscopy is carried out at the end of intensive phase of anti-TB treatment for new (2/3 months) and previously treated (3/4 months) patients in order to assess treatment efficacy and to decide on further treatment.

➢ Sputum Conversion rates at the end of intensive phase for new PTB cases

Figure 17 illustrates the rates of sputum conversion at the end of intensive phase for new PTB patients by district for the year 2020.

The national figure for sputum conversion is 79.2% for the year 2020 which is slightly lower than the global target of 85%. The highest sputum conversion rate has been reported from Mullaitivu (100%) followed by Ratnapura(93.9%) and Anuradhapura (93.3%) districts. Matara (55.7%) and Kalmunai (61.6%) districts report the two lowest rates for year 2020.

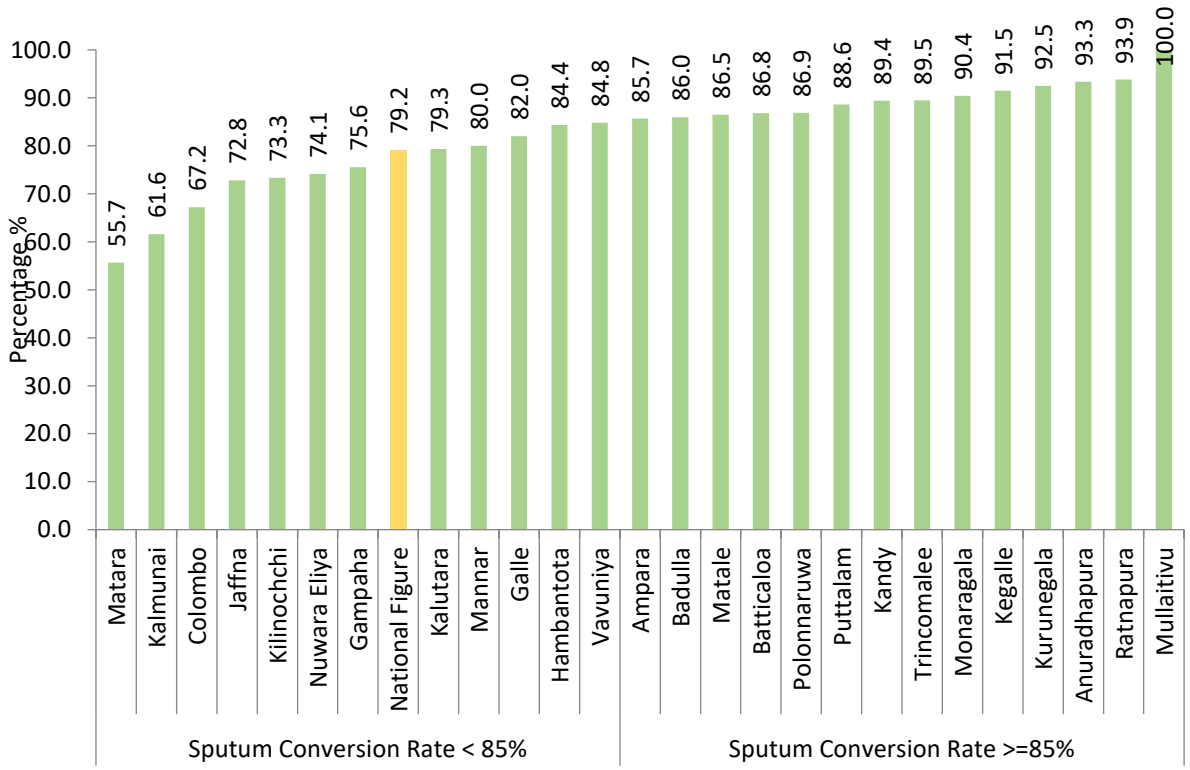


Figure 17: Sputum Conversion rate for new patients by district for year 2020

- **Sputum Conversion rates at the end of intensive phase for previously treated PTB cases**

The national figure for the sputum conversion rate for previously treated patients is 67.8%. The highest rate of 100% was observed in Mannar, Monaragala, Polonnaruwa, Anuradhapura and Ampara districts. (100%), and Ratnapura (100%) districts followed by Kandy (93.8%) and Anuradhapura (92.3%) districts, whereas The lowest sputum conversion rate was reported from Kalmunai district at a rate of 18.2% (Figure 18).

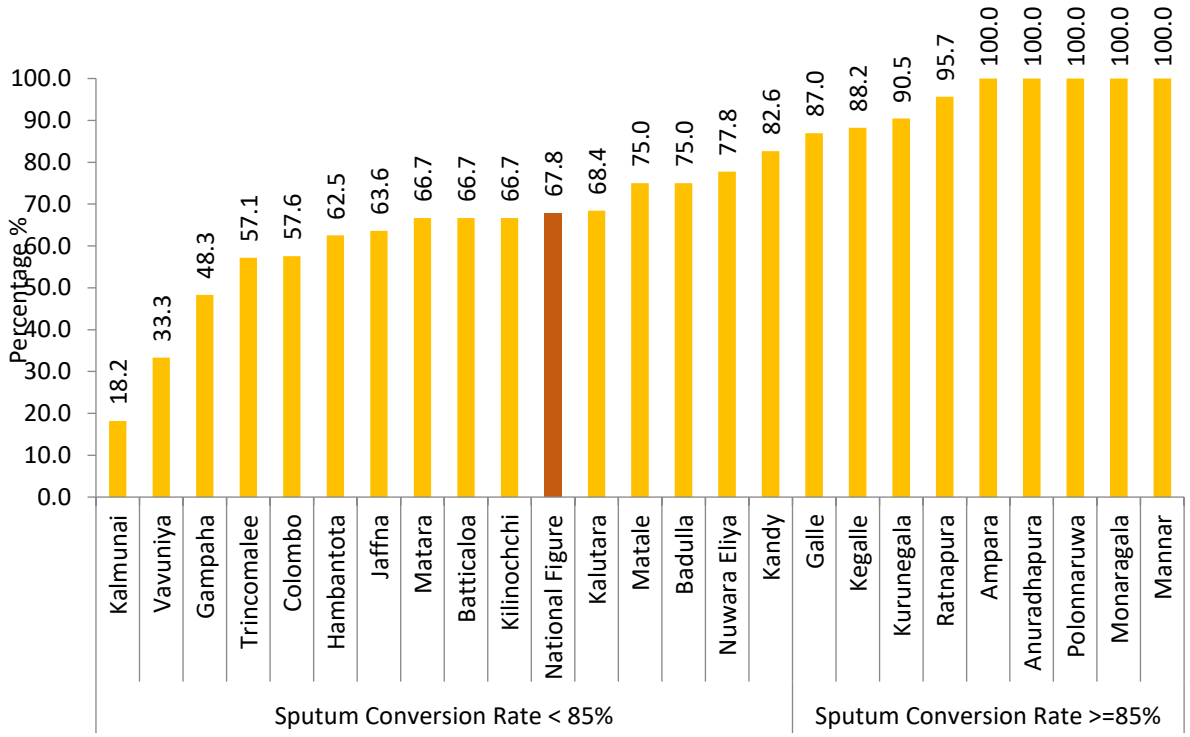


Figure 18: Sputum Conversion rate for previouslytreated patients by district for year 2020

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 2019.

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

Total number of cases registered for treatment in 2019 was 8434. Out of this, outcome of 315 (3.7%) patients was not evaluated (Table 18). Outcome of rest of the patients is illustrated in figure 19.

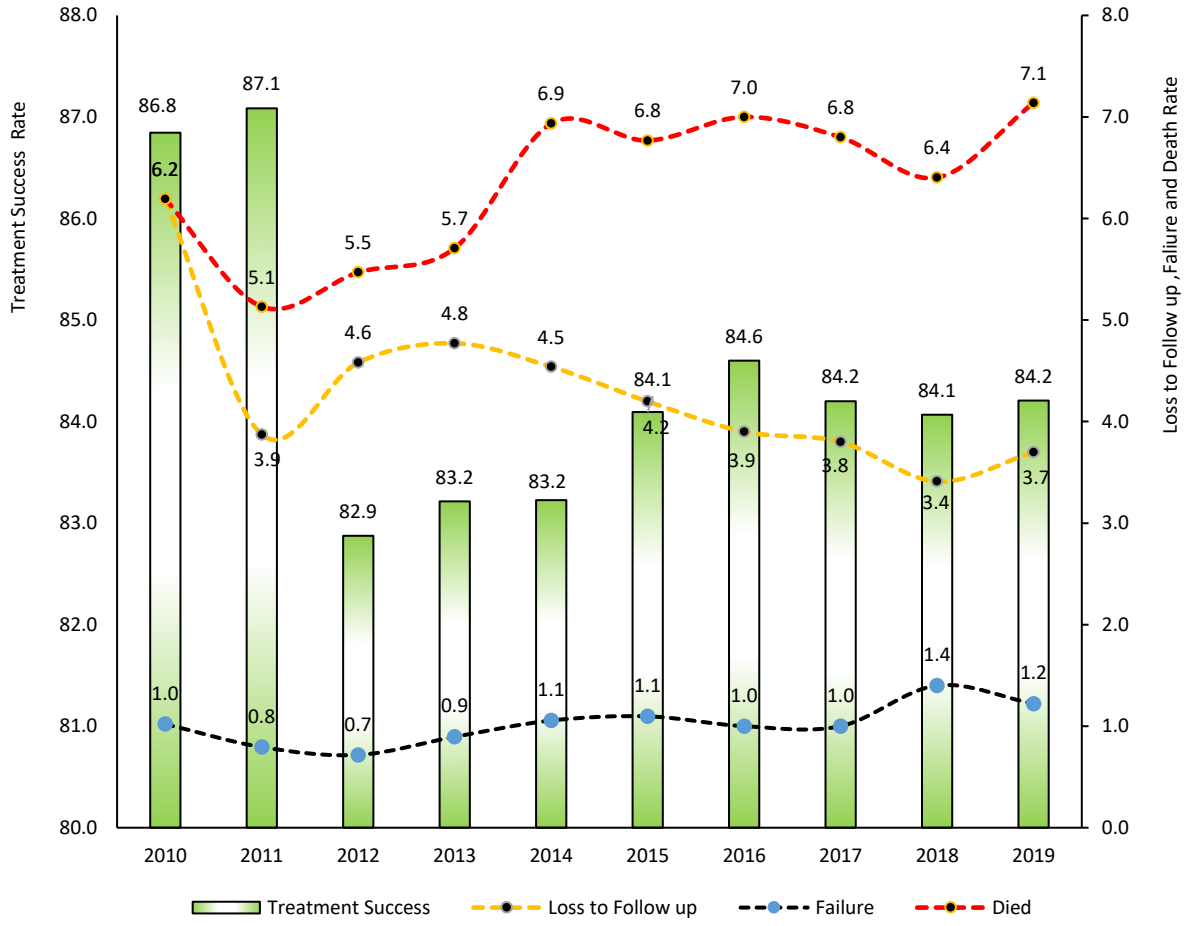


Figure 19: Treatment Outcome of All Forms of TB Cases from 2010-2019

Treatment Success Rate

The cure rate among registered cases was 44.1% (3723 cases) and a further 40.1% (3379 cases) completed treatment, accounting for an overall treatment success rate of 84.2% (7102 cases). This national figure is below the global target of 85% for treatment success rate. 2019 rate is a 0.1% higher than the rate reported for the year 2018, which was 84.1%.

There is a greater variation in treatment success rate among the districts, as depicted in Figure 19. Mullaitivu district reports the highest treatment success rate of 100%, while the lowest of 76.5% was reported from Nuwara Eliya (figure 20).

Treatment Failure Rate

The treatment failure rate was 1.2% (n=103) in 2019. There is a marginal decrease in treatment failure rate observed compared to 2018, which was 1.4%. Kegalle (8%, n=6) and Hambantota (3.8%, n=5) districts accounted for the highest failure rates. Colombo district reported 28 patients with treatment failure among their 2024 total cases, giving a treatment failure rate of 1.4%. There were no patients with treatment failure in the districts of Kilinochchi (total cases=61), Mullaitivu (total cases=23) and Mannar (total cases=22 in the year 2019 (Table 18).

Lost to Follow Up Rate

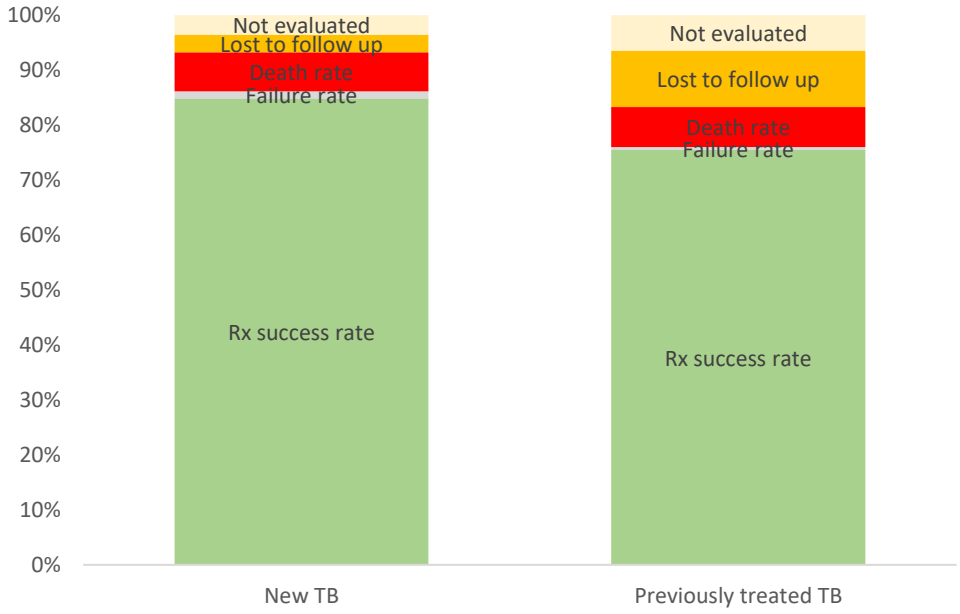
In 2019, the Lost to Follow Up rate was 3.7%, marginally higher than 3.4% figure for the previous year. The highest Lost to Follow Up rate, 7.2%, was reported in Colombo. The next highest rate of 7.0% was reported from Nuwara Eliya district, and Gampaha reported a rate of 5.6%. Ampara, Polonnaruwa, Killinochchi, Ratnapura, Mannar and Mullaitivu reported zero cases of Lost to Follow Up (Table 18).

Death Rate

Altogether, 602 deaths were reported among the patients with TB registered during the year 2019. However, the contribution of TB to the death was ruled out in 309 of reported 602 deaths. Among the rest 293, highest numbers were reported from Colombo (n=80), Gampaha (n=35) and Kalutara (n=26) districts. Leaving aside the deaths confirmed as not due to TB, the highest rates of 'all other deaths' were reported from the districts of Batticaloa (8.2%), Polonnaruwa (6.7%) and Puttalam (5.8%). (Table 18).

Overall outcome of New TB and Previously treated TB patients for year 2019

Treatment success rate of new TB patients (84.9%) is higher compared to the previously treated TB patients (75.5%) whereas; deaths rates are more or less similar in both groups (7.1% Vs 7.3%) The rate of lost to follow up is three times among previously treated TB patients (10.3%) to that of new TB patients (3.2%) (Figure 20).



	New TB	Previously treated TB
Rx success rate	84.9	75.5
Failure rate	1.3	0.5
Death rate	7.1	7.3
Lost to follow up	3.2	10.3
Not evaluated	3.5	6.5

Figure 20: Overall Outcome rates of All forms of new and previously treated TB cases for year 2019

➢ Treatment Outcome of new PTB Cases

This section focuses on the treatment outcome rates among pulmonary TB (PTB) patients registered in 2019. In 2019, 5689 new PTB cases were registered for treatment. These patients' outcomes fell into following categories (Table 20 and Figure 21):

- Cured (n= 3409, 59.9%)
- Treatment completed (n= 1408, 24.7%)
- Lost to follow up (n=211, 3.7%)
- Treatment failure (n=93, 1.6%)
- Died and confirmed as not due to TB (n=213, 3.7%)
- Died and not confirmed as not due to TB (n=207, 3.6%)
- Still on treatment/ diagnosis changed/ other (n= 148, 2.6%)

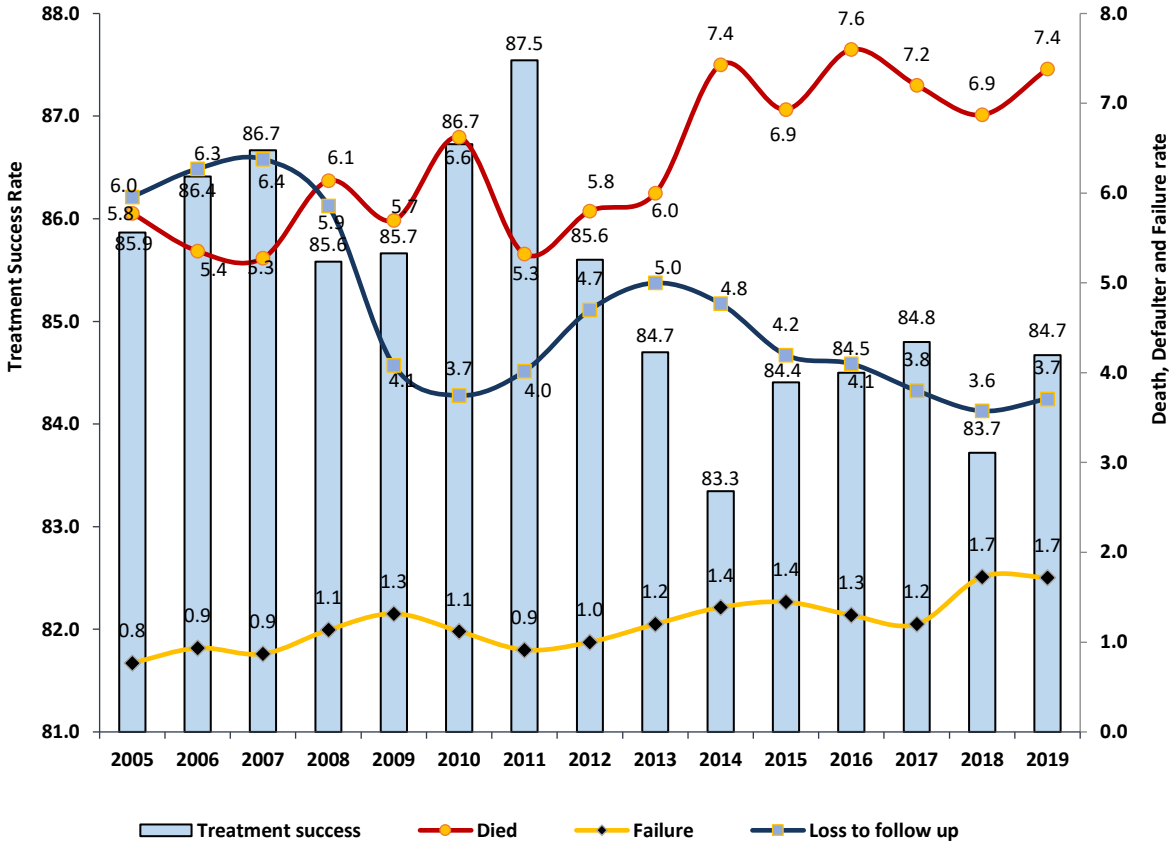


Figure 21: Treatment Outcome of New Pulmonary TB Cases from 2005-2019

Treatment Success Rate

Altogether, 3409 patients were cured and another 1408 completed their treatment within the due period. This gives an overall treatment success rate of 84.7%. This is a slight increase from the figure of the previous year, 83.7% (figure 21). The major contribution to the cure rates is from the districts of Ratnapura (85.6%), Anuradhapura (81.8%), Mannar (81.3%) and Matara (80.5%) (Table 20).

Treatment Failure Rate

Of all registered PTB patients in 2019, treatment has failed among 93 patients, giving a failure rate of 1.6%, which is a decrease from the previous year's figure of 1.7%. The highest failure rate of 5.7% was reported from the Hambantota district. None of the patients registered in Mannar, Mullaitivu, and Kilinochchi districts were reported treatment failures (Table 20).

Lost to Follow Up Rate

The Lost to Follow Up rate among PTB patients was 3.7 % (n=211) in 2019. The highest Lost to Follow Up case rate was reported from Nuwara Eliya district (9.2%, n=11), and the highest caseload of Lost to Follow Up was reported from Colombo district (n=100, 7.2%). Colombo, Gampaha, Nuwara Eliya and Galle 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 2019, a total of 420 (7.4%) patients had died. Among those 420, TB was excluded from the cause of death in 213 (3.7%) patients. The rest 207 patients gave a death rate of 3.6% (Table 20).

- **Treatment Outcome of New Bacteriologically confirmed PTB cases**

Treatment outcomes were separately analyzed for the reported bacteriologically confirmed PTB cases. This number was 4414 for the year 2019 (Table 21).

Treatment Success Rate

Of the 4414 cases, 3409 were cured after treatment, and a further 367 completed the course of treatment within the due period. Altogether, this gives a treatment success rate of 85.5% (n=3776). This is an increase from the previous year's figure of 84.0%. District variations in the treatment success rate are illustrated in figure 22.

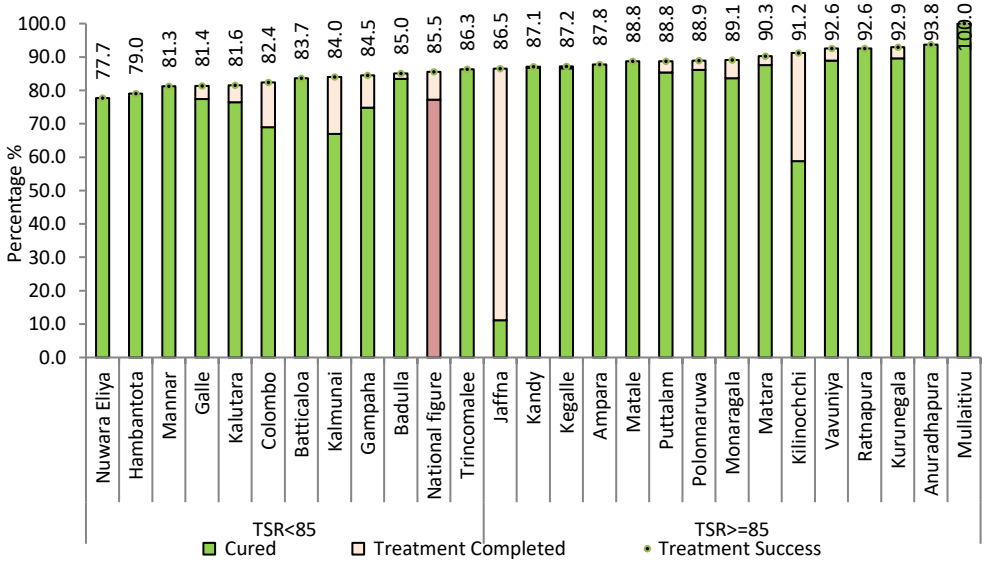


Figure 22: Treatment Success Rates of New Bacteriologically confirmed PTB Cases by Districts in 2019

Treatment failure was reported among 88 of these patients (1.9%), while Lost to Follow Up was seen among 173 (3.9%) patients. Another 80 (1.8%) patients fell into 'still on treatment/ changed diagnosis' category (Table 21).

- **Treatment Outcome of clinically diagnosed cases**

Of the 1275 cases, 1041 were treatment completed, and further, this gives a treatment success rate of 81.6%. This is a decrease from the previous year's figure of 83%. District variations in the treatment success rate are illustrated in figure 24 and Table 22.

Figure 23: Treatment Success Rates of New Clinically Diagnosed Cases by Districts in 2019

- **Treatment Outcome of Sputum negative patients diagnosed with Xpert-MTB/RIF**

District variations in the treatment success rates are illustrated in figure 24.

Of the 372 cases, 262 (70.4%) were cured after treatment, and further 61 (16.4%) completed the course of treatment within the due period. Altogether, this gives a treatment success rate of 323 (86.8%). This is a slight increase from the previous year's figure of 85.6% (Table 29). District variations in the treatment success rates are illustrated in figure 25.

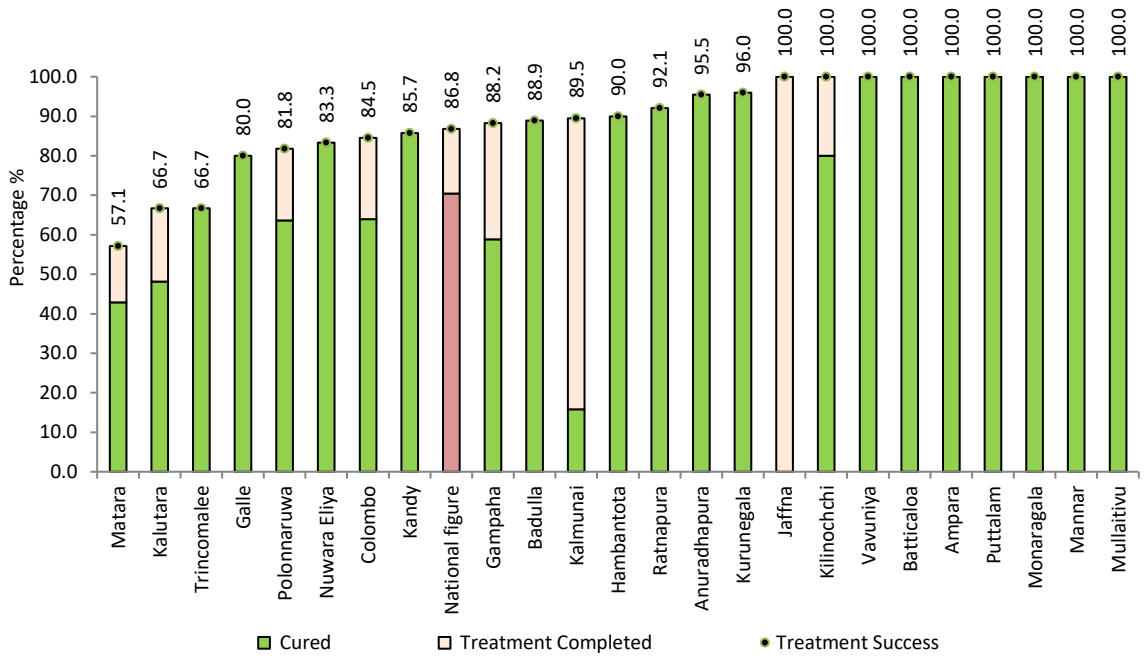


Figure 24: Treatment Success Rates of Sputum negative Xpert MTB/RIF positive cases by Districts in 2019

- **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 24).

A total of 604 previously treated TB patients were registered in 2019 of which 304 (50.3%) cases were cured and 152 (25.2%) completed treatment giving a treatment success rate of 75.5 % (n=456). While the loss to follow up rate was 10.3% (n=62) and 6.5% (n=39) were not evaluated (Table 24).

- **Treatment Outcome of Sputum Negative and Culture Positive Cases**

In 2019, there were152 new PTB cases whose sputum smear was negative but culture was positive. The cure rate among these cases registered for treatment was 69.1% (n=105) and a further 35 (23%) completed treatment within due period. Thus, the overall treatment success rate among sputum negative, culture positive category was 92.1% (n=140) (Table 28).

Figures 25-29 illustrates the treatment outcomes of different categories of TB patients in the year 2019.

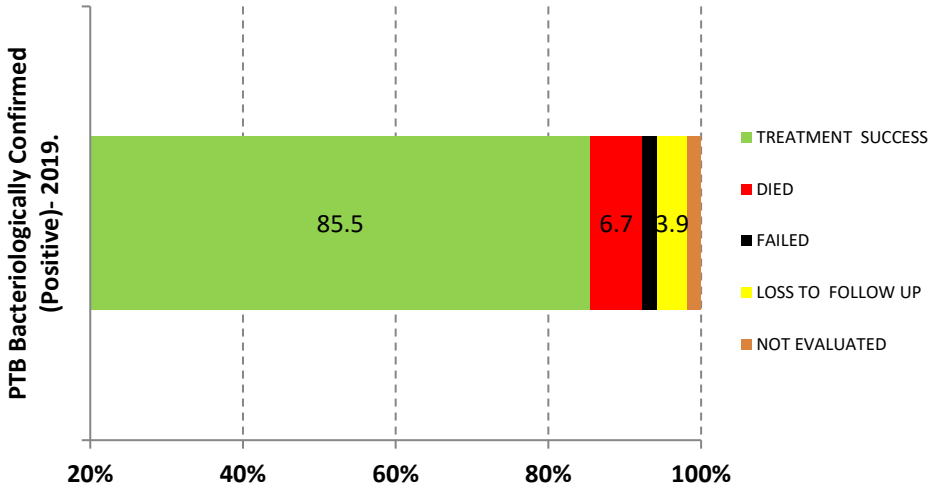


Figure 25: Treatment Outcome Summary of Bacteriologically Diagnosed TB Patients in 2019

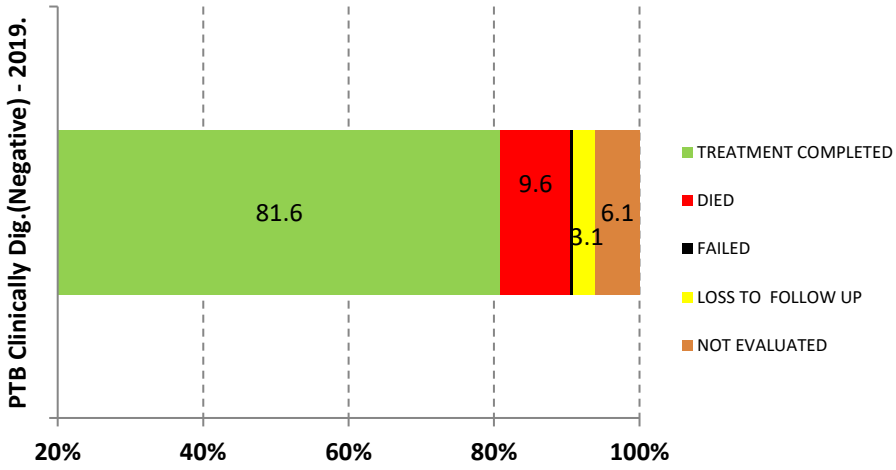


Figure 26: Treatment Outcome Summary of Clinically Diagnosed TB Patients in 2019

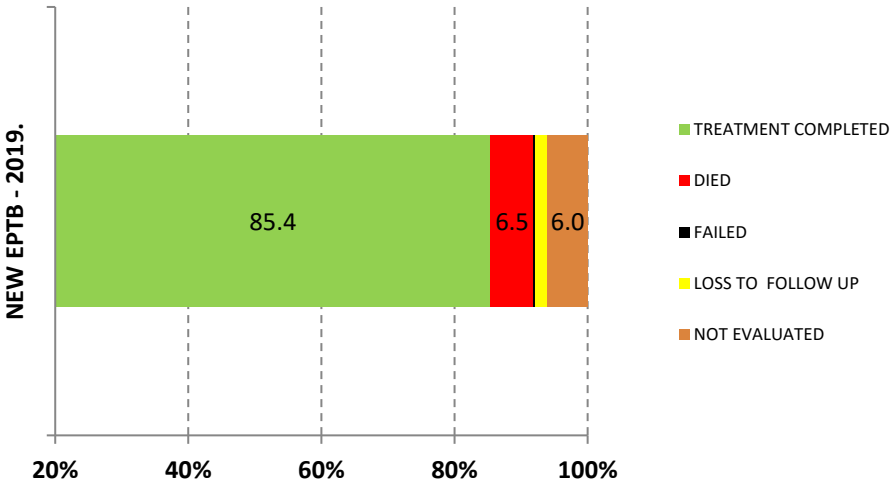


Figure 27: Treatment Outcome Summary of Extra Pulmonary TB Patients in 2019

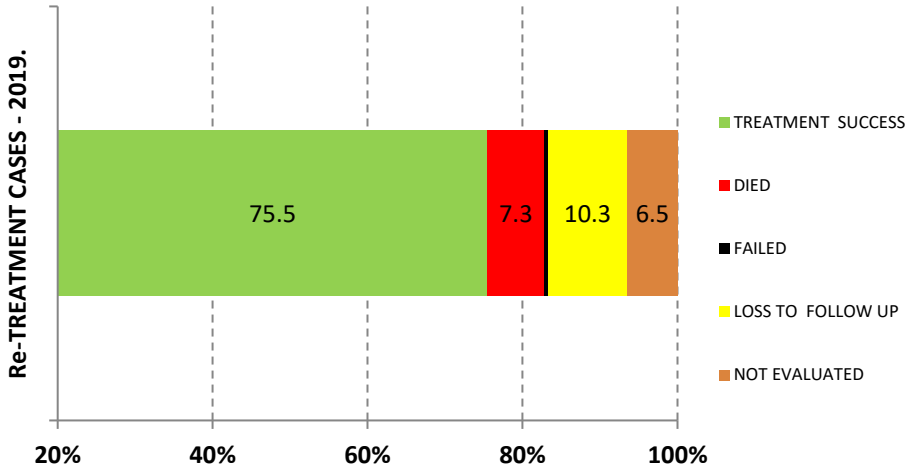


Figure 28:Treatment Outcome Summary of Re-Treatment TB Patients in 2019

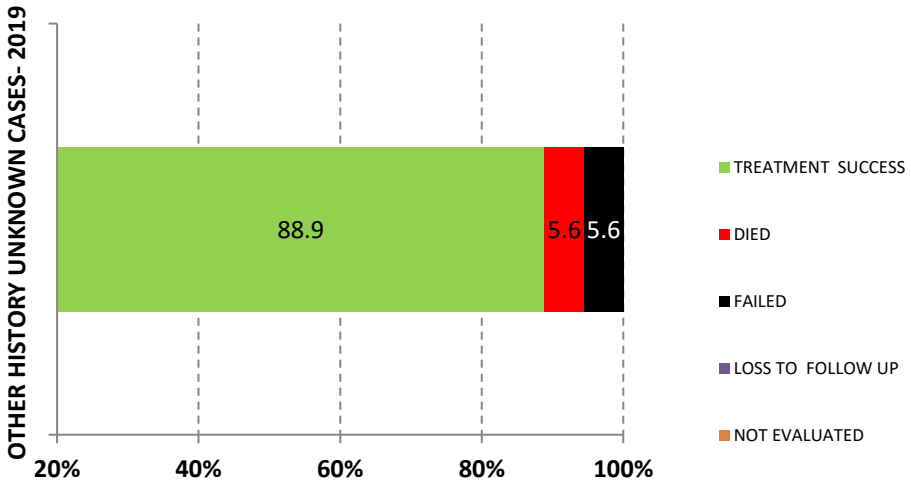


Figure 29: Treatment Outcome Summary of Treatment History Unknown TB Patients in 2019

DOTS Coverage

Population coverage of Directly Observed Treatment Short course (DOTS) in the country is 100% since 2010 and Table 6 shows the results.

Table 5: Distribution of population coverage of DOTS according to districts since 1997

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	

Nutritional status of Tuberculosis patients

For the year 2020, there was a total of 7258 TB patients reported to the national programme.

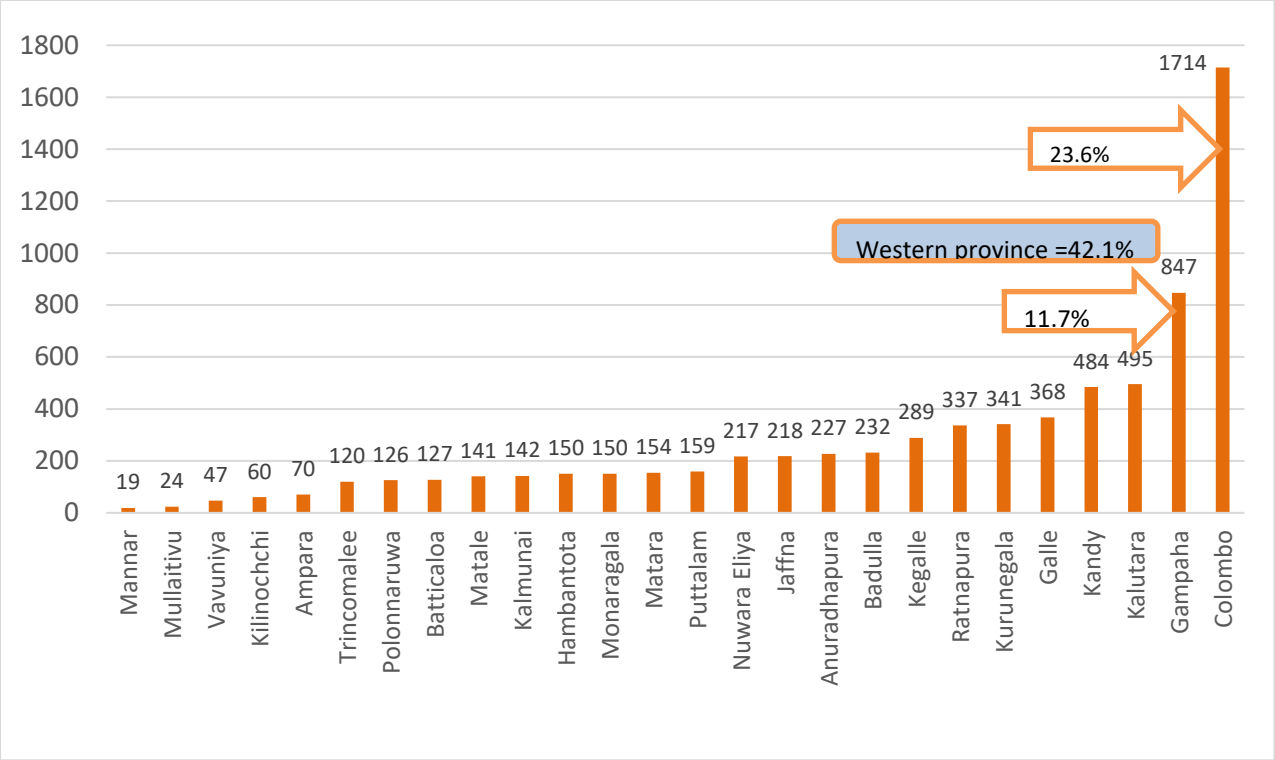


Figure 30: District wise distribution of TB patients:2020

Assessment of nutritional status among TB patients is part of the initial management. However, only 4566 patients' BMI levels were reported during the registration.

According to the patients with recorded BMI values, the categorization of BMI according to the international cutoff values and Asian cut off values are as follows.

Table 6: Distribution of nutritional status among the TB patients for the year 2020

BMI value	International categorization (%)	Asian categorization (%)
Underweight	2115(46.3%)	2115(46.3%)
Normal	1917(42.0%)	1508(33.0%)
Overweight*	534(11.7%)	943(20.7%)
Total	**4566(100.0%)**	**4566(100.0%)**

***** Overweight and obese were categorized together as "overweight"

Table 7: Factors associated with undernutrition among TB patients in Sri Lanka: 2020

Variable	Bivariate analysis		Multivariate analysis	
	Odds Ratio	P value	Odds Ratio	P value
Gender Male Female	2.39	0.07	0.96	0.632
Age <15 years 15-59 years 60 years and above	16.93	0.79	1.01	0.067
Presence of comorbidities Yes No	48.91	**<0.001**	0.54	**<0.001**
Site of TB PTB EPTB	109.33	**<0.001**	2.60	**<0.001**
Treatment category New Retreatment	20.51	**<0.001**	1.60	**<0.001**
Smoking Yes No	13.56	**0.001**	1.30	**0.047**
Alcohol Yes No	6.06	**0.049**	0.83	0.143
Illicit drug use Yes No	16.15	**<0.001**	1.65	**0.023**

PART II - ACTIVITY REPORT

Important activities were carried out in 2020 and the preceding year in view of improving the quality of services provided by the NPTCCD:

- The Epidemiological review was carried out with international and local resources during August/September 2020 to assess the completeness and accuracy of routine tuberculosis (TB) surveillance and vital registration (VR) to inform WHO estimated TB burden and to investigate the plausible drivers of the TB epidemic in the country. This is done to aid prioritization of TB control activities at central and peripheral level in facilitating achievement of END TB targets.
- End term review was conducted in 2020 as the current National Stratergic Plan 2016 to 2020 was coming to an end and the present grant for tuberculosis (TB) from the Global Fund. This review was organised by the NPTCCD, strongly supported by WHO and GF. The findings of the review will feed into the preparations for the next NSP, which have already begun.
- National Strategic Plan was formed from year 2021 to 2025. In preparation of this, the recommendations given in End Term Review 2020 were strongly considered.
- Sri Lanka has committed to achieve the WHO End TB strategy targets by the year 2035. 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, Nuwara Eliya, Polonnarauwa, Ampara, Vavuniya, and Jaffna have been introduced as pilot districts. This will be expanded and all 26 administrative areas will be covered in 2021.
- Decentralization of diagnostic services beyond DCC was done by enhancing the number of microscopic centrs to around 164 all over the island.
- Introducing presumptive TB register at the OPD setting to enhance case detection.
- In addition to the routine screening activities, a mobile screening team was involved in the screening activities. NPTCCD provided mobile x-ray facility for community screening and awareness programmes. Nine programmes were completed successfully.
- Midterm review also revealed that prison inmates were a key high risk group in Sri Lanka. Hence 48 mass screening programmes were conducted for all prison inmates 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 on management of 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 2020 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

Major Challenges

The following factors were identified as major challenges:

1. Managing of trained medical staff and distribution them at the central and peripheral levels addressing the misdistribution.
2. Addressing 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 a further improvement in treatment sustainability.
5. Low detection of pediatric TB cases.
6. Maintenance of low incidence of Muti-drug resistant TB cases.
7. Increasing case findings.
8. Reduction of OPD referrals.
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 program 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 (n=44,417,21.9%), contacts of TB patients (n=15,325, 7.6%) and persons came for medical examinations (n=56,769, 28%).

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 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 of 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 at the National Reference Laboratory at Welisara and four regional laboratories at Kandy, Jaffna , Karapitiya andRatnapura. Liquid culture facilities are available only at NTRL. Sputum cultures are 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 on a limited scale and by 2019 these facilities were expanded island wide.Table 5 shows the facilities available for 2020.

Table 9: Testing by WHO recommended Rapid Diagnostics in 2020

Year	Laboratory	Number of Gene X pert tests performed	Number of specimens with +ve results
2020	NTRL		
	All Districts		529

- **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 such as Colombo, Kurunegala, Kandy, Badulla, Kalutara, Ratnapura, Galle and Matara. The other clinics obtain this facility from the nearest hospital. The total num28ber of Digital X-ray films consumed in 2020 at the Chest Clinics were 53,721.

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). Currently >99% of the all the new born babies have 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.

DETAILED TABLES AND MAPS

Table 8: Annual Mortality of All TB Cases from 2006-2020

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
2019	375	1.7
2020	260	1.2

Source: Health 814

Table 9: Distribution Rates of all TB cases by District of Residence in 2020

District	Estimated Mid-Year Population	No. of Cases Detected	No. of Cases Per 100,000 Population
Colombo	2,426,822	1714	70.6
Gampaha	2,467,775	847	34.3
Kalutara	1,321,809	495	37.4
Kandy	1,467,744	484	33.0
Matale	525,692	141	26.8
Nuwara Eliya	748,866	217	29.0
Galle	1,127,893	368	32.6
Matara	863,395	154	17.8
Hambantota	667,185	150	22.5
Jaffna	618,123	218	35.3
Vavuniya	186,983	47	25.1
Batticaloa	562,486	127	22.6
Ampara	272,125	70	25.7
Kalmunai	435,695	142	32.6
Trincomalee	415,003	120	28.9
Kurunegala	1,734,886	341	19.7
Puttalam	821,032	159	19.4
Anuradhapura	951,933	227	23.8
Polonnaruwa	442,696	126	28.5
Badulla	866,452	232	26.8
Monaragala	500,851	150	29.9
Ratnapura	1,165,901	337	28.9
Kegalle	889,052	289	32.5
Mannar	108,329	19	17.5
Mullaitivu	97,481	24	24.6
Kilinochchi	125,265	60	47.9
Total	**21,811,476**	**7,258**	**33.3**

Table 10: All TB Case Detection by District of Registration in 2020

District	New Cases				Retreatment Cases																				Treatment History unknown				Grand Total
					Relapse				Treatment After Failure				Lost to Follow up				Other Previously Treated				Total Retreatment Cases								
	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	913	233	382	**1528**	69	7	**10**	**86**	22	5	7	**34**	34	4	**1**	**39**	14	4	**4**	**22**	139	20	22	**181**	4	0	1	5	**1714**
Gampaha	408	144	220	**772**	38	8	**3**	**49**	5	0	1	**6**	17	2	**1**	**20**	0	0	**0**	**0**	60	10	5	**75**	0	0	0	0	**847**
Kalutara	295	35	141	**471**	15	0	**4**	**19**	4	0	1	**5**	0	0	**0**	**0**	0	0	**0**	**0**	19	0	5	**24**	0	0	0	0	**495**
Kandy	207	117	130	**454**	10	4	**1**	**15**	8	0	2	**10**	5	0	**0**	**5**	0	0	**0**	**0**	23	4	3	**30**	0	0	0	0	**484**
Matale	72	21	43	**136**	4	0	**0**	**4**	0	0	0	**0**	0	1	**0**	**1**	0	0	**0**	**0**	4	1	0	**5**	0	0	0	0	**141**
Nuwara Eliya	85	36	83	**204**	3	1	**1**	**5**	3	0	0	**3**	3	1	**1**	**5**	0	0	**0**	**0**	9	2	2	**13**	0	0	0	0	**217**
Galle	167	48	119	**334**	11	2	**6**	**19**	4	0	0	**4**	7	1	**0**	**8**	1	2	**0**	**3**	23	5	6	**34**	0	0	0	0	**368**
Matara	95	3	44	**142**	8	0	**2**	**10**	1	0	0	**1**	0	0	**0**	**0**	0	0	**1**	**1**	9	0	3	**12**	0	0	0	0	**154**
Hambantota	64	26	46	**136**	5	4	**2**	**11**	3	0	0	**3**	0	0	**0**	**0**	0	0	**0**	**0**	8	4	2	**14**	0	0	0	0	**150**
Jaffna	91	25	87	**203**	8	1	**3**	**12**	2	0	0	**2**	1	0	**0**	**1**	0	0	**0**	**0**	11	1	3	**15**	0	0	0	0	**218**
Vavuniya	33	5	5	**43**	1	0	**1**	**2**	2	0	0	**2**	0	0	**0**	**0**	0	0	**0**	**0**	3	0	1	**4**	0	0	0	0	**47**
Batticaloa	76	10	34	**120**	5	0	**1**	**6**	1	0	0	**1**	0	0	**0**	**0**	0	0	**0**	**0**	6	0	1	**7**	0	0	0	0	**127**
Ampara	33	14	18	**65**	4	0	**1**	**5**	0	0	0	**0**	0	0	**0**	**0**	0	0	**0**	**0**	4	0	1	**5**	0	0	0	0	**70**
Kalmunai	85	21	21	**127**	7	1	**1**	**9**	0	0	1	**1**	4	1	**0**	**5**	0	0	**0**	**0**	11	2	2	**15**	0	0	0	0	**142**
Trincomalee	76	14	22	**112**	2	0	**1**	**3**	3	0	0	**3**	2	0	**0**	**2**	0	0	**0**	**0**	7	0	1	**8**	0	0	0	0	**120**
Kurunegala	183	51	83	**317**	15	0	**3**	**18**	5	0	0	**5**	1	0	**0**	**1**	0	0	**0**	**0**	21	0	3	**24**	0	0	0	0	**341**
Puttalam	85	24	47	**156**	0	2	**1**	**3**	0	0	0	**0**	0	0	**0**	**0**	0	0	**0**	**0**	0	2	1	**3**	0	0	0	0	**159**
Anuradhapura	135	16	57	**208**	10	0	**2**	**12**	6	0	0	**6**	1	0	**0**	**1**	0	0	**0**	**0**	17	0	2	**19**	0	0	0	0	**227**
Polonnaruwa	61	33	30	**124**	2	0	**0**	**2**	0	0	0	**0**	0	0	**0**	**0**	0	0	**0**	**0**	2	0	0	**2**	0	0	0	0	**126**
Badulla	107	40	75	**222**	3	2	**4**	**9**	1	0	0	**1**	0	0	**0**	**0**	0	0	**0**	**0**	4	2	4	**10**	0	0	0	0	**232**
Monaragala	72	32	35	**139**	5	1	**2**	**8**	2	0	1	**3**	0	0	**0**	**0**	0	0	**0**	**0**	7	1	3	**11**	0	0	0	0	**150**
Ratnapura	179	30	95	**304**	15	0	**7**	**22**	6	1	1	**8**	0	0	**0**	**0**	2	1	**0**	**3**	23	2	8	**33**	0	0	0	0	**337**
Kegalle	162	28	81	**271**	10	0	**1**	**11**	5	0	0	**5**	2	0	**0**	**2**	0	0	**0**	**0**	17	0	1	**18**	0	0	0	0	**289**
Mannar	10	2	5	**17**	2	0	**0**	**2**	0	0	0	**0**	0	0	**0**	**0**	0	0	**0**	**0**	2	0	0	**2**	0	0	0	0	**19**
Mullaitivu	10	2	12	**24**	0	0	**0**	**0**	0	0	0	**0**	0	0	**0**	**0**	0	0	**0**	**0**	0	0	0	**0**	0	0	0	0	**24**
Kilinochchi	30	14	13	**57**	2	0	**0**	**2**	1	0	0	**1**	0	0	**0**	**0**	0	0	**0**	**0**	3	0	0	**3**	0	0	0	0	**60**
Total	**3734**	**1024**	**1928**	**6686**	**254**	**33**	**57**	**344**	**84**	**6**	**14**	**104**	**77**	**10**	**3**	**90**	**17**	**7**	**5**	**29**	**432**	**56**	**79**	**567**	**4**	**0**	**1**	**5**	**7258**

Table 11: Distribution of New Cases of TB by Province in 2020

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	1616	26.0	412	6.6	743	12.0	2771	44.6	280	4.5	5	0.1	3056	49.2
Central	364	13.3	174	6.3	256	9.3	794	29.0	48	1.8	0	0.0	842	30.7
Sabaragamuwa	341	16.6	58	2.8	176	8.6	575	28.0	51	2.5	0	0.0	626	30.5
Sorthern	326	12.3	77	2.9	209	7.9	612	23.0	60	2.3	0	0.0	672	25.3
North Western	268	10.5	75	2.9	130	5.1	473	18.5	27	1.1	0	0.0	500	19.6
Eastern	270	16.0	59	3.5	95	5.6	424	25.2	35	2.1	0	0.0	459	27.2
Northern	174	15.3	48	4.2	122	10.7	344	30.3	24	2.1	0	0.0	368	32.4
North Central	196	14.1	49	3.5	87	6.2	332	23.8	21	1.5	0	0.0	353	25.3
Uva	179	13.1	72	5.3	110	8.0	361	26.4	21	1.5	0	0.0	382	27.9
Total	3734	17.1	1024	4.7	1928	8.8	6686	30.7	567	2.6	5	0.0	7258	33.3

Table 12: Distribution of new cases of TB by Age and Type in 2020

Age Group	Number of Patients							
	Smear Positive	Rate	Smear Negative	Rate	EPTB	Rate	All New	Rate
0 - 14	27	0.5	46	0.8	113	2.0	234	4.0
15 - 24	300	7.4	75	1.8	239	5.9	773	19.0
25 - 34	400	11.2	79	2.2	291	8.2	867	24.3
35 - 44	604	21.4	99	3.5	334	11.8	1146	40.6
45 - 54	748	43.1	184	10.6	317	18.3	1500	86.5
55 - 64	865	76.1	242	21.3	326	28.7	1599	140.7
65 +	790	29.2	299	11.0	308	11.4	1693	62.6
Total	**3734**	**17.1**	**1024**	**4.7**	**1928**	**8.8**	**7812**	**35.8**

Table 13: Distribution of New Cases of TB by Age and Sex in 2020

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 2020

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	7	12	59	83	148	219	212	131	49	920	7	18	108	80	84	94	109	76	32	608	920	608	1528
Gampaha	2	6	24	47	83	107	128	98	22	517	2	4	43	32	28	47	39	43	17	255	517	255	772
Kalutara	3	0	18	26	62	69	80	35	17	310	1	5	20	24	38	19	27	18	9	161	310	161	471
Kandy	4	3	20	31	40	57	71	36	12	274	1	6	26	19	18	32	43	28	7	180	274	180	454
Matale	1	1	7	7	11	20	27	21	4	99	0	0	3	5	12	4	8	2	3	37	99	37	136
Nuwara Eliya	3	3	14	17	29	18	17	19	9	129	2	2	19	9	16	6	12	6	3	75	129	75	204
Galle	0	7	16	25	37	34	50	39	17	225	2	2	15	16	12	14	23	18	7	109	225	109	334
Matara	0	1	6	8	19	11	17	15	4	81	0	1	5	12	6	12	9	9	7	61	81	61	142
Hambantota	2	0	2	6	20	14	21	16	10	91	1	4	5	8	7	6	10	3	1	45	91	45	136
Jaffna	0	3	8	25	15	28	23	22	5	129	1	2	17	10	4	12	17	7	4	74	129	74	203
Vavuniya	0	0	2	6	5	2	6	5	2	28	0	0	2	2	3	1	5	2	0	15	28	15	43
Batticaloa	1	4	5	5	14	17	14	13	4	77	1	2	5	6	3	6	9	10	1	43	77	43	120
Ampara	1	1	2	5	5	4	13	11	3	45	0	1	1	4	1	3	0	7	3	20	45	20	65
Kalmunai	2	2	4	4	10	21	23	18	5	89	0	1	3	5	5	7	8	6	3	38	89	38	127
Trincomalee	0	0	8	8	6	16	17	15	3	73	1	3	6	6	5	2	11	4	1	39	73	39	112
Kurunegala	0	2	7	19	47	43	55	40	7	220	0	4	6	14	7	16	23	24	3	97	220	97	317
Puttalam	1	1	7	7	14	28	21	14	4	97	2	1	3	11	10	11	9	8	4	59	97	59	156
Anuradhapura	0	0	10	23	23	32	28	24	6	146	0	5	7	9	8	10	17	3	3	62	146	62	208
Polonnaruwa	0	2	3	4	10	13	27	17	5	81	0	0	7	3	5	8	10	7	3	43	81	43	124
Badulla	1	1	8	27	25	22	33	18	7	142	1	2	11	10	14	14	15	10	3	80	142	80	222
Monaragala	0	1	3	13	22	18	21	14	9	101	1	2	3	6	3	7	7	6	3	38	101	38	139
Ratnapura	4	3	13	29	35	31	35	32	13	195	0	3	14	14	20	25	10	17	6	109	195	109	304
Kegalle	1	1	10	13	18	46	33	36	9	167	1	3	19	13	20	12	17	17	2	104	167	104	271
Mannar	0	0	0	1	1	0	2	1	0	5	0	0	2	2	1	2	2	1	2	12	5	12	17
Mullaitivu	0	0	3	2	1	3	4	2	1	16	0	0	1	3	0	0	3	0	1	8	16	8	24
Kilinochchi	1	1	2	4	5	4	6	8	4	35	2	0	2	2	2	2	6	6	0	22	35	22	57
Total	34	55	261	445	705	877	984	700	231	4292	26	71	353	325	332	372	449	338	128	2394	4292	2394	6686

Table 15: Age and Sex Distribution of Smear Positive New TB Cases by District in 2020

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	1	30	52	98	161	157	83	23	605	0	3	49	33	41	54	64	43	21	308	605	308	913
Gampaha	0	1	8	18	55	65	80	50	13	290	0	1	18	14	13	24	21	19	8	118	290	118	408
Kalutara	1	0	12	16	44	49	61	19	10	212	0	1	10	13	20	10	14	8	7	83	212	83	295
Kandy	0	1	7	17	20	34	37	18	8	142	0	3	8	8	6	14	14	10	2	65	142	65	207
Matale	0	0	5	5	9	14	16	6	3	58	0	0	2	0	5	1	4	0	2	14	58	14	72
Nuwara Eliya	0	0	7	10	15	5	9	10	3	59	0	0	9	3	7	3	2	1	1	26	59	26	85
Galle	0	1	7	12	15	19	30	24	11	119	0	0	6	8	7	5	8	11	3	48	119	48	167
Matara	0	0	5	8	14	8	12	14	2	63	0	1	1	7	3	7	5	5	3	32	63	32	95
Hambantota	0	0	0	4	11	6	11	7	7	46	0	1	3	6	3	3	2	0	0	18	46	18	64
Jaffna	0	0	5	13	5	14	13	10	3	63	0	0	5	5	1	4	7	3	3	28	63	28	91
Vavuniya	0	0	1	6	4	2	6	3	2	24	0	0	1	0	2	1	3	2	0	9	24	9	33
Batticaloa	0	1	4	3	9	15	9	9	1	51	0	2	4	4	1	3	4	7	0	25	51	25	76
Ampara	0	0	1	3	4	2	9	3	3	25	0	0	0	1	1	0	0	4	2	8	25	8	33
Kalmunai	1	0	2	3	9	17	17	12	2	63	0	0	2	2	3	2	5	5	3	22	63	22	85
Trincomalee	0	0	5	3	4	12	11	11	2	48	0	0	3	6	3	1	10	4	1	28	48	28	76
Kurunegala	0	0	2	10	30	31	27	25	5	130	0	1	4	7	4	8	12	15	2	53	130	53	183
Puttalam	0	0	5	1	5	17	15	11	2	56	0	0	2	6	4	5	7	3	2	29	56	29	85
Anuradhapura	0	0	8	17	13	23	22	17	2	102	0	2	4	3	4	7	8	2	3	33	102	33	135
Polonnaruwa	0	1	0	2	9	5	20	8	3	48	0	0	1	1	3	3	3	1	1	13	48	13	61
Badulla	0	0	5	11	15	12	14	10	3	70	0	1	6	5	7	4	6	6	2	37	70	37	107
Monaragala	0	0	1	6	14	7	14	7	5	54	0	0	2	4	1	3	2	3	3	18	54	18	72
Ratnapura	1	0	7	13	23	16	24	23	9	116	0	0	10	9	11	10	6	13	4	63	116	63	179
Kegalle	0	0	5	8	11	30	22	21	7	104	0	2	10	8	10	7	10	9	2	58	104	58	162
Mannar	0	0	0	0	1	0	2	1	0	4	0	0	2	1	1	0	1	0	1	6	4	6	10
Mullaitivu	0	0	2	1	1	2	1	1	0	8	0	0	0	1	0	0	0	0	1	2	8	2	10
Kilinochchi	0	0	2	3	4	3	4	2	1	19	0	0	2	0	1	0	4	4	0	11	19	11	30
Total	3	6	136	245	442	569	643	405	130	2579	0	18	164	155	162	179	222	178	77	1155	2579	1155	3734

Table 16: Age and Sex Distribution of Smear Negative New TB Cases by District in 2020

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	5	5	8	10	25	29	26	26	12	146	4	7	17	9	5	16	15	10	4	87	146	87	233
Gampaha	1	1	4	6	7	23	24	31	4	101	1	0	3	6	3	4	7	11	8	43	101	43	144
Kalutara	1	0	0	2	2	5	4	7	3	24	0	1	3	0	0	0	4	3	0	11	24	11	35
Kandy	3	0	8	6	9	8	19	11	4	68	1	0	7	4	3	9	12	10	3	49	68	49	117
Matale	0	0	0	0	0	1	6	7	1	15	0	0	1	0	0	1	2	1	1	6	15	6	21
Nuwara Eliya	0	0	2	1	4	6	5	2	3	23	1	0	3	1	1	0	4	2	1	13	23	13	36
Galle	0	3	0	1	1	4	8	4	3	24	0	0	2	1	0	4	10	5	2	24	24	24	48
Matara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	3	0	3	3
Hambantota	1	0	0	1	1	5	5	6	1	20	0	0	1	0	0	0	2	3	0	6	20	6	26
Jaffna	0	0	0	3	2	5	2	2	0	14	0	0	3	0	0	3	4	1	0	11	14	11	25
Vavuniya	0	0	0	0	0	0	0	2	0	2	0	0	1	1	0	0	1	0	0	3	2	3	5
Batticaloa	1	0	0	0	1	0	0	3	2	7	1	0	0	0	0	0	1	1	0	3	7	3	10
Ampara	1	0	0	0	1	1	1	5	0	9	0	1	0	1	0	0	0	2	1	5	9	5	14
Kalmunai	0	0	1	0	0	4	5	5	1	16	0	0	1	0	1	1	2	0	0	5	16	5	21
Trincomalee	0	0	0	2	0	3	2	2	1	10	1	1	0	0	1	1	0	0	0	4	10	4	14
Kurunegala	0	0	2	3	5	3	15	7	1	36	0	0	0	1	0	4	5	4	1	15	36	15	51
Puttalam	0	0	0	2	6	5	4	1	1	19	0	0	0	1	2	0	0	2	0	5	19	5	24
Anuradhapura	0	0	0	1	1	1	1	3	2	9	0	0	0	0	1	3	3	0	0	7	9	7	16
Polonnaruwa	0	0	0	0	0	4	7	8	2	21	0	0	0	1	1	3	2	5	0	12	21	12	33
Badulla	0	0	1	5	1	4	8	3	3	25	1	0	2	1	2	4	3	1	1	15	25	15	40
Monaragala	0	0	2	1	5	4	6	6	2	26	1	0	0	0	0	2	3	0	0	6	26	6	32
Ratnapura	0	0	0	4	3	4	4	4	2	21	0	0	0	0	1	3	2	2	1	9	21	9	30
Kegalle	0	1	3	1	0	6	2	6	1	20	0	0	0	2	2	1	1	2	0	8	20	8	28
Mannar	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	2
Mullaitivu	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	1	1	2
Kilinochchi	1	0	0	0	0	0	2	5	2	10	1	0	0	0	0	0	1	2	0	4	10	4	14
Total	14	10	31	49	74	125	156	156	52	667	12	10	44	30	25	59	86	67	24	357	667	357	1024

Table 17: Age and Sex Distribution of All New PTB Cases by District in 2020

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	5	6	38	62	123	190	183	109	35	751	4	10	66	42	46	70	79	53	25	395	751	395	1146
Gampaha	1	2	12	24	62	88	104	81	17	391	1	1	21	20	16	28	28	30	16	161	391	161	552
Kalutara	2	0	12	18	46	54	65	26	13	236	0	2	13	13	20	10	18	11	7	94	236	94	330
Kandy	3	1	15	23	29	42	56	29	12	210	1	3	15	12	9	23	26	20	5	114	210	114	324
Matale	0	0	5	5	9	15	22	13	4	73	0	0	3	0	5	2	6	1	3	20	73	20	93
Nuwara Eliya	0	0	9	11	19	11	14	12	6	82	1	0	12	4	8	3	6	3	2	39	82	39	121
Galle	0	4	7	13	16	23	38	28	14	143	0	0	8	9	7	9	18	16	5	72	143	72	215
Matara	0	0	5	8	14	8	12	14	2	63	0	1	1	7	5	7	5	5	4	35	63	35	98
Hambantota	1	0	0	5	12	11	16	13	8	66	0	1	4	6	3	3	4	3	0	24	66	24	90
Jaffna	0	0	5	16	7	19	15	12	3	77	0	0	8	5	1	7	11	4	3	39	77	39	116
Vavuniya	0	0	1	6	4	2	6	5	2	26	0	0	2	1	2	1	4	2	0	12	26	12	38
Batticaloa	1	1	4	3	10	15	9	12	3	58	1	2	4	4	1	3	5	8	0	28	58	28	86
Ampara	1	0	1	3	5	3	10	8	3	34	0	1	0	2	1	0	0	6	3	13	34	13	47
Kalmunai	1	0	3	3	9	21	22	17	3	79	0	0	3	2	4	3	7	5	3	27	79	27	106
Trincomalee	0	0	5	5	4	15	13	13	3	58	1	1	3	6	4	2	10	4	1	32	58	32	90
Kurunegala	0	0	4	13	35	34	42	32	6	166	0	1	4	8	4	12	17	19	3	68	166	68	234
Puttalam	0	0	5	3	11	22	19	12	3	75	0	0	2	7	6	5	7	5	2	34	75	34	109
Anuradhapura	0	0	8	18	14	24	23	20	4	111	0	2	4	3	5	10	11	2	3	40	111	40	151
Polonnaruwa	0	1	0	2	9	9	27	16	5	69	0	0	1	2	4	6	5	6	1	25	69	25	94
Badulla	0	0	6	16	16	16	22	13	6	95	1	1	8	6	9	8	9	7	3	52	95	52	147
Monaragala	0	0	3	7	19	11	20	13	7	80	1	0	2	4	1	5	5	3	3	24	80	24	104
Ratnapura	1	0	7	17	26	20	28	27	11	137	0	0	10	9	12	13	8	15	5	72	137	72	209
Kegalle	0	1	8	9	11	36	24	27	8	124	0	2	10	10	12	8	11	11	2	66	124	66	190
Mannar	0	0	0	0	1	0	2	1	0	4	0	0	2	2	1	0	2	0	1	8	4	8	12
Mullaitivu	0	0	2	1	1	2	1	1	1	9	0	0	0	1	0	0	1	0	1	3	9	3	12
Kilinochchi	1	0	2	3	4	3	6	7	3	29	1	0	2	0	1	0	5	6	0	15	29	15	44
Total	17	16	167	294	516	694	799	561	182	3246	12	28	208	185	187	238	308	245	101	1512	3246	1512	4758

Table 18: Age and Sex Distribution of New EPTB Cases by District in 2020

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	2	6	21	21	25	29	29	22	14	169	3	8	42	38	38	24	30	23	7	213	169	213	382
Gampaha	1	4	12	23	21	19	24	17	5	126	1	3	22	12	12	19	11	13	1	94	126	94	220
Kalutara	1	0	6	8	16	15	15	9	4	74	1	3	7	11	18	9	9	7	2	67	74	67	141
Kandy	1	2	5	8	11	15	15	7	0	64	0	3	11	7	9	9	17	8	2	66	64	66	130
Matale	1	1	2	2	2	5	5	8	0	26	0	0	0	5	7	2	2	1	0	17	26	17	43
Nuwara Eliya	3	3	5	6	10	7	3	7	3	47	1	2	7	5	8	3	6	3	1	36	47	36	83
Galle	0	3	9	12	21	11	12	11	3	82	2	2	7	7	5	5	5	2	2	37	82	37	119
Matara	0	1	1	0	5	3	5	1	2	18	0	0	4	5	1	5	4	4	3	26	18	26	44
Hambantota	1	0	2	1	8	3	5	3	2	25	1	3	1	2	4	3	6	0	1	21	25	21	46
Jaffna	0	3	3	9	8	9	8	10	2	52	1	2	9	5	3	5	6	3	1	35	52	35	87
Vavuniya	0	0	1	0	1	0	0	0	0	2	0	0	0	1	1	0	1	0	0	3	2	3	5
Batticaloa	0	3	1	2	4	2	5	1	1	19	0	0	1	2	2	3	4	2	1	15	19	15	34
Ampara	0	1	1	2	0	1	3	3	0	11	0	0	1	2	0	3	0	1	0	7	11	7	18
Kalmunai	1	2	1	1	1	0	1	1	2	10	0	1	0	3	1	4	1	1	0	11	10	11	21
Trincomalee	0	0	3	3	2	1	4	2	0	15	0	2	3	0	1	0	1	0	0	7	15	7	22
Kurunegala	0	2	3	6	12	9	13	8	1	54	0	3	2	6	3	4	6	5	0	29	54	29	83
Puttalam	1	1	2	4	3	6	2	2	1	22	2	1	1	4	4	6	2	3	2	25	22	25	47
Anuradhapura	0	0	2	5	9	8	5	4	2	35	0	3	3	6	3	0	6	1	0	22	35	22	57
Polonnaruwa	0	1	3	2	1	4	0	1	0	12	0	0	6	1	1	2	5	1	2	18	12	18	30
Badulla	1	1	2	11	9	6	11	5	1	47	0	1	3	4	5	6	6	3	0	28	47	28	75
Monaragala	0	1	0	6	3	7	1	1	2	21	0	2	1	2	2	2	2	3	0	14	21	14	35
Ratnapura	3	3	6	12	9	11	7	5	2	58	0	3	4	5	8	12	2	2	1	37	58	37	95
Kegalle	1	0	2	4	7	10	9	9	1	43	1	1	9	3	8	4	6	6	0	38	43	38	81
Mannar	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	1	1	4	1	4	5
Mullaitivu	0	0	1	1	0	1	3	1	0	7	0	0	1	2	0	0	2	0	0	5	7	5	12
Kilinochchi	0	1	0	1	1	1	0	1	1	6	1	0	0	2	1	2	1	0	0	7	6	7	13
Total	17	39	94	151	189	183	185	139	49	1046	14	43	145	140	145	134	141	93	27	882	1046	882	1928

Table 19: Distribution of Treatment Outcome of All forms of TB by Districts in 2019

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died						Failure		Lost to Follow up		Not Evaluated		Total
								Confiremed as not due to TB		All Other Deaths		All TB Deaths								
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	2024	838	41.4	818	40.4	1656	81.8	64	3.2	80	4.0	144	7.1	28	1.4	146	7.2	50	2.5	**2024**
Gampaha	1070	424	39.6	464	43.4	888	83.0	44	4.1	35	3.3	79	7.4	8	0.7	60	5.6	35	3.3	**1070**
Kalutara	533	241	45.2	173	32.5	414	77.7	14	2.6	26	4.9	40	7.5	5	0.9	14	2.6	60	11.3	**533**
Kandy	620	277	44.7	248	40.0	525	84.7	38	6.1	10	1.6	48	7.7	10	1.6	12	1.9	25	4.0	**620**
Matale	181	88	48.6	65	35.9	153	84.5	7	3.9	7	3.9	14	7.7	4	2.2	5	2.8	5	2.8	**181**
Nuwara Eliya	200	82	41.0	71	35.5	153	76.5	16	8.0	1	0.5	17	8.5	2	1.0	14	7.0	14	7.0	**200**
Galle	404	173	42.8	157	38.9	330	81.7	7	1.7	21	5.2	28	6.9	5	1.2	19	4.7	22	5.4	**404**
Matara	178	106	59.6	54	30.3	160	89.9	2	1.1	6	3.4	8	4.5	1	0.6	3	1.7	6	3.4	**178**
Hambantota	133	55	41.4	49	36.8	104	78.2	8	6.0	0	0.0	8	6.0	5	3.8	5	3.8	11	8.3	**133**
Jaffna	272	14	5.1	220	80.9	234	86.0	15	5.5	8	2.9	23	8.5	4	1.5	3	1.1	8	2.9	**272**
Vavuniya	52	30	57.7	13	25.0	43	82.7	4	7.7	1	1.9	5	9.6	1	1.9	1	1.9	2	3.8	**52**
Batticaloa	147	91	61.9	34	23.1	125	85.0	3	2.0	12	8.2	15	10.2	1	0.7	1	0.7	5	3.4	**147**
Ampara	91	40	44.0	44	48.4	84	92.3	3	3.3	2	2.2	5	5.5	2	2.2	0	0.0	0	0.0	**91**
Kalmunai	164	72	43.9	64	39.0	136	82.9	12	7.3	2	1.2	14	8.5	1	0.6	8	4.9	5	3.0	**164**
Trincomalee	108	72	66.7	22	20.4	94	87.0	4	3.7	3	2.8	7	6.5	2	1.9	3	2.8	2	1.9	**108**
Kurunegala	443	202	45.6	183	41.3	385	86.9	11	2.5	19	4.3	30	6.8	4	0.9	4	0.9	20	4.5	**443**
Puttalam	173	84	48.6	71	41.0	155	89.6	2	1.2	10	5.8	12	6.9	1	0.6	2	1.2	3	1.7	**173**
Anuradhapura	242	147	60.7	83	34.3	230	95.0	4	1.7	0	0.0	4	1.7	7	2.9	1	0.4	0	0.0	**242**
Polonnaruwa	163	67	41.1	78	47.9	145	89.0	2	1.2	11	6.7	13	8.0	1	0.6	0	0.0	4	2.5	**163**
Badulla	280	123	43.9	111	39.6	234	83.6	11	3.9	9	3.2	20	7.1	2	0.7	6	2.1	18	6.4	**280**
Monaragala	131	53	40.5	65	49.6	118	90.1	6	4.6	3	2.3	9	6.9	2	1.5	1	0.8	1	0.8	**131**
Ratnapura	394	236	59.9	125	31.7	361	91.6	21	5.3	11	2.8	32	8.1	1	0.3	0	0.0	0	0.0	**394**
Kegalle	325	158	48.6	123	37.8	281	86.5	5	1.5	13	4.0	18	5.5	6	8.0	4	1.2	16	4.9	**325**
Mannar	22	15	68.2	4	18.2	19	86.4	1	4.5	1	4.5	2	9.1	0	0.0	0	0.0	1	4.5	**22**
Mullaitivu	23	15	65.2	8	34.8	23	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**23**
Kilinochchi	61	20	32.8	32	52.5	52	85.2	5	8.2	2	3.3	7	11.5	0	0.0	0	0.0	2	3.3	**61**
Total	**8434**	**3723**	**44.1**	**3379**	**40.1**	**7102**	**84.2**	**309**	**3.7**	**293**	**3.5**	**602**	**7.1**	**103**	**1.2**	**312**	**3.7**	**315**	**3.7**	**8434**

Table 20: Distribution of Treatment Outcome of All Forms of New (PTB and EPTB) Cases by District in 2019

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died						Failure		Lost to Follow up		Not Evaluated		Total
								Confiremed as not due to TB		All Other Deaths		All TB Deaths								
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	1811	752	41.5	759	41.9	1511	83.4	54	3.0	73	4.0	127	7.0	26	1.4	109	6.0	38	2.1	**1811**
Gampaha	996	392	39.4	440	44.2	832	83.5	43	4.3	27	2.7	70	7.0	8	0.8	54	5.4	32	3.2	**996**
Kalutara	499	224	44.9	169	33.9	393	78.8	14	2.8	25	5.0	39	7.8	4	0.8	10	2.0	53	10.6	**499**
Kandy	593	263	44.4	240	33.9	503	84.8	36	6.1	10	1.7	46	7.8	10	1.7	11	1.9	23	3.9	**593**
Matale	170	79	46.5	63	33.9	142	83.5	7	4.1	7	4.1	14	8.2	4	2.4	5	2.9	5	2.9	**170**
Nuwara Eliya	186	73	39.2	69	33.9	142	76.3	15	8.1	1	0.5	16	8.6	2	1.1	14	7.5	12	6.5	**186**
Galle	372	158	42.5	144	33.9	302	81.2	6	1.6	20	5.4	26	7.0	5	1.3	17	4.6	22	5.9	**372**
Matara	169	99	58.6	54	33.9	153	90.5	2	1.2	6	3.6	8	4.7	1	0.6	2	1.2	5	3.0	**169**
Hambantota	125	49	39.2	49	33.9	98	78.4	8	6.4	0	0.0	8	6.4	5	4.0	5	4.0	9	7.2	**125**
Jaffna	261	14	5.4	212	33.9	226	86.6	13	5.0	8	3.1	21	8.0	3	1.1	3	1.1	8	3.1	**261**
Vavuniya	45	24	53.3	12	33.9	36	80.0	4	8.9	1	2.2	5	11.1	1	2.2	1	2.2	2	4.4	**45**
Batticaloa	137	82	59.9	34	33.9	116	84.7	3	2.2	12	8.8	15	10.9	1	0.7	1	0.7	4	2.9	**137**
Ampara	86	36	41.9	43	33.9	79	91.9	3	3.5	2	2.3	5	5.8	2	2.3	0	0.0	0	0.0	**86**
Kalmunai	153	67	43.8	61	33.9	128	83.7	11	7.2	2	1.3	13	8.5	1	0.7	7	4.6	4	2.6	**153**
Trincomalee	98	63	64.3	22	33.9	85	86.7	4	4.1	3	3.1	7	7.1	2	2.0	2	2.0	2	2.0	**98**
Kurunegala	410	189	46.1	171	33.9	360	87.8	11	2.7	18	4.4	29	7.1	4	1.0	2	0.5	15	3.7	**410**
Puttalam	162	76	46.9	71	33.9	147	90.7	1	0.6	8	4.9	9	5.6	1	0.6	2	1.2	3	1.9	**162**
Anuradhapura	228	135	59.2	82	33.9	217	95.2	4	1.8	0	0.0	4	1.8	7	3.1	0	0.0	0	0.0	**228**
Polonnaruwa	151	62	41.1	74	33.9	136	90.1	2	1.3	8	5.3	10	6.6	1	0.7	0	0.0	4	2.6	**151**
Badulla	255	106	41.6	109	33.9	215	84.3	11	4.3	9	3.5	20	7.8	2	0.8	1	0.4	17	6.7	**255**
Monaragala	119	46	38.7	62	33.9	108	90.8	6	5.0	2	1.7	8	6.7	2	1.7	1	0.8	0	0.0	**119**
Ratnapura	378	225	59.5	120	33.9	345	91.3	21	5.6	11	2.9	32	8.5	1	0.3	0	0.0	0	0.0	**378**
Kegalle	310	149	48.1	121	33.9	270	87.1	5	1.6	11	3.5	16	5.2	6	1.9	3	1.0	15	4.8	**310**
Mannar	19	13	68.4	3	33.9	16	84.2	1	5.3	1	5.3	2	10.5	0	0.0	0	0.0	1	5.3	**19**
Mullaitivu	21	13	61.9	8	33.9	21	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**21**
Kilinochchi	58	20	34.5	29	33.9	49	84.5	5	8.6	2	3.4	7	12.1	0	0.0	0	0.0	2	3.4	**58**
Total	**7812**	**3409**	43.6	**3221**	33.9	**6630**	84.9	**290**	3.7	**267**	3.4	**557**	7.1	**99**	1.3	**250**	3.2	**276**	3.5	**7812**

Table 21: Distribution of Treatment Outcome of All New PTB Cases by District in 2019

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
								Confiremed as not due to TB		All Other Deaths										
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	1388	752	54.2	389	28.0	1141	82.2	43	3.1	58	4.2	101	7.3	25	1.8	100	7.2	21	1.5	**1388**
Gampaha	703	392	55.8	190	27.0	582	82.8	30	4.3	21	3.0	51	7.3	7	1.0	46	6.5	17	2.4	**703**
Kalutara	346	224	64.7	54	15.6	278	80.3	10	2.9	19	5.5	29	8.4	2	0.6	6	1.7	31	9.0	**346**
Kandy	436	263	60.3	108	24.8	371	85.1	23	5.3	9	2.1	32	7.3	10	2.3	10	2.3	13	3.0	**436**
Matale	112	79	70.5	19	17.0	98	87.5	2	1.8	4	3.6	6	5.4	4	3.6	2	1.8	2	1.8	**112**
Nuwara Eliya	119	73	61.3	15	12.6	88	73.9	14	11.8	0	0.0	14	11.8	2	1.7	11	9.2	4	3.4	**119**
Galle	253	158	62.5	49	19.4	207	81.8	5	2.0	14	5.5	19	7.5	5	2.0	15	5.9	7	2.8	**253**
Matara	123	99	80.5	12	9.8	111	90.2	2	1.6	6	4.9	8	6.5	1	0.8	0	0.0	3	2.4	**123**
Hambantota	87	49	56.3	22	25.3	71	81.6	4	4.6	0	0.0	4	4.6	5	5.7	3	3.4	4	4.6	**87**
Jaffna	186	14	7.5	144	77.4	158	84.9	11	5.9	7	3.8	18	9.7	3	1.6	3	1.6	4	2.2	**186**
Vavuniya	30	24	80.0	2	6.7	26	86.7	3	10.0	0	0.0	3	10.0	1	3.3	0	0.0	0	0.0	**30**
Batticaloa	110	82	74.5	12	10.9	94	85.5	2	1.8	11	10.0	13	11.8	1	0.9	1	0.9	1	0.9	**110**
Ampara	68	36	52.9	26	38.2	62	91.2	2	2.9	2	2.9	4	5.9	2	2.9	0	0.0	0	0.0	**68**
Kalmunai	124	67	54.0	35	28.2	102	82.3	10	8.1	2	1.6	12	9.7	1	0.8	6	4.8	3	2.4	**124**
Trincomalee	83	63	75.9	10	12.0	73	88.0	3	3.6	3	3.6	6	7.2	2	2.4	2	2.4	0	0.0	**83**
Kurunegala	283	189	66.8	64	22.6	253	89.4	7	2.5	12	4.2	19	6.7	3	1.1	1	0.4	7	2.5	**283**
Puttalam	124	76	61.3	37	29.8	113	91.1	0	0.0	7	5.6	7	5.6	1	0.8	1	0.8	2	1.6	**124**
Anuradhapura	165	135	81.8	20	12.1	155	93.9	3	1.8	0	0.0	3	1.8	7	4.2	0	0.0	0	0.0	**165**
Polonnaruwa	121	62	51.2	46	38.0	108	89.3	2	1.7	6	5.0	8	6.6	1	0.8	0	0.0	4	3.3	**121**
Badulla	192	106	55.2	55	28.6	161	83.9	9	4.7	7	3.6	16	8.3	2	1.0	0	0.0	13	6.8	**192**
Monaragala	72	46	63.9	16	22.2	62	86.1	5	6.9	2	2.8	7	9.7	2	2.8	1	1.4	0	0.0	**72**
Ratnapura	263	225	85.6	17	6.5	242	92.0	15	5.7	5	1.9	20	7.6	1	0.4	0	0.0	0	0.0	**263**
Kegalle	216	149	69.0	38	17.6	187	86.6	2	0.9	9	4.2	11	5.1	5	2.3	3	1.4	10	4.6	**216**
Mannar	16	13	81.3	0	0.0	13	81.3	1	6.3	1	6.3	2	12.5	0	0.0	0	0.0	1	6.3	**16**
Mullaitivu	19	13	68.4	6	31.6	19	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**19**
Kilinochchi	50	20	40.0	22	44.0	42	84.0	5	10.0	2	4.0	7	14.0	0	0.0	0	0.0	1	2.0	**50**
Total	**5689**	**3409**	**59.9**	**1408**	**24.7**	**4817**	**84.7**	**213**	**3.7**	**207**	**3.6**	**420**	**7.4**	**93**	**1.6**	**211**	**3.7**	**148**	**2.6**	**5689**

Table 22: Distribution of Treatment Outcome of New Sputum Positive PTB Cases by District in 2019

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
								Confiremed as not due to TB		All Other Deaths										
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	1091	752	68.9	147	13.5	899	82.4	32	2.9	45	4.1	77	77.0	23	2.1	80	7.3	12	1.1	**1091**
Gampaha	524	392	74.8	51	9.7	443	84.5	16	3.1	9	1.7	25	25.0	7	1.3	38	7.3	11	2.1	**524**
Kalutara	293	224	76.5	15	5.1	239	81.6	8	2.7	14	4.8	22	22.0	2	0.7	5	1.7	25	8.5	**293**
Kandy	303	263	86.8	1	0.3	264	87.1	13	4.3	5	1.7	18	18.0	10	3.3	8	2.6	3	1.0	**303**
Matale	89	79	88.8	0	0.0	79	88.8	1	1.1	4	4.5	5	5.0	4	4.5	1	1.1	0	0.0	**89**
Nuwara Eliya	94	73	77.7	0	0.0	73	77.7	9	9.6	0	0.0	9	9.0	2	2.1	9	9.6	1	1.1	**94**
Galle	204	158	77.5	8	3.9	166	81.4	5	2.5	10	4.9	15	15.0	5	2.5	14	6.9	4	2.0	**204**
Matara	113	99	87.6	3	2.7	102	90.3	2	1.8	6	5.3	8	8.0	1	0.9	0	0.0	2	1.8	**113**
Hambantota	62	49	79.0	0	0.0	49	79.0	3	4.8	0	0.0	3	3.0	5	8.1	3	4.8	2	3.2	**62**
Jaffna	126	14	11.1	95	75.4	109	86.5	7	5.6	5	4.0	12	12.0	3	2.4	0	0.0	2	1.6	**126**
Vavuniya	27	24	88.9	1	3.7	25	92.6	1	3.7	0	0.0	1	1.0	1	3.7	0	0.0	0	0.0	**27**
Batticaloa	98	82	83.7	0	0.0	82	83.7	2	2.0	11	11.2	13	13.0	1	1.0	1	1.0	1	1.0	**98**
Ampara	41	36	87.8	0	0.0	36	87.8	1	2.4	2	4.9	3	3.0	2	4.9	0	0.0	0	0.0	**41**
Kalmunai	100	67	67.0	17	17.0	84	84.0	7	7.0	1	1.0	8	8.0	0	0.0	6	6.0	2	2.0	**100**
Trincomalee	73	63	86.3	0	0.0	63	86.3	3	4.1	3	4.1	6	6.0	2	2.7	2	2.7	0	0.0	**73**
Kurunegala	211	189	89.6	7	3.3	196	92.9	3	1.4	7	3.3	10	10.0	3	1.4	1	0.5	1	0.5	**211**
Puttalam	89	76	85.4	3	3.4	79	88.8	0	0.0	7	7.9	7	7.0	1	1.1	1	1.1	1	1.1	**89**
Anuradhapura	144	135	93.8	0	0.0	135	93.8	3	2.1	0	0.0	3	3.0	6	4.2	0	0.0	0	0.0	**144**
Polonnaruwa	72	62	86.1	2	2.8	64	88.9	2	2.8	4	5.6	6	6.0	1	1.4	0	0.0	1	1.4	**72**
Badulla	127	106	83.5	2	1.6	108	85.0	7	5.5	4	3.1	11	11.0	2	1.6	0	0.0	6	4.7	**127**
Monaragala	55	46	83.6	3	5.5	49	89.1	2	3.6	1	1.8	3	3.0	2	3.6	1	1.8	0	0.0	**55**
Ratnapura	243	225	92.6	0	0.0	225	92.6	13	5.3	5	2.1	18	18.0	0	0.0	0	0.0	0	0.0	**243**
Kegalle	172	149	86.6	1	0.6	150	87.2	1	0.6	8	4.7	9	9.0	5	2.9	3	1.7	5	2.9	**172**
Mannar	16	13	81.3	0	0.0	13	81.3	1	6.3	1	6.3	2	2.0	0	0.0	0	0.0	1	6.3	**16**
Mullaitivu	13	13	100.0	0	0.0	13	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**13**
Kilinochchi	34	20	58.8	11	32.4	31	91.2	3	8.8	0	0.0	3	3.0	0	0.0	0	0.0	0	0.0	**34**
Total	**4414**	**3409**	**77.2**	**367**	**8.3**	**3776**	**85.5**	**145**	**3.3**	**152**	**3.4**	**297**	**297.0**	**88**	**1.99366**	**173**	**3.9**	**80**	**1.81242**	**4414**

Table 23: Distribution of Treatment Outcome of New Sputum Negative PTB Cases by District in 2019

District	Total Number Registered	Treatment Completed		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
				Confiremed as not due to TB		All Other Deaths										
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	297	242	81.5	11	3.7	13	4.4	24	8.1	2	0.7	20	6.7	9	3.0	**297**
Gampaha	179	139	77.7	14	7.8	12	6.7	26	14.5	0	0.0	8	4.5	6	3.4	**179**
Kalutara	53	39	73.6	2	3.8	5	9.4	7	13.2	0	0.0	1	1.9	6	11.3	**53**
Kandy	133	107	80.5	10	7.5	4	3.0	14	10.5	0	0.0	2	1.5	10	7.5	**133**
Matale	23	19	82.6	1	4.3	0	0.0	1	4.3	0	0.0	1	4.3	2	8.7	**23**
Nuwara Eliya	25	15	60.0	5	20.0	0	0.0	5	20.0	0	0.0	2	8.0	3	12.0	**25**
Galle	49	41	83.7	0	0.0	4	8.2	4	8.2	0	0.0	1	2.0	3	6.1	**49**
Matara	10	9	90.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	10.0	**10**
Hambantota	25	22	88.0	1	4.0	0	0.0	1	4.0	0	0.0	0	0.0	2	8.0	**25**
Jaffna	60	49	81.7	4	6.7	2	3.3	6	10.0	0	0.0	3	5.0	2	3.3	**60**
Vavuniya	3	1	33.3	2	66.7	0	0.0	2	66.7	0	0.0	0	0.0	0	0.0	**3**
Batticaloa	12	12	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**12**
Ampara	27	26	96.3	1	3.7	0	0.0	1	3.7	0	0.0	0	0.0	0	0.0	**27**
Kalmunai	24	18	75.0	3	12.5	1	4.2	4	16.7	1	4.2	0	0.0	1	4.2	**24**
Trincomalee	10	10	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**10**
Kurunegala	72	57	79.2	4	5.6	5	6.9	9	12.5	0	0.0	0	0.0	6	8.3	**72**
Puttalam	35	34	97.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	**35**
Anuradhapura	21	20	95.2	0	0.0	0	0.0	0	0.0	1	4.8	0	0.0	0	0.0	**21**
Polonnaruwa	49	44	89.8	0	0.0	2	4.1	2	4.1	0	0.0	0	0.0	3	6.1	**49**
Badulla	65	53	81.5	2	3.1	3	4.6	5	7.7	0	0.0	0	0.0	7	10.8	**65**
Monaragala	17	13	76.5	3	17.6	1	5.9	4	23.5	0	0.0	0	0.0	0	0.0	**17**
Ratnapura	20	17	85.0	2	10.0	0	0.0	2	10.0	1	5.0	0	0.0	0	0.0	**20**
Kegalle	44	37	84.1	1	2.3	1	2.3	2	4.5	0	0.0	0	0.0	5	11.4	**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	6	6	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**6**
Kilinochchi	16	11	68.8	2	12.5	2	12.5	4	25.0	0	0.0	0	0.0	0	0.0	**15**
Total	**1275**	**1041**	**81.6**	**68**	**5.3**	**55**	**4.3**	123	9.6	**5**	**0.4**	**38**	3.0	**68**	5.3	**1275**

Table 24: Distribution of Treatment Outcome of EPTB Cases by District in 2019

District	Total Number Registered	Treatment Completed		Died				All Deaths		Failure		Lost to Follow up		Not Evaluated		Total
				Confiremed as not due to TB		All Other Deaths										
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	423	370	87.5	11	2.6	15	3.5	26	6.1	1	0.2	9	2.1	17	4.0	423
Gampaha	293	250	85.3	13	4.4	6	2.0	19	6.5	1	0.3	8	2.7	15	5.1	293
Kalutara	153	115	75.2	4	2.6	6	3.9	10	6.5	2	1.3	4	2.6	22	14.4	153
Kandy	157	132	84.1	13	8.3	1	0.6	14	8.9	0	0.0	1	0.6	10	6.4	157
Matale	58	44	75.9	5	8.6	3	5.2	8	13.8	0	0.0	3	5.2	3	5.2	58
Nuwara Eliya	67	54	80.6	1	1.5	1	1.5	2	3.0	0	0.0	3	4.5	8	11.9	67
Galle	119	95	79.8	1	0.8	6	5.0	7	5.9	0	0.0	2	1.7	15	12.6	119
Matara	46	42	91.3	0	0.0	0	0.0	0	0.0	0	0.0	2	4.3	2	4.3	46
Hambantota	38	27	71.1	4	10.5	0	0.0	4	10.5	0	0.0	2	5.3	5	13.2	38
Jaffna	75	68	90.7	2	2.7	1	1.3	3	4.0	0	0.0	0	0.0	4	5.3	75
Vavuniya	15	10	66.7	1	6.7	1	6.7	2	13.3	0	0.0	1	6.7	2	13.3	15
Batticaloa	27	22	81.5	1	3.7	1	3.7	2	7.4	0	0.0	0	0.0	3	11.1	27
Ampara	18	17	94.4	1	5.6	0	0.0	1	5.6	0	0.0	0	0.0	0	0.0	18
Kalmunai	29	26	89.7	1	3.4	0	0.0	1	3.4	0	0.0	1	3.4	1	3.4	29
Trincomalee	15	12	80.0	1	6.7	0	0.0	1	6.7	0	0.0	0	0.0	2	13.3	15
Kurunegala	127	107	84.3	4	3.1	6	4.7	10	7.9	1	0.8	1	0.8	8	6.3	127
Puttalam	38	34	89.5	1	2.6	1	2.6	2	5.3	0	0.0	1	2.6	1	2.6	38
Anuradhapura	63	62	98.4	1	1.6	0	0.0	1	1.6	0	0.0	0	0.0	0	0.0	63
Polonnaruwa	30	28	93.3	0	0.0	2	6.7	2	6.7	0	0.0	0	0.0	0	0.0	30
Badulla	63	54	85.7	2	3.2	2	3.2	4	6.3	0	0.0	1	1.6	4	6.3	63
Monaragala	47	46	97.9	1	2.1	0	0.0	1	2.1	0	0.0	0	0.0	0	0.0	47
Ratnapura	115	103	89.6	6	5.2	6	5.2	12	10.4	0	0.0	0	0.0	0	0.0	115
Kegalle	94	83	88.3	3	3.2	2	2.1	5	5.3	1	1.1	0	0.0	5	5.3	94
Mannar	3	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3
Mullaitivu	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
Kilinochchi	8	7	87.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	12.5	8
Total	**2123**	**1813**	**85.4**	**77**	**3.6**	**60**	**2.8**	**137**	**6.5**	**6**	**0.3**	**39**	**1.8**	**128**	**6.0**	**2123**

Table 25: Distribution of Treatment Outcome of Re-Treatment TB Cases by District in 2019

District	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died				Failure		Lost to Follow up		Not Evaluated		Total
								Confiremed as not due to TB		All Other Deaths								
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	199	80	40.2	53	26.6	133	66.8	9	4.5	7	3.5	1	0.5	37	18.6	12	6.0	**199**
Gampaha	73	31	42.5	24	32.9	55	75.3	1	1.4	8	11.0	0	0.0	6	8.2	3	4.1	**73**
Kalutara	34	17	50.0	4	11.8	21	61.8	0	0.0	1	2.9	1	2.9	4	11.8	7	20.6	**34**
Kandy	27	14	51.9	8	29.6	22	81.5	2	7.4	0	0.0	0	0.0	1	3.7	2	7.4	**27**
Matale	11	9	81.8	2	18.2	11	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**11**
Nuwara Eliya	14	9	64.3	2	14.3	11	78.6	1	7.1	0	0.0	0	0.0	0	0.0	2	14.3	**14**
Galle	32	15	46.9	13	40.6	28	87.5	1	3.1	1	3.1	0	0.0	2	6.3	0	0.0	**32**
Matara	9	7	77.8	0	0.0	7	77.8	0	0.0	0	0.0	0	0.0	1	11.1	1	11.1	**9**
Hambantota	8	6	75.0	0	0.0	6	75.0	0	0.0	0	0.0	0	0.0	0	0.0	2	25.0	**8**
Jaffna	11	0	0.0	8	72.7	8	72.7	2	18.2	0	0.0	1	9.1	0	0.0	0	0.0	**11**
Vavuniya	7	6	85.7	1	14.3	7	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**7**
Batticaloa	10	9	90.0	0	0.0	9	90.0	0	0.0	0	0.0	0	0.0	0	0.0	1	10.0	**10**
Ampara	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	**5**
Kalmunai	11	5	45.5	3	27.3	8	72.7	1	9.1	0	0.0	0	0.0	1	9.1	1	9.1	**11**
Trincomalee	10	9	90.0	0	0.0	9	90.0	0	0.0	0	0.0	0	0.0	1	10.0	0	0.0	**10**
Kurunegala	33	13	39.4	12	36.4	25	75.8	0	0.0	1	3.0	0	0.0	2	6.1	5	15.2	**33**
Puttalam	11	8	72.7	0	0.0	8	72.7	1	9.1	2	18.2	0	0.0	0	0.0	0	0.0	**11**
Anuradhapura	14	12	85.7	1	7.1	13	92.9	0	0.0	0	0.0	0	0.0	1	7.1	0	0.0	**14**
Polonnaruwa	12	5	41.7	4	33.3	9	75.0	0	0.0	3	25.0	0	0.0	0	0.0	0	0.0	**12**
Badulla	25	17	68.0	2	8.0	19	76.0	0	0.0	0	0.0	0	0.0	5	20.0	1	4.0	**25**
Monaragala	12	7	58.3	3	25.0	10	83.3	0	0.0	1	8.3	0	0.0	0	0.0	1	8.3	**12**
Ratnapura	16	11	68.8	5	31.3	16	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**16**
Kegalle	15	9	60.0	2	13.3	11	73.3	0	0.0	2	13.3	0	0.0	1	6.7	1	6.7	**15**
Mannar	2	1	50.0	1	50.0	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	#DIV/0!	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**0**
Kilinochchi	3	0	0.0	3	100.0	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**3**
Total	**604**	**304**	50.3	**152**	25.2	456	75.5	**18**	3.0	**26**	4.3	**3**	0.5	**62**	10.3	**39**	6.5	**604**

Table 26: Distribution of Treatment Outcome of Other TB Cases by District in 2019

District	Total Number Registered	Cured		Treatment Completed		Died				Failure		Lost to Follow up		Not Evaluated		Total
						Confiremed as not due to TB		All Other Deaths								
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	14	6	42.9	6	42.9	1	7.1	0	0.0	1	7.1	0	0.0	0	0.0	**14**
Gampaha	1	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**
Kandy	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**
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**
Galle	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**
Hambantota	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**
Vavuniya	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**
Ampara	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**
Trincomalee	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**
Puttalam	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**
Polonnaruwa	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**
Monaragala	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**
Kegalle	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**0**
Mannar	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**1**
Mullaitivu	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**2**
Kilinochchi	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**	**10**	**55.6**	**6**	**33.3**	**1**	**5.6**	**0**	**0.0**	**1**	**5.6**	**0**	**0.0**	**0**	**0.0**	**18**

Table 27: Distribution of Sputum Conversion of New PTB Cases at the End of the Intensive Phase by District in 2019

District	Total Number Registered	Negetive		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 28: Distribution of Sputum Conversion of Re-Treatment PTB Cases at the End of the Intensive Phase by District in 2019

District	Total Number Registered	Negetive		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**

Table 29: Distribution of Treatment Outcome of Sputum Negative Culture Positive TB Cases by District in 2019

District	Total Number Registered	Cured		Treatment Completed		Died				Failure		Lost to Follow up		Not Evaluated		Total
						Confiremed as not due to TB		All Other Deaths								
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	18	12	66.7	5	27.8	0	0.0	1	5.6	0	0.0	0	0.0	0	0.0	**18**
Gampaha	31	21	67.7	9	29.0	0	0.0	0	0.0	0	0.0	1	3.2	0	0.0	**31**
Kalutara	11	7	63.6	2	18.2	0	0.0	0	0.0	0	0.0	0	0.0	2	18.2	**11**
Kandy	7	7	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**7**
Matale	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**
Galle	13	10	76.9	1	7.7	0	0.0	1	7.7	0	0.0	0	0.0	1	7.7	**13**
Matara	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**1**
Hambantota	4	2	50.0	0	0.0	0	0.0	0	0.0	1	25.0	1	25.0	0	0.0	**4**
Jaffna	11	0	0.0	10	90.9	0	0.0	0	0.0	1	9.1	0	0.0	0	0.0	**11**
Vavuniya	2	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**2**
Batticaloa	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**0**
Ampara	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**2**
Kalmunai	6	1	16.7	3	50.0	1	16.7	0	0.0	0	0.0	1	16.7	0	0.0	**6**
Trincomalee	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**0**
Kurunegala	10	8	80.0	2	20.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**10**
Puttalam	4	4	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**4**
Anuradhapura	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**1**
Polonnaruwa	3	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**3**
Badulla	12	12	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**12**
Monaragala	5	5	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**5**
Ratnapura	6	5	83.3	0	0.0	1	16.7	0	0.0	0	0.0	0	0.0	0	0.0	**6**
Kegalle	3	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**3**
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	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**0**
Kilinochchi	2	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**2**
Total	**152**	**105**	69.1	**35**	23.0	**2**	1.3	**2**	1.3	**2**	1.3	**3**	2.0	**3**	2.0	**152**

Table 30: Distribution of Treatment Outcome of WRD TB Cases by District in 2019

District	Total Number Registered	Cured		Treatment Completed		Confiremed as not due to TB		All Other Deaths		Failure		Lost to Follow up		Not Evaluated		Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	97	62	63.9	20	20.6	4	4.1	4	4.1	1	1.0	5	5.2	1	1.0	**97**
Gampaha	34	20	58.8	10	29.4	1	2.9	1	2.9	0	0.0	2	5.9	0	0.0	**34**
Kalutara	27	13	48.1	5	18.5	0	0.0	3	11.1	1	3.7	0	0.0	5	18.5	**27**
Kandy	21	18	85.7	0	0.0	0	0.0	1	4.8	2	9.5	0	0.0	0	0.0	**21**
Matale	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	6	5	83.3	0	0.0	0	0.0	0	0.0	0	0.0	1	16.7	0	0.0	**6**
Galle	5	4	80.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	20.0	**5**
Matara	7	3	42.9	1	14.3	2	28.6	1	14.3	0	0.0	0	0.0	0	0.0	**7**
Hambantota	10	9	90.0	0	0.0	0	0.0	0	0.0	1	10.0	0	0.0	0	0.0	**10**
Jaffna	8	0	0.0	8	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**8**
Vavuniya	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**1**
Batticaloa	4	4	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**4**
Ampara	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**1**
Kalmunai	19	3	15.8	14	73.7	0	0.0	1	5.3	0	0.0	0	0.0	1	5.3	**19**
Trincomalee	3	2	66.7	0	0.0	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	**3**
Kurunegala	25	24	96.0	0	0.0	1	4.0	0	0.0	0	0.0	0	0.0	0	0.0	**25**
Puttalam	4	4	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**4**
Anuradhapura	22	21	95.5	0	0.0	0	0.0	0	0.0	1	4.5	0	0.0	0	0.0	**22**
Polonnaruwa	11	7	63.6	2	18.2	1	9.1	0	0.0	0	0.0	0	0.0	1	9.1	**11**
Badulla	18	16	88.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	11.1	**18**
Monaragala	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**1**
Ratnapura	38	35	92.1	0	0.0	3	7.9	0	0.0	0	0.0	0	0.0	0	0.0	**38**
Kegalle	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**0**
Mannar	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**2**
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	5	4	80.0	1	20.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**5**
Total	**372**	**262**	70.4	**61**	16.4	**13**	3.5	**11**	3.0	**6**	1.6	**8**	2.2	**11**	3.0	**372**

Table 31: All TB Case Detection by category by District of Registration in 2020

District	New Cases							Total Retreatment Cases							Other Previously Treated History unknown							Grand Total
	Bacteriology conform				Clinically Diagnosis (Sputum Negative)	EPTB	Total	Bacteriology conform				Clinically Diagnosis (Sputum Negative)	EPTB	Total	Bacteriology conform				Clinically Diagnosis (Sputum Negative)	EPTB	Total	
	Sputum PTB sp+ve	Sputum PTBsp-ve Culture Pos	Sputum PTBsp-ve WRD Pos	Total				Sputum PTB sp+ve	Sputum PTBsp-ve Culture Pos	Sputum PTBsp-ve WRD Pos	Total				Sputum PTB sp+ve	Sputum PTBsp-ve Culture Pos	Sputum PTBsp-ve WRD Pos	Total				
Colombo	665	26	222	913	233	382	1528	91	2	46	139	20	22	181	2	0	2	4	0	1	5	1714
Gampaha	357	15	36	408	144	220	772	49	7	4	60	10	5	75	0	0	0	0	0	0	0	847
Kalutara	266	3	26	295	35	141	471	18	0	1	19	0	5	24	0	0	0	0	0	0	0	495
Kandy	198	2	7	207	117	130	454	23	0	0	23	4	3	30	0	0	0	0	0	0	0	484
Matale	68	0	4	72	21	43	136	4	0	0	4	1	0	5	0	0	0	0	0	0	0	141
Nuwara Eliya	82	0	3	85	36	83	204	9	0	0	9	2	2	13	0	0	0	0	0	0	0	217
Galle	143	2	22	167	48	119	334	14	1	8	23	5	6	34	0	0	0	0	0	0	0	368
Matara	71	3	21	95	3	44	142	9	0	0	9	0	3	12	0	0	0	0	0	0	0	154
Hambantota	48	4	12	64	26	46	136	5	1	2	8	4	2	14	0	0	0	0	0	0	0	150
Jaffna	75	2	14	91	25	87	203	7	0	4	11	1	3	15	0	0	0	0	0	0	0	218
Vavuniya	26	0	7	33	5	5	43	3	0	0	3	0	1	4	0	0	0	0	0	0	0	47
Batticaloa	67	0	9	76	10	34	120	4	1	1	6	0	1	7	0	0	0	0	0	0	0	127
Ampara	28	1	4	33	14	18	65	4	0	0	4	0	1	5	0	0	0	0	0	0	0	70
Kalmunai	70	3	12	85	21	21	127	9	1	1	11	2	2	15	0	0	0	0	0	0	0	142
Trincomalee	70	0	6	76	14	22	112	7	0	0	7	0	1	8	0	0	0	0	0	0	0	120
Kurunegala	151	12	20	183	51	83	317	15	3	3	21	0	3	24	0	0	0	0	0	0	0	341
Puttalam	69	9	7	85	24	47	156	0	0	0	0	2	1	3	0	0	0	0	0	0	0	159
Anuradhapura	121	0	14	135	16	57	208	13	0	4	17	0	2	19	0	0	0	0	0	0	0	227
Polonnaruwa	51	4	6	61	33	30	124	0	1	1	2	0	0	2	0	0	0	0	0	0	0	126
Badulla	83	18	6	107	40	75	222	4	0	0	4	2	4	10	0	0	0	0	0	0	0	232
Monaragala	69	2	1	72	32	35	139	6	1	0	7	1	3	11	0	0	0	0	0	0	0	150
Ratnapura	133	1	45	179	30	95	304	9	1	13	23	2	8	33	0	0	0	0	0	0	0	337
Kegalle	137	5	20	162	28	81	271	13	0	4	17	0	1	18	0	0	0	0	0	0	0	289
Mannar	10	0	0	10	2	5	17	2	0	0	2	0	0	2	0	0	0	0	0	0	0	19
Mullaitivu	7	0	3	10	2	12	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Kilinochchi	27	1	2	30	14	13	57	2	0	1	3	0	0	3	0	0	0	0	0	0	0	60
Total	**3092**	**113**	**529**	**3734**	**1024**	**1928**	**6686**	**320**	**19**	**93**	**432**	**56**	**79**	**567**	**2**	**0**	**2**	**4**	**0**	**1**	**5**	**7258**

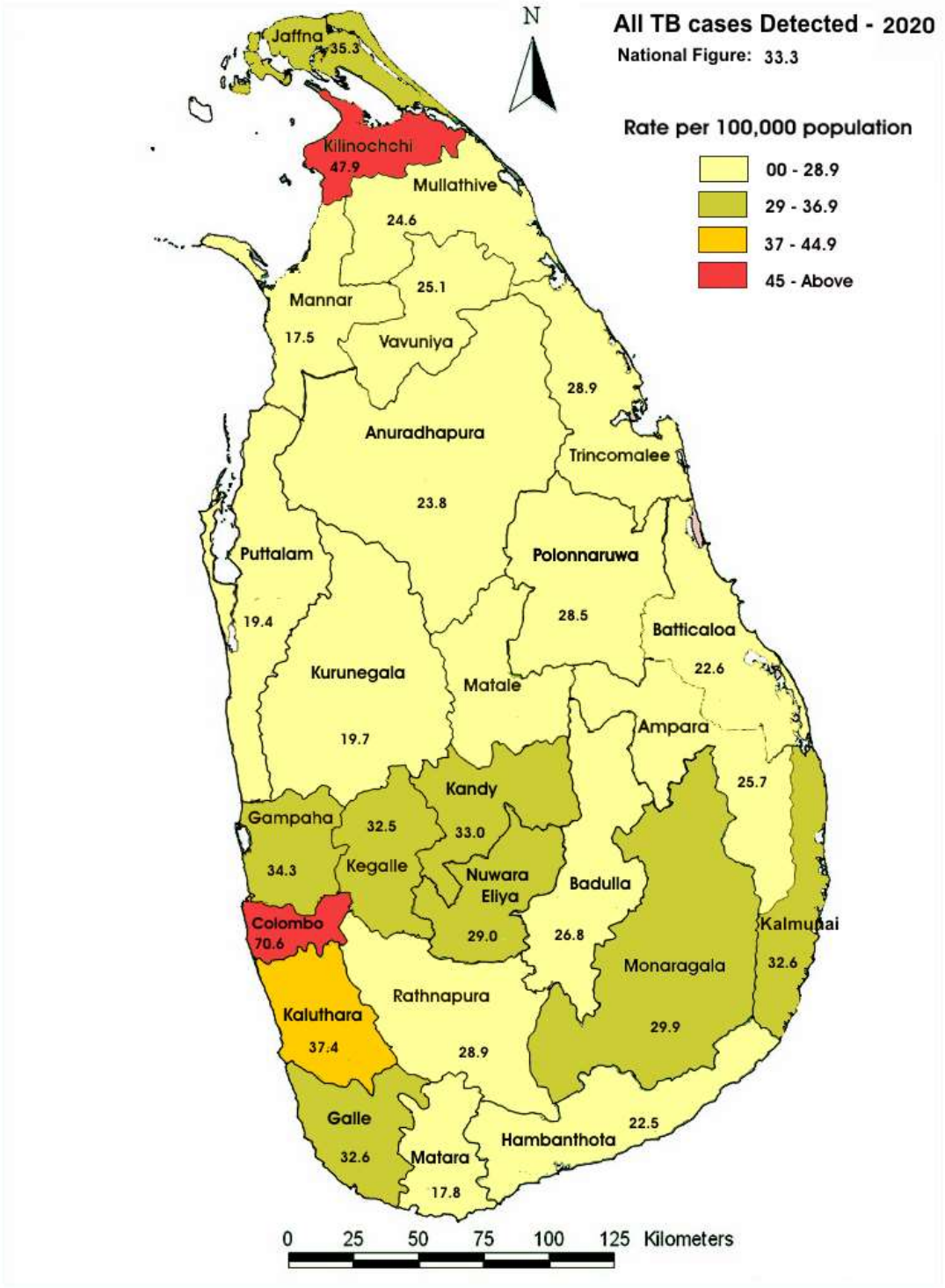


Figure 31: Map of all cases detected

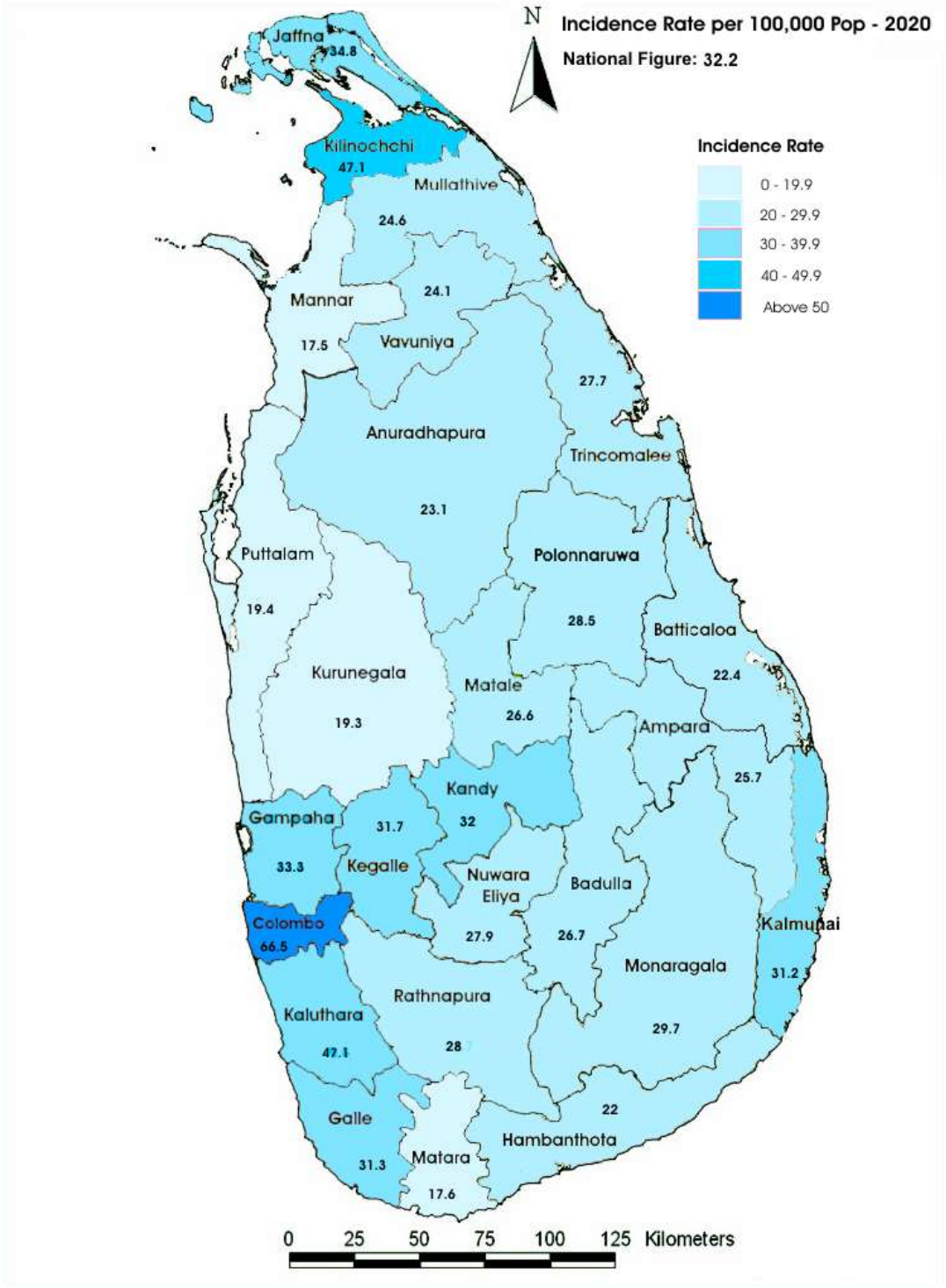


Figure 32: Map of TB incident rate

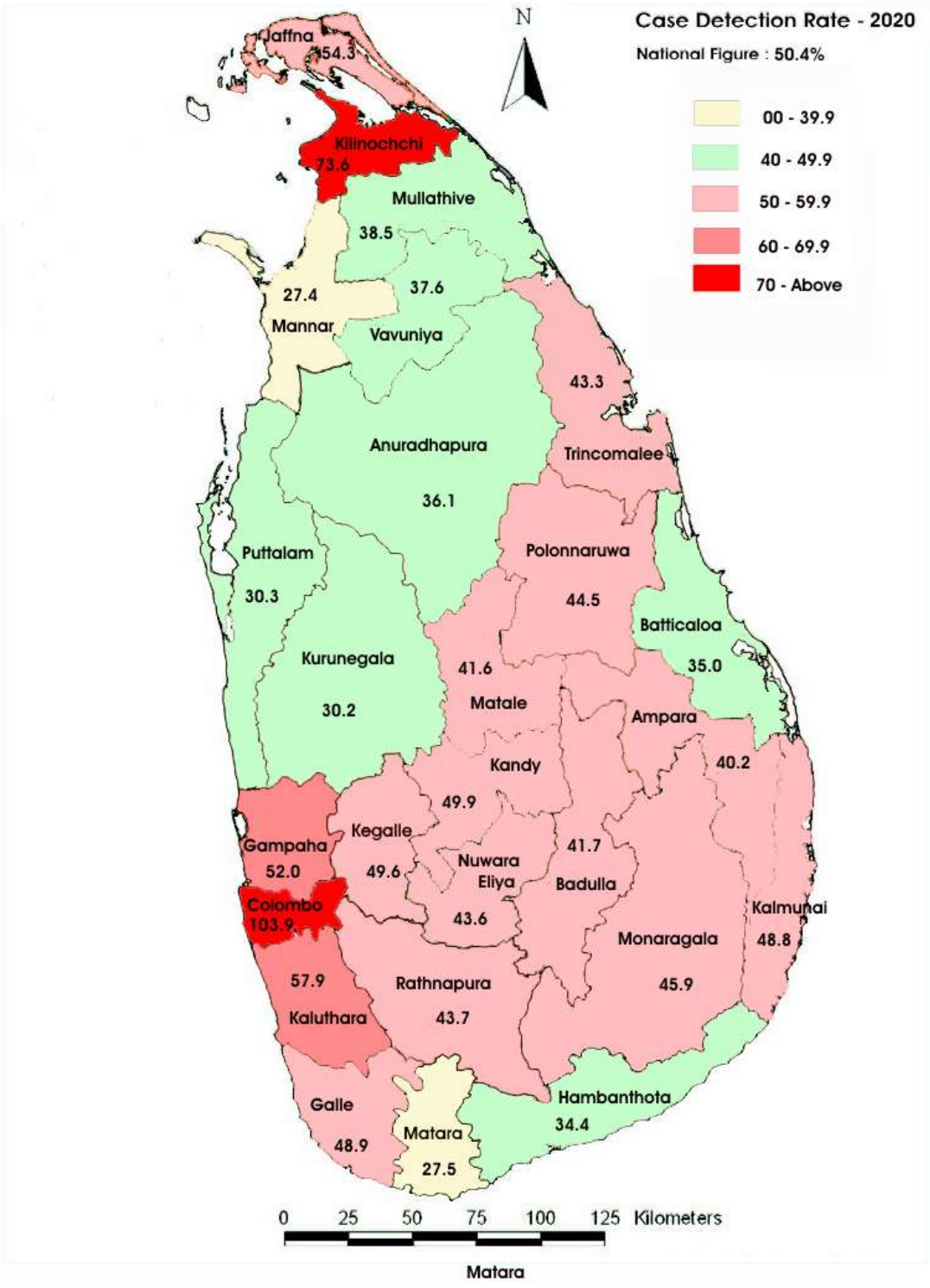


Figure 33: Map of case detection rate

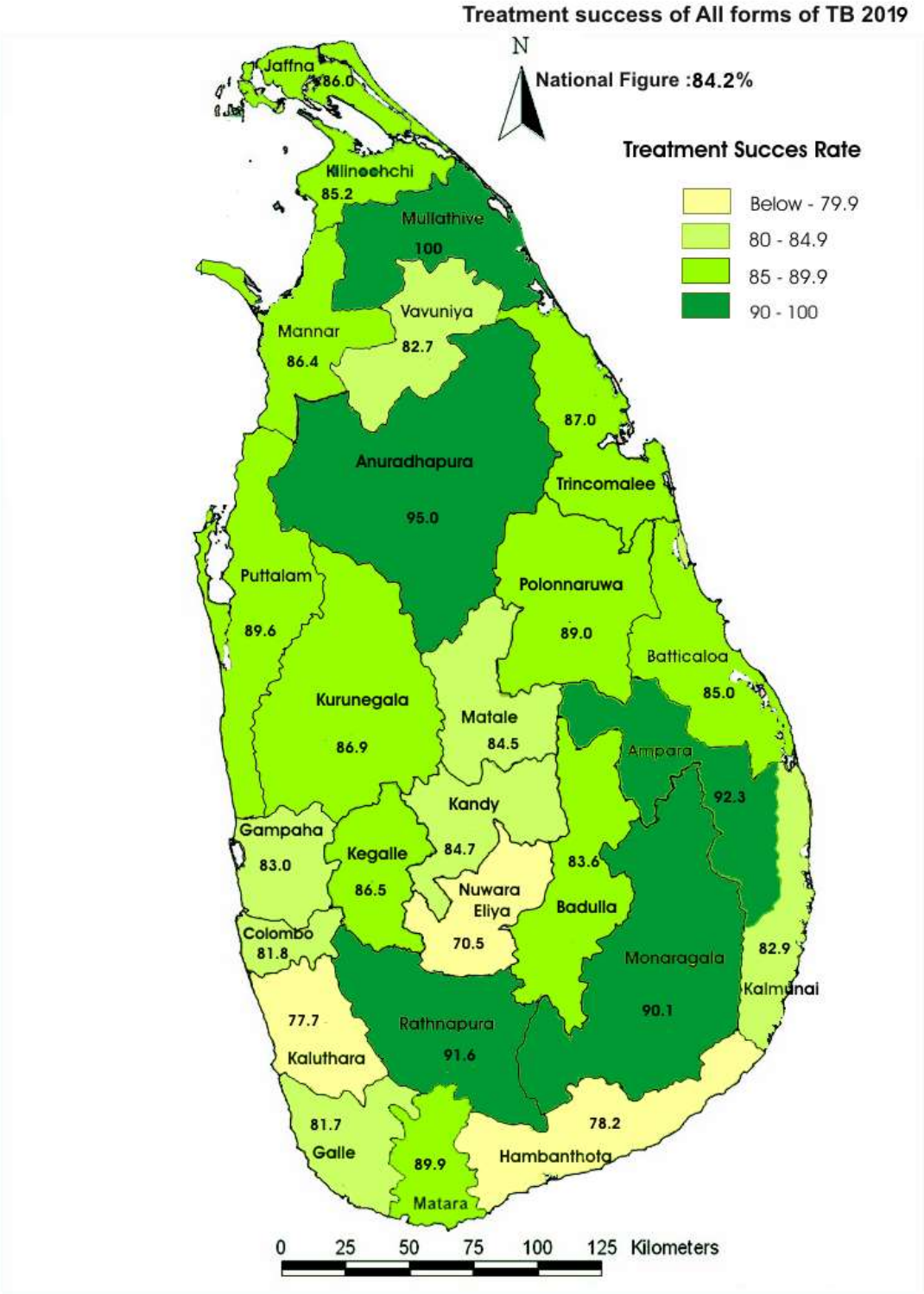


Figure 34: Map of treatment success rate

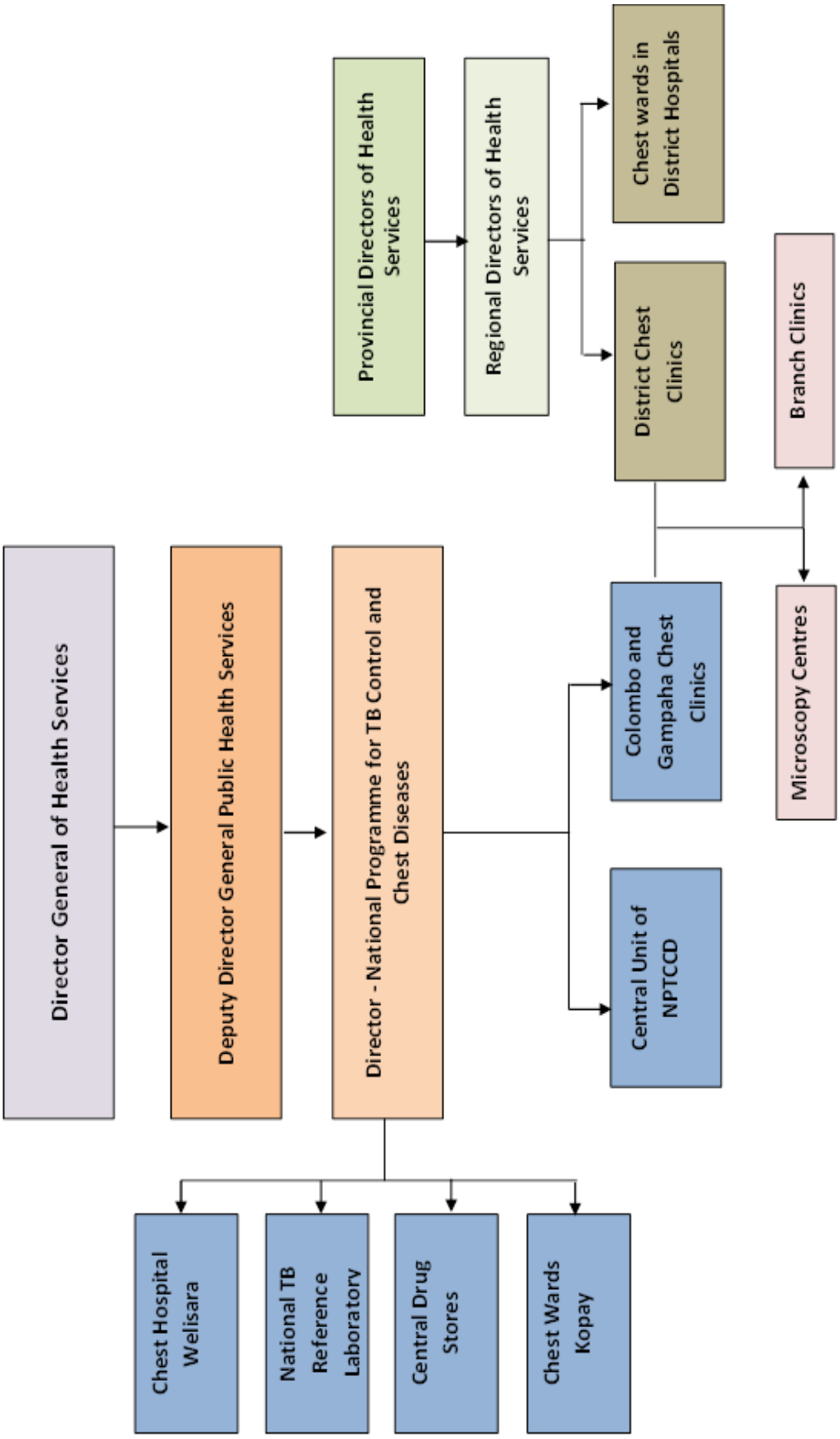


Figure 35: NPTCCD Organizational chart