

# **ANNUAL REPORT 2012**



**NATIONAL PROGRAMME FOR TUBERCULOSIS CONTROL AND CHEST DISEASES  
MINISTRY OF HEALTH  
SRI LANKA**

## Contributors

### ❖ Advisory Panel

- Dr. K.N. Gamini Senavirathne – Director / NPTCCD
- Dr. Sudath Samaraweera – Deputy Director / NPTCCD

### ❖ Writing Panel

- Dr. Nirupa Pallewatte – Consultant Community Physician
- Dr. Pramil Liyanage – Medical Officer (Health Information)
- Janaka Thilakaratne – Development Assistant
- Saman Ranathunge – Project Officer GFATM

## Content

List of Tables	iv
List of Figures	vi
List of Abbreviations	vii
Foreword	ix
Preface	x
<b>PART I: Progress Report</b>	
Introduction	03
Methods	06
Results	
Surveillance of Tuberculosis	10
Incidence of Tuberculosis	10
Case Detection of Tuberculosis	11
Treatment Outcome of Tuberculosis	18
DOTS Coverage	23
<b>PART II: Activity Report</b>	
Activities	27
Major Challenges	33
<b>PART III: Administration Report</b>	
OPD Attendance and Ward Admissions	37
Laboratory Services	37
X Ray Facilities	38
BCG Vaccination	39
Detailed Tables	41
Maps	63
Annexure	67

## List of Tables

Table 1	<i>MDG Targets for 2010 and 2015</i>	05
Table 2	<i>Distribution of All Cases of Extra Pulmonary Tuberculosis by Site in 2012</i>	15
Table 3	<i>Utilization of TB/Respiratory Curative Care Facilities in 2012</i>	37
Table 4	<i>Utilization of Diagnostic Care Facilities in 2012</i>	38
Table 5	<i>EQA Results of Sputum Smear Microscopy in 2012</i>	38

### Detailed Tables

Table 6	<i>Notification of New TB Cases in Sri Lanka from 2003 – 2012</i>	43
Table 7	<i>Annual Mortality of All TB Cases from 2003-2012</i>	43
Table 8	<i>Distribution Rates of all TB cases by District of Residence in 2012</i>	44
Table 9	<i>All TB Case Detection by District of Registration in 2012</i>	45
Table 10	<i>Percentage Distribution of Re-treatment TB cases by Type and District in 2012</i>	46
Table 11	<i>Distribution of New Cases of TB by Age and Type in 2012</i>	47
Table 12	<i>Distribution of New Cases of TB by Age and Sex in 2012</i>	47
Table 13	<i>Age and Sex Distribution of All New TB Cases by District in 2012</i>	48
Table 14	<i>Age and Sex Distribution of New Smear Positive TB Cases by District in 2012</i>	49
Table 15	<i>Age and Sex Distribution of New Smear Negative TB Cases by District in 2012</i>	50
Table 16	<i>Age and Sex Distribution of All New PTB Cases by District in 2012</i>	51
Table 17	<i>Age and Sex Distribution of New EPTB Cases by District in 2012</i>	52
Table 18	<i>Distribution of Treatment Outcome of All forms of TB by District in 2011</i>	53
Table 19	<i>Distribution of Treatment Outcome of All Forms of New (PTB and EPTB) TB Cases by District in 2011</i>	54
Table 20	<i>Distribution of Treatment Outcome of All New PTB Cases by District in 2011</i>	55
Table 21	<i>Distribution of Treatment Outcome of New Sputum Positive TB Cases by District in 2011</i>	56
Table 22	<i>Distribution of Treatment Outcome of New Sputum Negative TB Cases by District in 2011</i>	57

<i>Table 23</i>	<i>Distribution of Treatment Outcome of EPTB Cases by District in 2011</i>	<i>58</i>
<i>Table 24</i>	<i>Distribution of Treatment Outcome of Re-treatment TB Cases by District in 2011</i>	<i>59</i>
<i>Table 25</i>	<i>Distribution of Treatment Outcome of Other TB Cases by District in 2011</i>	<i>60</i>
<i>Table 26</i>	<i>Distribution of Sputum Conversion of New PTB Cases at the End of the Intensive Phase by District in 2012</i>	<i>61</i>
<i>Table 27</i>	<i>Distribution of Sputum Conversion of Re-treatment PTB Cases at the End of the Intensive Phase by District in 2012</i>	<i>62</i>
<b>Annexure</b>		
<i>Table 28</i>	<i>Provision of Financial Assistance to TB Patients in 2012</i>	<i>70</i>
<i>Table 29</i>	<i>Expenditure from Consolidated Funds in 2012</i>	<i>70</i>
<i>Table 30</i>	<i>Distribution of Sources of Funding for TB Control Activities in 2012 (in USD)</i>	<i>71</i>
<i>Table 31</i>	<i>Training Programmes carried out at Central Level in 2012</i>	<i>71</i>
<i>Table 32</i>	<i>Training Programmes carried out at Provincial and District Levels in 2012</i>	<i>72</i>
<i>Table 33</i>	<i>International Level Training Programmes, Meetings and Workshops in 2012</i>	<i>72</i>
<i>Table 34</i>	<i>Regional Training Programmes, Meetings and Workshops in Foreign Countries in 2012 under R-06 TB Grant, SAARC and SEARO-WHO</i>	<i>73</i>
<i>Table 35</i>	<i>Supervision and Monitoring Activities carried out by the Central Level Staff in 2012</i>	<i>73</i>
<i>Table 36</i>	<i>External Technical Assistance in 2012</i>	<i>74</i>
<i>Table 37</i>	<i>Health Education Activities carried out in 2012</i>	<i>74</i>

## List of Figures

Figure 1	Incidence Rate of TB from 2003 - 2012	10
Figure 2	Case Detection of TB by Type from 2003 - 2012	11
Figure 3	Case Detection of TB by Type in 2012	11
Figure 4	Case Detection of TB by District of Registration in 2012	12
Figure 5	Percentage Distribution of New Cases of TB by Type and District in 2012	13
Figure 6	Distribution of New Smear Positive TB Cases Detection by District in 2012	13
Figure 7	Distribution of New Smear Negative TB Cases Detection by District in 2012	14
Figure 8	Distribution of New Extra Pulmonary TB Cases Detection by District in 2012	15
Figure 9	Distribution of All New Cases of TB by Age Group in 2012	16
Figure 10	Percentage Distribution of Re-treatment TB cases by Type and District in 2012	17
Figure 11	Treatment Outcome of All Forms of TB Cases from 2002-2011	18
Figure 12	Treatment Success Rate of All Forms of TB by District in 2011	19
Figure 13	Treatment Outcome of New Pulmonary TB Cases from 2002-2011	20
Figure 14	Sputum Conversion Percentage of New Smear Positive TB Cases by District in 2012	21
Figure 15	Treatment Success Rates of New Smear Positive TB Cases by District in 2011	22
Figure 16	Treatment Outcome Summary of TB Patients (New Smear Positive, New Smear Negative, New EPTB and Re-Treatment) in 2011	23
Figure 17	DOTS Coverage from 1997-2012 with Map of Year Achieved	23

### Maps

Figure 18	Map of Case Notification Distribution of TB in 2012	65
Figure 19	Map of Case Incidence Distribution of TB in 2012	65
Figure 20	Map of Case Detection Distribution of TB in 2012	66
Figure 21	Map of Treatment Success Distribution of TB Cases in 2011	66

### Annexure

Figure 22	Organizational Structure of National TB Control Programme in 2012	69
Figure 23	IEC Materials Produced and Paper Advertisements Published in 2012	75

## List of Abbreviations

<i>AFB</i>	<i>Acid Fast Bacilli</i>
<i>AIDS</i>	<i>Acquired Immune Deficiency Syndrome</i>
<i>AMC</i>	<i>Anti-Malaria Campaign</i>
<i>AMO</i>	<i>Assistant Medical Officer</i>
<i>ART</i>	<i>Anti-Retroviral Therapy</i>
<i>BCG</i>	<i>Bacillus Calmette–Guérin</i>
<i>BMICH</i>	<i>Bandaranaike Memorial International Conference Hall</i>
<i>BSL</i>	<i>Biosafety Level</i>
<i>CHW</i>	<i>Chest Hospital Welisara</i>
<i>CPT</i>	<i>Cotrimoxazole Preventive Treatment</i>
<i>CRP</i>	<i>Consultant Respiratory Physician</i>
<i>DCC</i>	<i>District Chest Clinic</i>
<i>DDG (PHS)</i>	<i>Deputy Director General (Public Health Services)</i>
<i>DEO</i>	<i>Data Entry Operator</i>
<i>DM</i>	<i>Diabetes Mellitus</i>
<i>DOTS</i>	<i>Directly Observed Therapy Short-course</i>
<i>DST</i>	<i>Drug Susceptibility Testing</i>
<i>DTCO</i>	<i>District Tuberculosis Control Officer</i>
<i>ePIMS</i>	<i>Electronic Patient Information Management System</i>
<i>EPTB</i>	<i>Extra Pulmonary Tuberculosis</i>
<i>EQA</i>	<i>External Quality Assessment</i>
<i>FDC</i>	<i>Fixed Dose Combination</i>
<i>GDF</i>	<i>Global Drug Facility</i>
<i>GFATM</i>	<i>Global Fund to fight AIDS, Tuberculosis and Malaria</i>
<i>GLC</i>	<i>Green Light Committee</i>
<i>GP</i>	<i>General Practitioner</i>
<i>HIV</i>	<i>Human Immune Deficiency Virus</i>
<i>IEC</i>	<i>Information, Education and Communication</i>
<i>IUATLD</i>	<i>International Union Against Tuberculosis and Lung Disease</i>
<i>MDG</i>	<i>Millennium Development Goals</i>
<i>MDR-TB</i>	<i>Multi Drug Resistant Tuberculosis</i>
<i>MO</i>	<i>Medical Officer</i>

<i>MOH</i>	<i>Medical Officer of Health</i>
<i>NIHS</i>	<i>National Institute of Health Sciences</i>
<i>NPTCCD</i>	<i>National Programme for Tuberculosis Control and Chest Diseases</i>
<i>NSACP</i>	<i>National STD/AIDS Control Programme</i>
<i>NTRL</i>	<i>National Tuberculosis Reference Laboratory</i>
<i>OPD</i>	<i>Out Patient Department</i>
<i>PAL</i>	<i>Practical Approach to Lung health</i>
<i>PHI</i>	<i>Public Health Inspector</i>
<i>PLWHA</i>	<i>People Living With HIV/AIDS</i>
<i>PTB</i>	<i>Pulmonary Tuberculosis</i>
<i>RMO</i>	<i>Registered Medical Officer</i>
<i>SAARC</i>	<i>South Asian Association for Regional Cooperation</i>
<i>SEARO</i>	<i>Regional Office for South-East Asia (WHO)</i>
<i>STAC</i>	<i>SAARC Tuberculosis and AIDS Centre</i>
<i>TB</i>	<i>Tuberculosis</i>
<i>WHO</i>	<i>World Health Organization</i>



## Foreword

*I am happy to present the Annual Report of the National Programme for Tuberculosis Control and Chest Diseases – 2012 which contains the important data on status of Tuberculosis in Sri Lanka in 2012.*

*In this year many new ventures were launched to increase the case detection and to improve the case holding and technological and management advances were introduced to the programme to improve the performance. I am confident that the results of these interventions will be reflected as positive outcomes in the near future.*

*I am thankful to the Secretary, Ministry of Health, Director General of Health Services and Deputy Director General (Public Health Services I) for the guidance given to us. I do highly appreciate the support rendered by staff of NPTCCD, District TB Control Officers (DTCOs), consultants and all other members of our team in both centre and periphery for the control of TB.*

*I am particularly thankful to GFATM, WHO and SEARO for the support rendered in most of our activities.*

*I appreciate the staff of the Health Information Management Unit for compiling this report and panel of writers for making this task a success.*

*Dr. K. N. Gamini Senevirathne*

*Director,*

*NPTCCD*

## Preface

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

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

**Part I** of the report gives the performance of the National Tuberculosis Control Programme. Data collected during 2012 are analysed 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 2012 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 decentralized unit in the Ministry of Health, which is headed by the Director, NPTCCD. The programme functions under the Deputy Director General (Public Health Services I) of the Ministry of Health. The central unit of the NPTCCD, National Tuberculosis Reference Laboratory, Central Drug Stores of the NPTCCD, District Chest Clinics (DCCs) of Colombo and Gampaha and chest ward, DH Kopay 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 Chest Hospital situated in Welisara and 13 other chest wards situated in government hospitals.

Diagnostic services are provided through National TB Reference Laboratory, regional culture laboratory in Kandy, District Chest Clinic laboratories and 174 microscopy centers.

Central Drug Store of the NPTCCD is responsible for estimation, procurement, supply and distribution of anti TB drugs to District Chest Clinics.

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

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

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

NPTCCD carries out training of medical and paramedical staff engaged in TB care and carries out public awareness through various channels of communication. The Government of Sri Lanka is the main source of funding for the NPTCCD. In 2012 approximately, 397 million rupees was allocated from the government funds and it was mainly used for payment of salaries and wages and for major constructions. In addition, TB control activities are supported by the Global Fund to Fight AIDS Tuberculosis and Malaria (GFATM). World Health Organization (WHO) provides technical assistance to the programme and Global Drug Facility (GDF) provides Fixed Dose Combination (FDC) of anti TB drugs.

## 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.

## Objectives

- ✓ To ensure that every patient with TB and respiratory diseases have access to effective diagnosis, treatment and cure.
- ✓ To interrupt transmission of TB.
- ✓ To prevent the emergence of multidrug - resistant tuberculosis.
- ✓ To reduce the social and economic burden caused by TB and other respiratory diseases.

## Targets

To reach and thereafter to sustain the 2005 global targets achieving at least 70% case detection and at least 85% treatment success among TB cases under DOTS; in order to,

- ✓ reach the interim targets of halving TB deaths and prevalence.
- ✓ halt and reverse the incidence of TB as stated in the Millennium Development Goals set for 2015 (MDG-6 Target 6c) (Table 1)

**Table 1: MDG Targets for 2010 and 2015**

Indicator	1990 Estimates	2010 Targets	2015 Targets
Case Detection Rate under DOTS	N/A	86%	90%
Treatment Success Rate	N/A	>85%	>85%
Incidence	60/ 100k	42/100K	30/100k
Mortality	10/100k	2.2/100k	2.0/100k

## Methods

### Surveillance of TB

#### Notification System

##### TB Case Notification

TB is a notifiable disease since 1948. NPTCCD receives case notifications in a special form (Health 816 A) from District Chest Clinics, other government health institutions and from private health institutions.

Once a TB patient is diagnosed at a chest clinic, he or she should be registered in the District TB Register and should be notified to Central unit of the NPTCCD and to National Epidemiological Surveillance System through Medical Officer of Health. Patients diagnosed at other institutions are also referred to the relevant chest clinics for registration, notification and further management.

##### TB Death Notification

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

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

#### Monthly and Quarterly Records and Returns

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

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

#### Presentation of Data

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



## Dissemination of Data

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

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

## Indices

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

- ✓ Case Detection Rate
- ✓ Treatment Success Rate
- ✓ Sputum Conversion Rate
- ✓ Defaulter Rate
- ✓ Death Rate

## Case Detection Rate

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

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

$$\text{Case Detection Rate} = \frac{\text{Total number of incident (new / relapse) TB cases notified during the specified year}}{\text{Estimated number of incident cases of TB for the same year}} \times 100$$

## Incidence of TB

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

## Estimation of TB Incidence

Estimation of TB incidence is calculated by WHO using a mathematical model which is revised annually. Accordingly, the case detection rate in this report is based on 2011 WHO estimates (66.0 per 100,000 population).

## Treatment Success Rate

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

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

## Sputum Conversion Rate

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

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

## Defaulter Rate

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

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

## 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.

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

## DOTS Population Coverage

DOTS population coverage is the percentage of people living in areas where health service has adopted the Directly Observed Therapy Short-course (DOTS) strategy. The units of population covered are usually the administrative districts in the country and the outcome is usually expressed as a percentage of the national population.

## Results

### Surveillance of Tuberculosis

#### ➤ TB Case Notifications (H 816 A)

During the year 2012, 9355 cases of all forms of Tuberculosis were notified to the centre by the form H 816. In contrast to this, registered TB cases reported to the NPTCCD by TB-08 were 9343 (Table 9).

#### ➤ TB Death Notification (H 814)

During the year 2012, 203 TB deaths were notified by H 814 (Table 7).

### Incidence of Tuberculosis

The incidence (new and relapse) rate of TB in 2012 in Sri Lanka was 43.2 (8507 new and 245 relapse cases) per 100,000 population (Table 9). This was a considerable decrease of incidence rate when compared with year 2011, which was 48.5 (9508 new and 248 relapse cases) per 100,000 population (Figure 1).

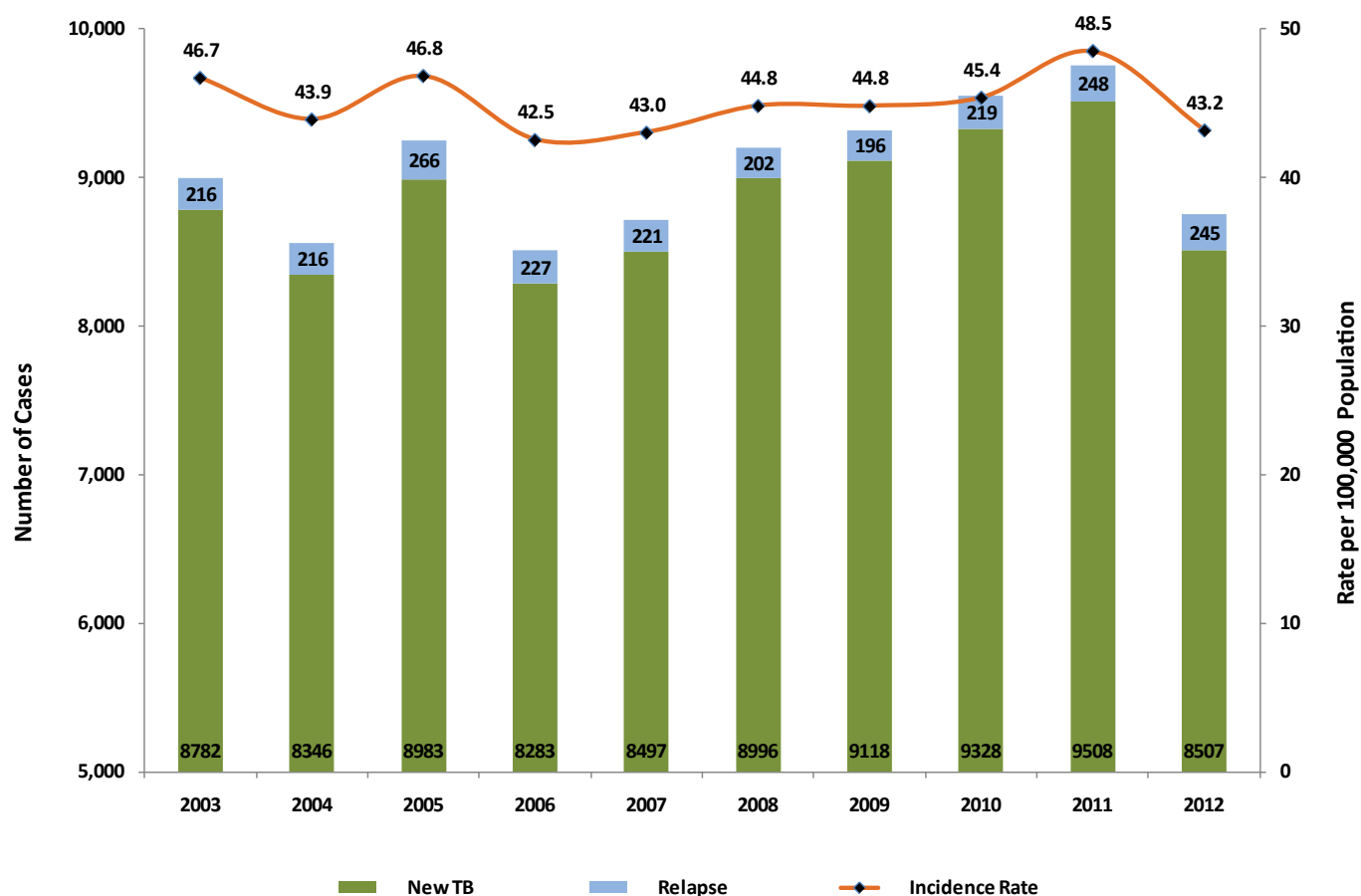


Figure 1: Incidence Rate of TB from 2003 - 2012

## Case Detection of Tuberculosis

The total number of all forms of TB cases reported from DCCs was 9343 which showed a decrease compared to 2011 (10329 cases) (Figure 2).

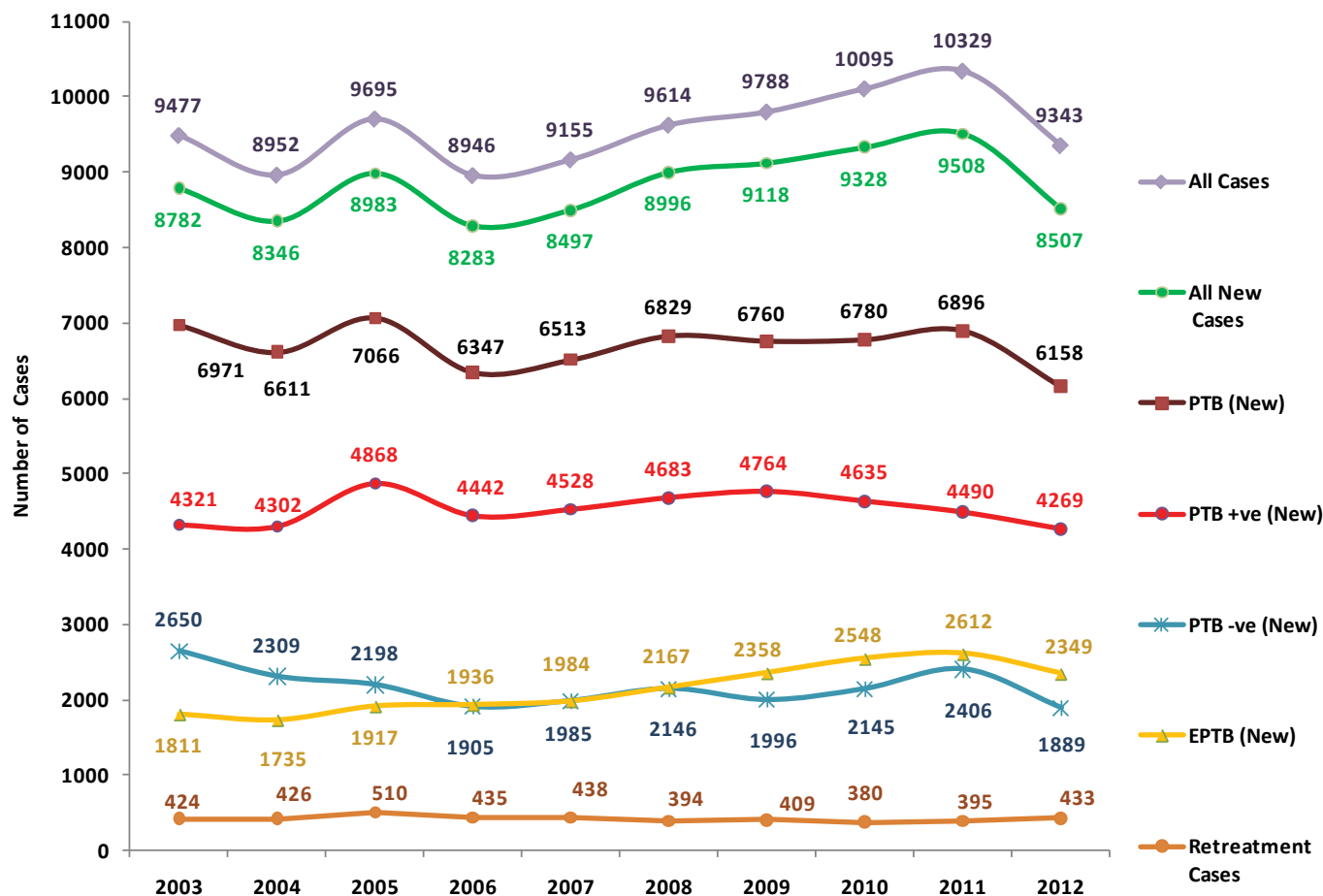


Figure 2: Case Detection of TB by Type from 2003 - 2012

Out of this 9343, 8507 (91.05%) were new cases and 433 re-treatment cases. Out of all new cases, 6158 were new pulmonary cases, of which 4269 were smear positive PTB and 1889 were smear negative PTB. Number of new EPTB cases was 2349 (Figure 3).

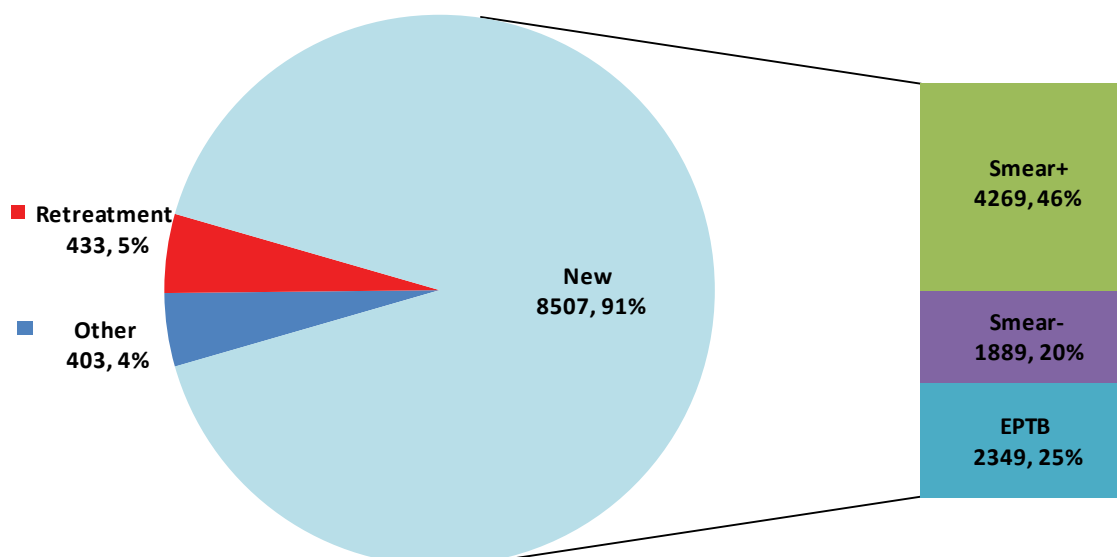


Figure 3: Case Detection of TB by Type in 2012

There is high disparity of detection of TB cases between districts (Figure 4). The highest number of TB cases was detected from Colombo 2190 (23%). High numbers of cases were reported from Gampaha (957), Kalutara (652), Kandy (639), Kurunegala (557) and Ratnapura (536) districts respectively.

Colombo district also accounted for highest number of relapse cases (84 cases, 34%) and defaulters (59 cases, 52%) (Table 9).

Lowest number of cases (31) has been reported from Mullaitivu district although number of TB cases (15) was doubled when compared with last year.

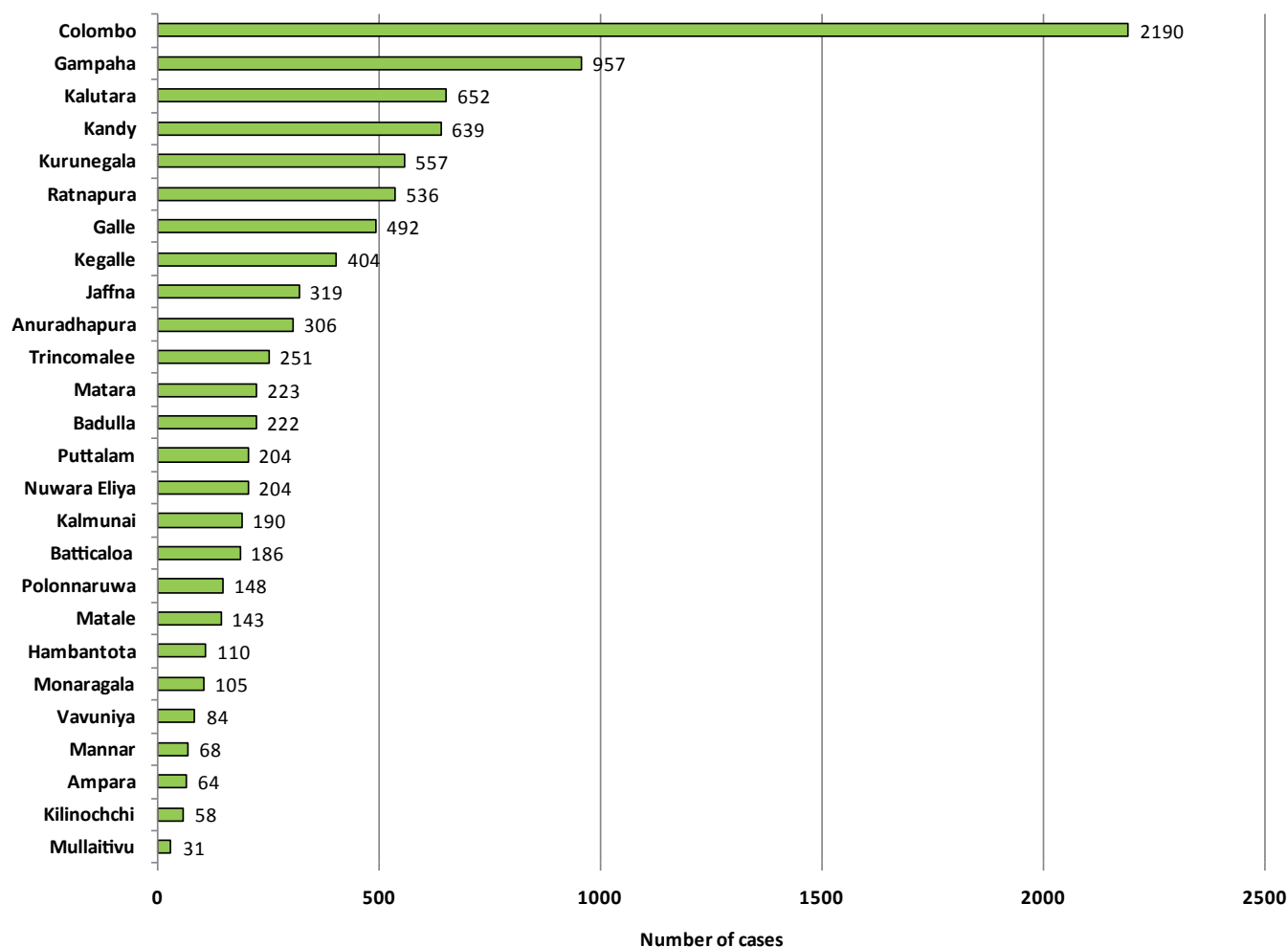


Figure 4: Case Detection of TB by District of Registration in 2012

### New TB Cases

There is disparity of distribution of new cases among districts (Figure 5). In Matara district more than 62% of cases were sputum positive while in Polonnaruwa, Kandy, Jaffna, Mullaitivu, Trincomalee and Kilinochchi, sputum positive cases account for less than 40% of total cases reported in respective districts. The number of smear negative cases detected was more than the smear positives in Trincomalee and Kilinochchi districts. Only 9.1% of total cases were sputum negative in Matara District.

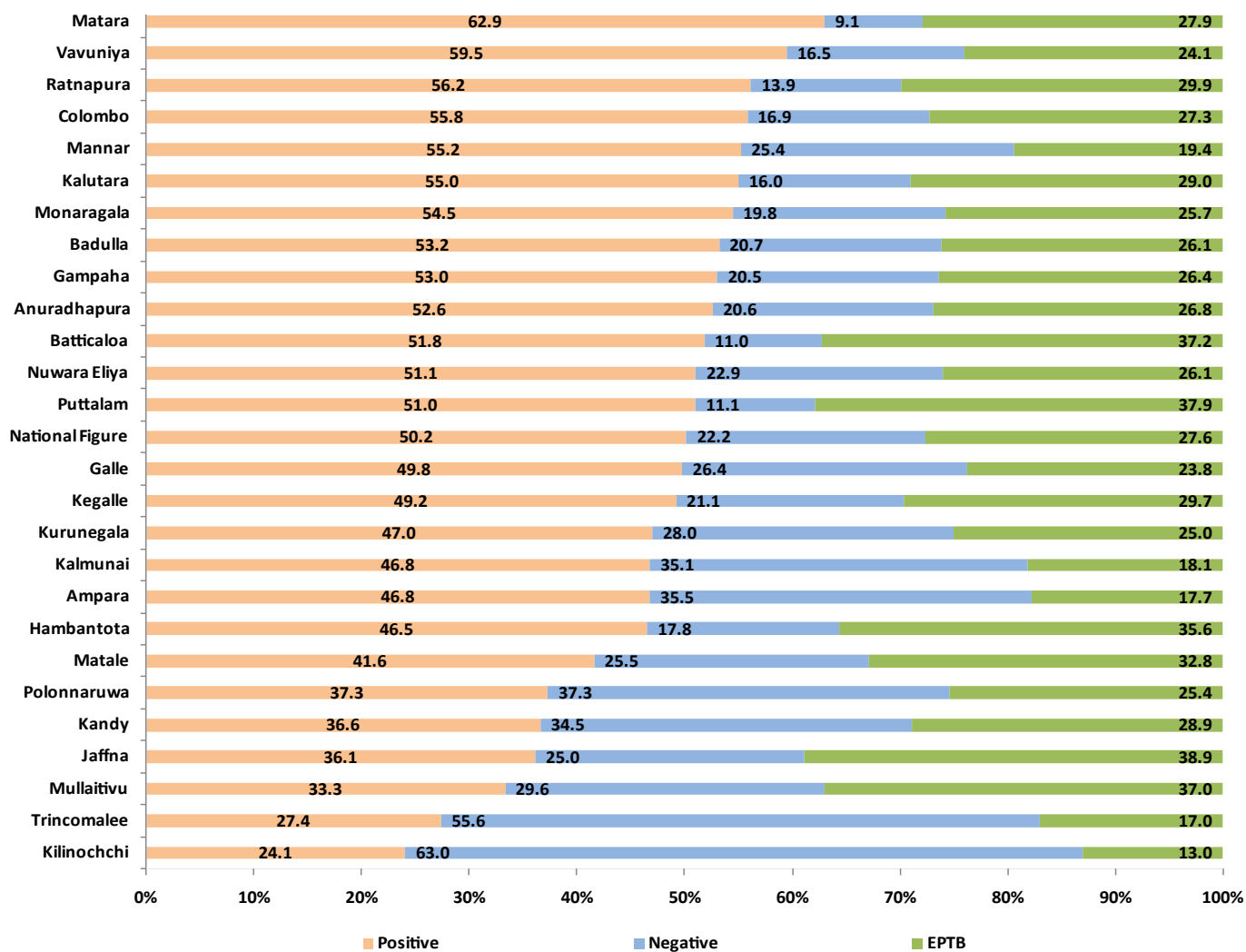


Figure 5: Percentage Distribution of New Cases of TB by Type and District in 2012

### ➤ New Sputum Smear Positive Pulmonary TB

The highest number (1075) and rate (46.5 per 100,000 population) of new sputum smear positive PTB cases were reported from Colombo district and this is 25% of the national figure (Table 14). Second highest number was reported from Gampaha (470) though rate was 20.5 per 100,000 population (Figure 6).

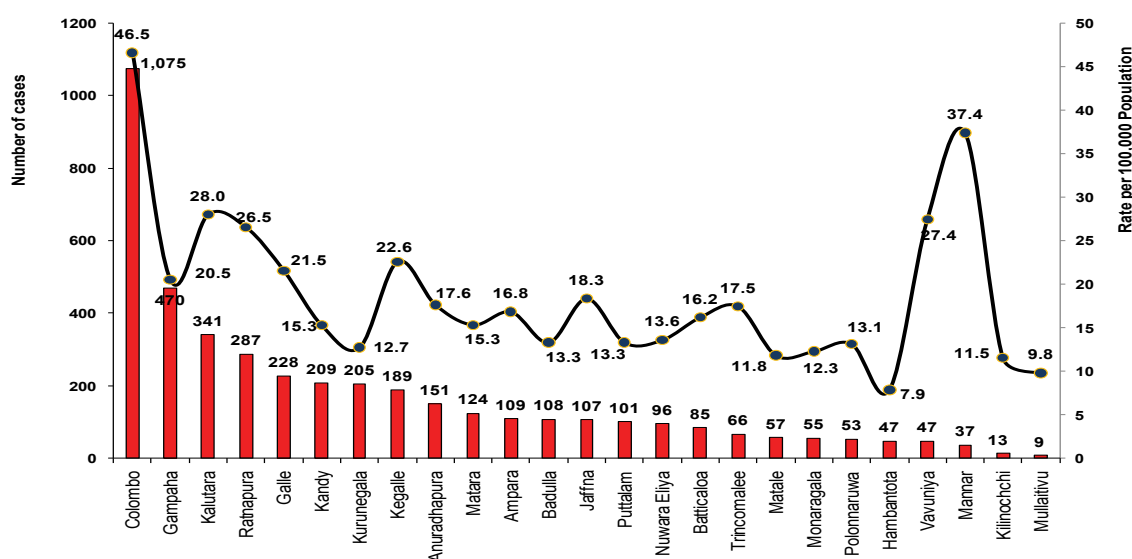


Figure 6: Distribution of New Smear Positive TB Cases Detection by District in 2012

High numbers of cases were reported from Kalutara (341), Ratnapura (287) and Galle (228) districts respectively. However, higher sputum positive rates per 100,000 population were reported from Mannar (37.4), Kalutara (28.0), Vavuniya (27.4) and Ratnapura (26.5) districts (Figure 6).

### ➤ New Sputum Smear Negative Pulmonary TB

The highest number of new sputum smear negative cases was reported from Colombo district (326). However, highest rates were reported from Trincomalee District (35 per 100,000 population) followed by Kilinochchi (30.1 per 100,000 population) and Mannar (17.2) respectively (Figure 7).

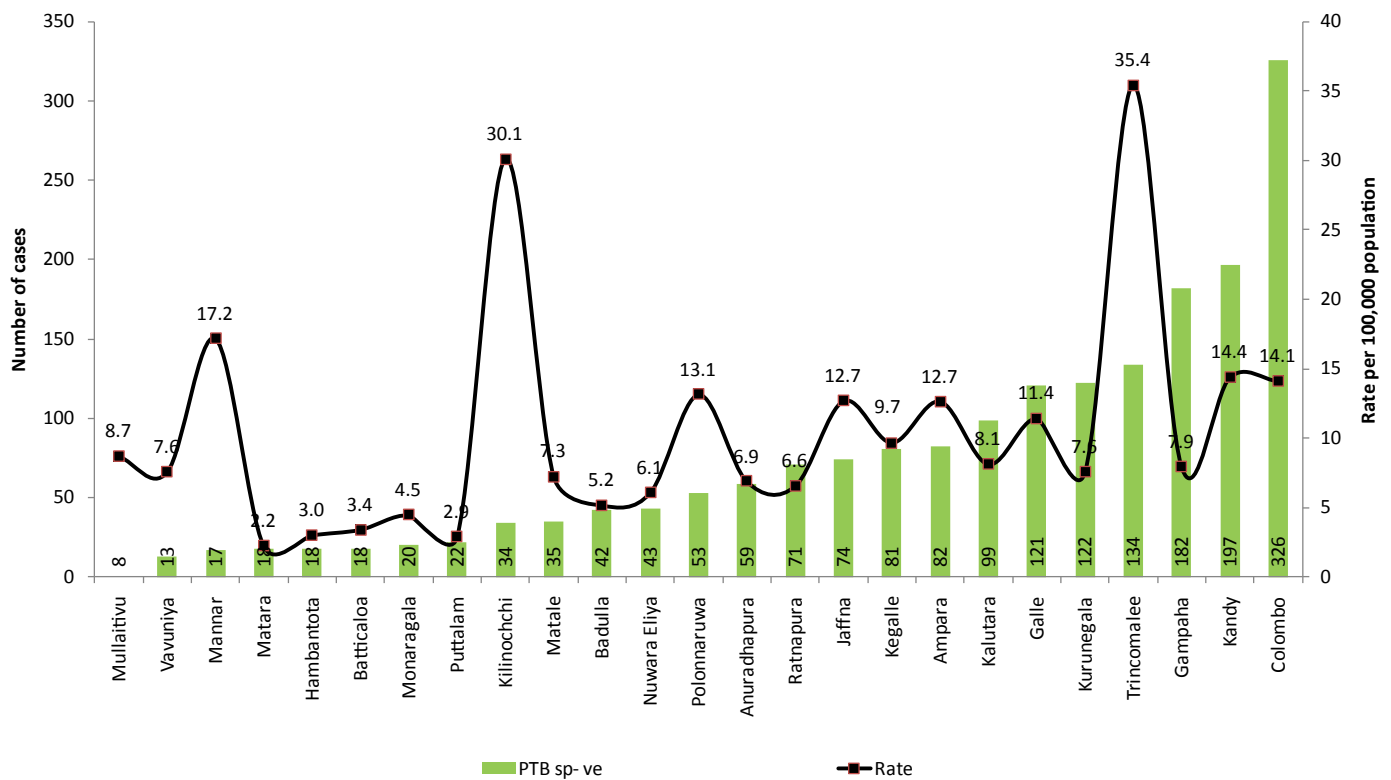


Figure 7: Distribution of New Smear Negative TB Cases Detection by District in 2012

### ➤ Extra Pulmonary TB

#### New EPTB Case Detection

Total number of new EPTB cases reported in 2012 was 2349. Colombo District accounted for highest number and rate of EPTB cases (525, 22.7 per 100,000 population). The second highest rate (19.7 per 100,000 population) of EPTB was reported from Jaffna though only 115 cases were reported (Figure 8).



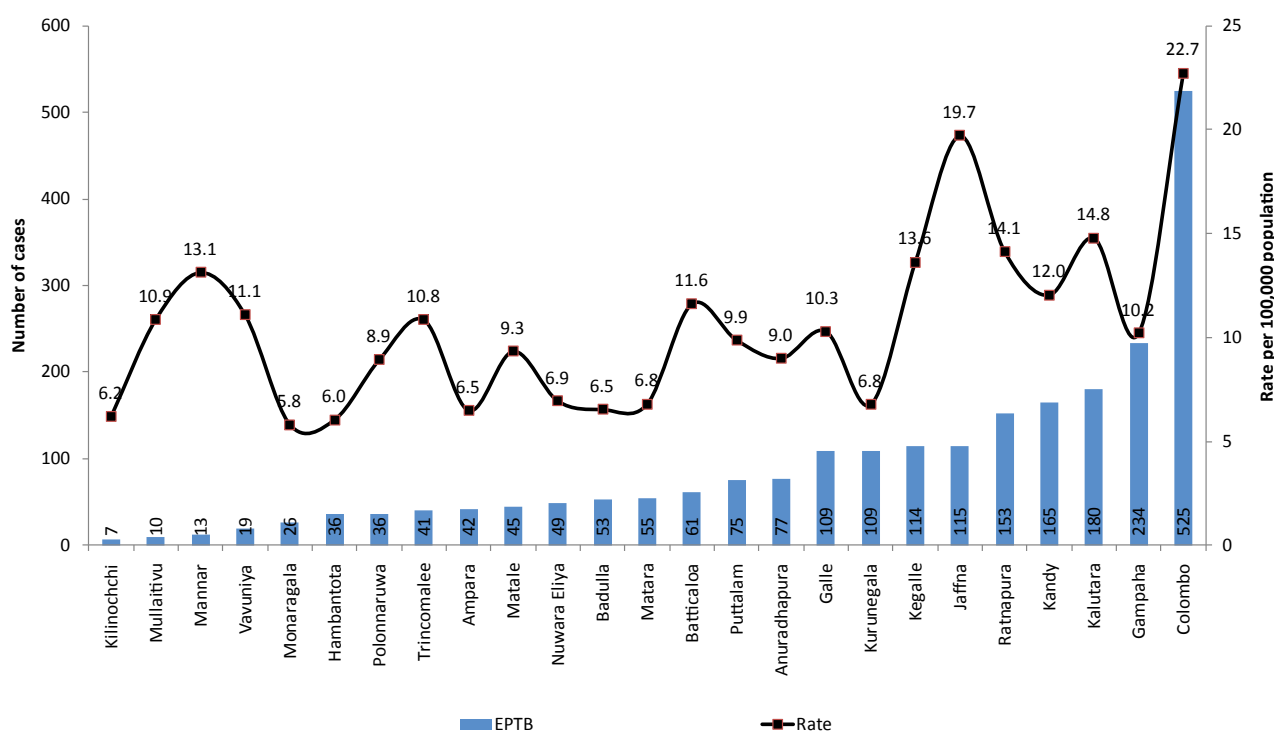


Figure 8: Distribution of New Extra Pulmonary TB Cases Detection by District in 2012

### Sites of EPTB Cases

Total number of EPTB cases reported in 2012 was 2511 (New and Other). TB adenitis accounted for 659 cases (26.2%) and 292 (11.6%) cases were pleural effusion. Site was not indicated in 1142 (45%) EPTB cases. In addition, 60 (2.4%) cases of spinal TB, 78 (3.1%) cases of TB meningitis and 24 (1%) of miliary TB cases were reported in 2012 (Table 2).

Table 2: Distribution of All Cases of Extra Pulmonary Tuberculosis by Site in 2012

Classification	Number	Percentage
Meningitis	78	3.1
Miliary TB	24	1.0
Primary TB	26	1.0
TB Adenitis	659	26.2
Pleural Effusion	292	11.6
Empyema	9	0.4
Spinal TB	60	2.4
Pericarditis	14	0.6
TB in Bones and Joints	127	5.1
Intestinal TB	42	1.7
Peritonitis	19	0.8
Genito-Urinary TB	19	0.8
Site Not Indicated	1142	45.5
<b>Total</b>	<b>2511</b>	<b>100.0</b>

## ➤ Age and Sex Distribution of New TB Cases

The highest number (1799) of new TB cases was detected in 45-54 age group (Figure 9). The lowest number was detected in 0-14 age group (309 cases). Out of 8507 all new cases, 61.8% of new cases were in the productive age group of 15-54. More males (66%) were detected than the females (34%). The highest number of new TB cases among males was found in the age group of 45-54 years (23% of 5635 male cases), while that in the females was in the same age group (18% of 2872 female cases) (Table 13).

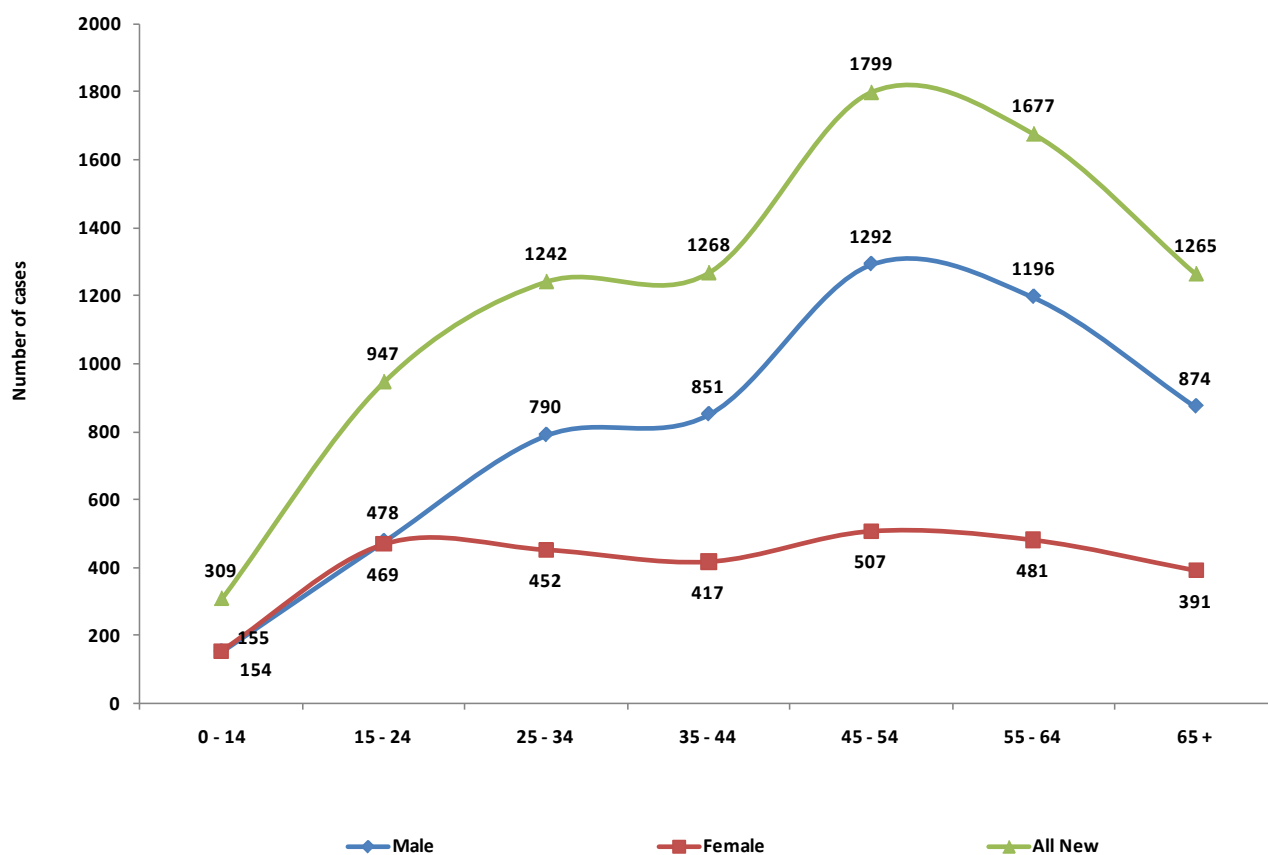


Figure 9: Distribution of All New Cases of TB by Age Group in 2012

## Re-Treatment TB Cases

In 2012, 433 (4.6% out of all TB cases) re-treatment cases were reported of which 245 (2.6% out of all cases of TB) were Relapse, 74 (0.8%) were Treatment after Failure and 114 (1.2%) were Treatment after Default cases (Table 9).

The highest number of retreatment cases 164 (37.9%) was reported from Colombo district and the second highest number was from Gampaha district 55 (12.7%).

Among Relapse cases the higher numbers were reported from Colombo, Gampaha, Ratnapura, Galle, Batticaloa, Kurunegala and Kalutara districts respectively.

Treatment after Failure cases were reported in higher numbers in Colombo, Kalutara and Kurunegala districts. Colombo, Gampaha and Kalutara were the districts which reported higher numbers of Treatment after Default cases. Colombo district contributed a significant number of cases for the national figure (51.8%).

When considering the proportion of retreatment cases, in Kilinochchi, Mannar, Ampara, Hambantota and Nuwara Eliya districts only relapse cases contributed to retreatment cases where as in Puttalam half of the retreatment cases were treatment after default and only 16.7 were relapses (Figure 10).

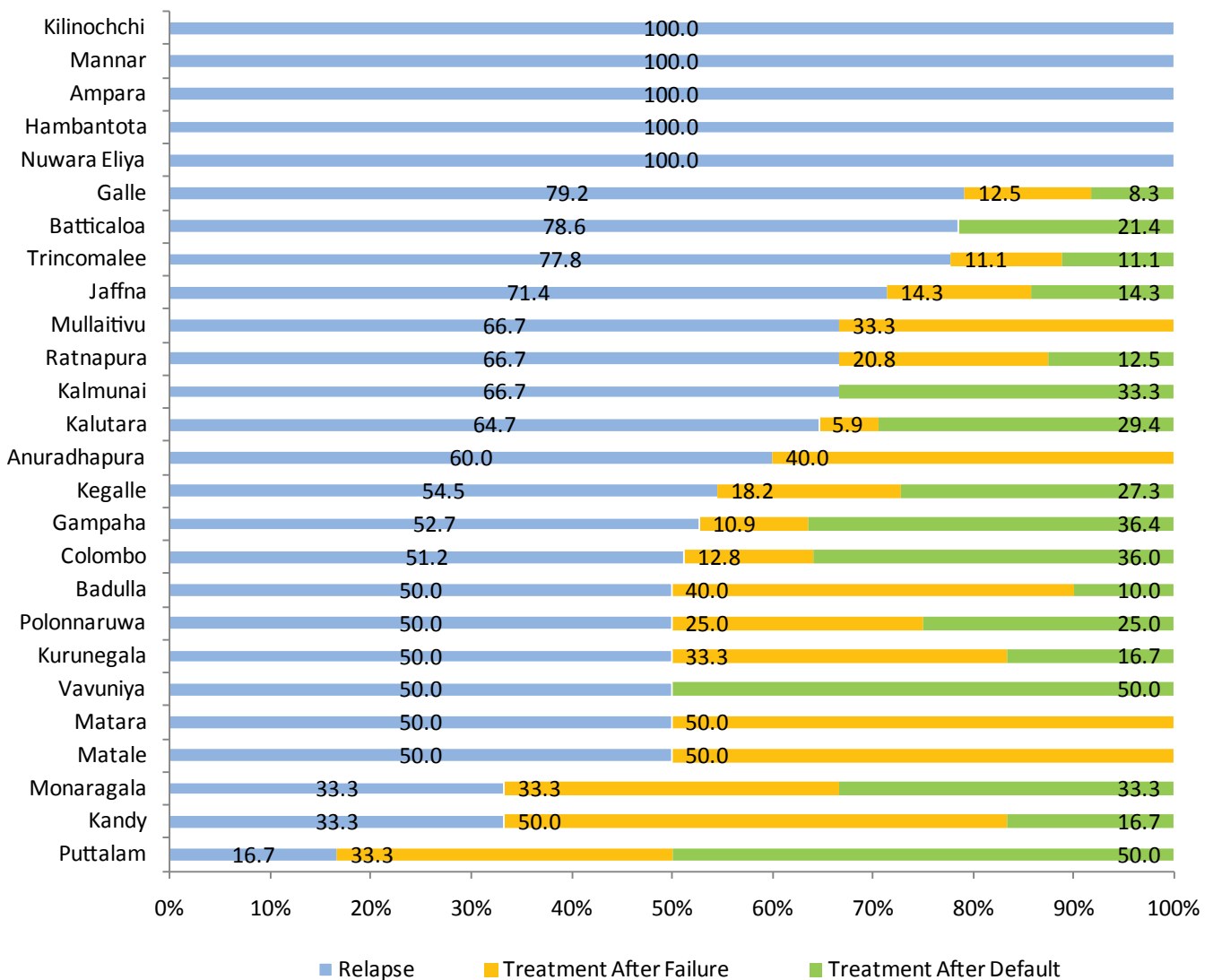


Figure 10: Percentage Distribution of Re-treatment TB cases by Type and District in 2012

### Multi Drug Resistant Tuberculosis (MDR-TB)

MDR-TB is not a big threat to Sri Lanka when compared to other countries in the SEARO region. Only 37 cases of MDR-TB were reported since 2008 and 5 cases were reported in year 2012.

### TB/HIV Co-Infection

All TB patients are offered HIV testing but special emphasis was given to those TB patients who belong to identified high risk groups for HIV. In 2012, 3379 TB patients were screened for HIV. Of these patients, 05 (0.15%) were recorded HIV positive.

## Treatment Outcome of Tuberculosis

Outcome data presented below are based on the information provided for cohort of patients of 2011.

### Treatment Outcome of All Forms TB Cases

Total number of cases registered for treatment in 2011 was 10329. Out of this, outcome of 269 (2.6%) were not evaluated and in this report, outcome is presented for rest of the cases (Table 18).

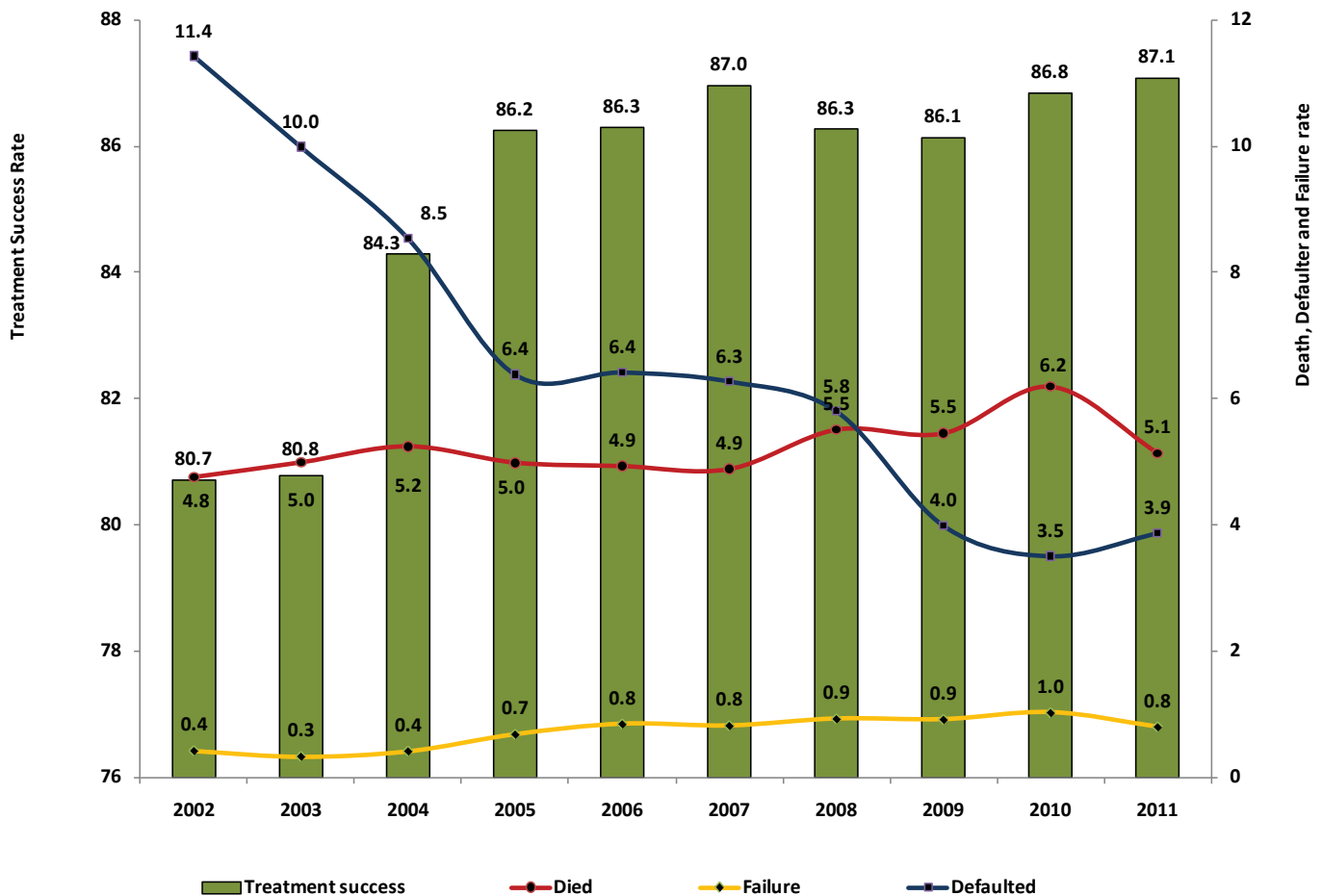


Figure 11: Treatment Outcome of All Forms of TB Cases from 2002-2011

### Treatment Success Rate

The cure rate among registered cases was 39.9% (4126 cases) and a further 47.1% (4869 cases) completed treatment, accounting for an overall treatment success rate of 87.1% (8995 cases). This shows a slight increase in comparison to 2010 where the treatment success rate was 86.8% (8767 cases)) (Figure 11). Only five districts showed the treatment success rate below the global target of 85%. They were Puttalam (76.1%), Kandy (81.8%) Kalmunai (83.1%), Ampara (83.5%) and Batticaloa (84.6%) districts. Trincomalee district showed the highest treatment completed rate (84.3%) and the lowest cure rate (12.7%) compared to the other districts (Figure 12).

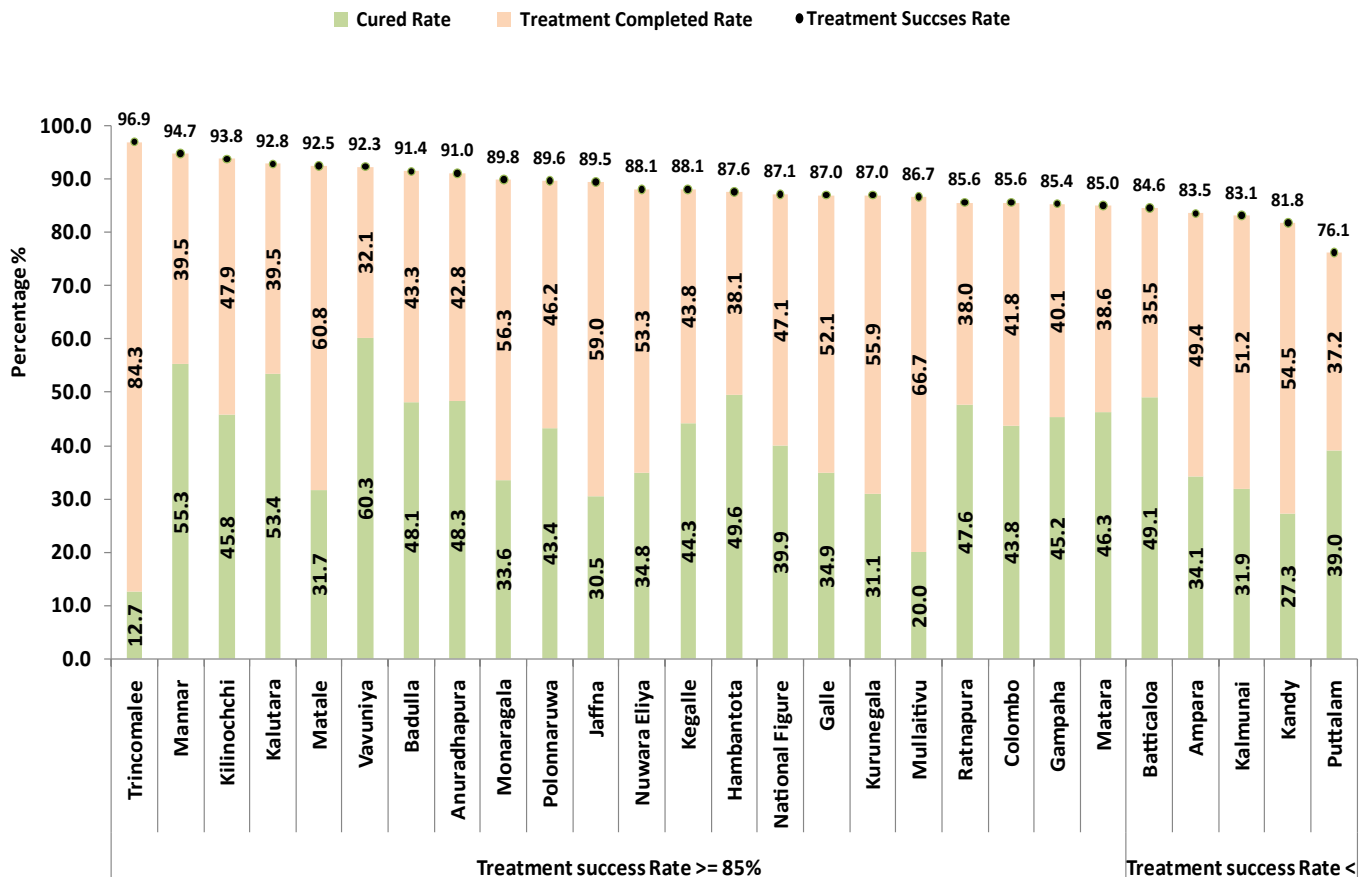


Figure 12: Treatment Success Rate of All Forms of TB by District in 2011

### Treatment Failure Rate

The treatment failure rate was 0.8% in 2012. There is a slight gradual decrease of failure rate since 2010 (Figure 11). Mullaitivu district accounted for the highest failure rate (13.3%). Badulla (2.4%) and Kurunegala (1.7%) also accounted for the high defaulter rates (Table 18).

### Defaulter Rate

The defaulter rate was 3.9% in Sri Lanka in 2012 and there was a slight increase of defaulters when compared to year 2010 (3.5%) (Figure 11). The highest defaulter rate was reported in Puttalam (10.6%). Colombo (7.0%), Kalmunai (6.3%) and Gampaha (5.8%) also accounted for high defaulter rates (Table 18).

### Death Rate

The number of TB patients died during the treatment period in year 2011 was 530 (5.1%) and highest death rate was in Matara District (10.6%, 26 cases). The highest number of deaths occurred in Colombo (85) though the rate was 4.1% (Table 18).

## Treatment Outcome of New PTB Cases

### ➤ Treatment Success Rate

In 2011, 6896 new PTB cases were registered for treatment. Of these cases 115 (1.7%) were in the category of Not Evaluated. The cure rate among registered cases was 3748 (54.4%) and a further 2290 (33.2%) completed treatment, giving an overall treatment success rate of 87.5% (Figure 13). The lowest treatment success rate of 78.8% was shown in Puttalam district (104 cases). Kandy, Kalmunai and Ratnapura district were below the global target 85% of Treatment Success Rate (Table 20).

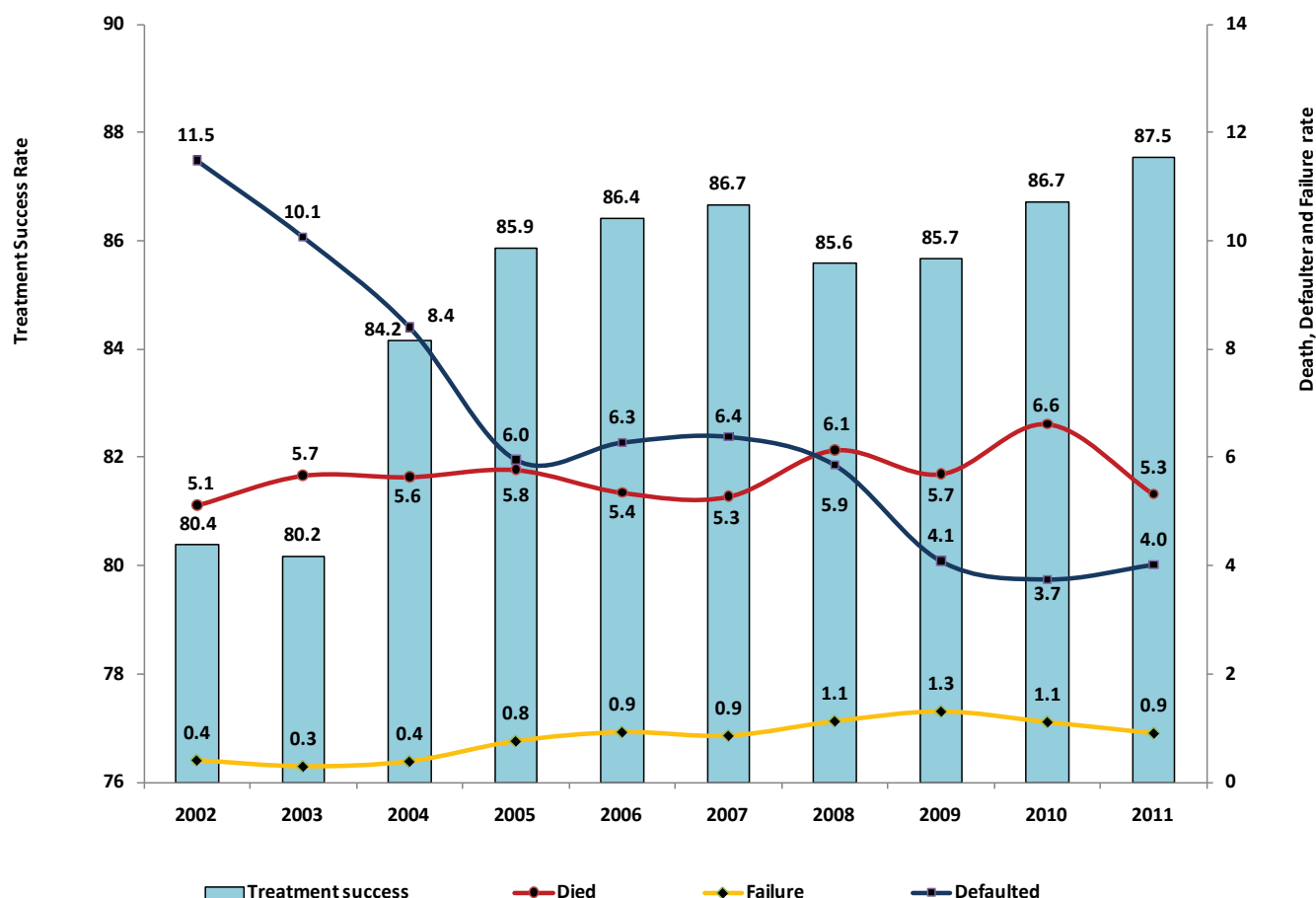


Figure 13: Treatment Outcome of New Pulmonary TB Cases from 2002-2011

### ➤ Treatment Failure Rate

Treatment failure rate among all new PTB cases was 0.9%. Highest rate (3.4% of all new PTB cases) was from Badulla district (Table 20).

### ➤ Defaulter Rate

The defaulter rate was 4% among all new PTB cases. The highest defaulter rate was reported in Puttalam (12.1%). Colombo (7.3%) and Kalmunai (6%) also accounted for high defaulter rates (Table 20).

## ➤ Death Rate

The death rate was 5.3% among all new PTB cases and highest death rate was in Matara District (11% 18 cases) (Table 20).

## Treatment Outcome of New Smear Positive TB Cases

### ➤ Sputum Conversion Rate

Sputum conversion rate at the end of intensive phase for Sri Lanka was 87.2% in 2012 and varied from lowest of 72% (Jaffna) to highest of 100% (Trincomalee) (Figure 14).

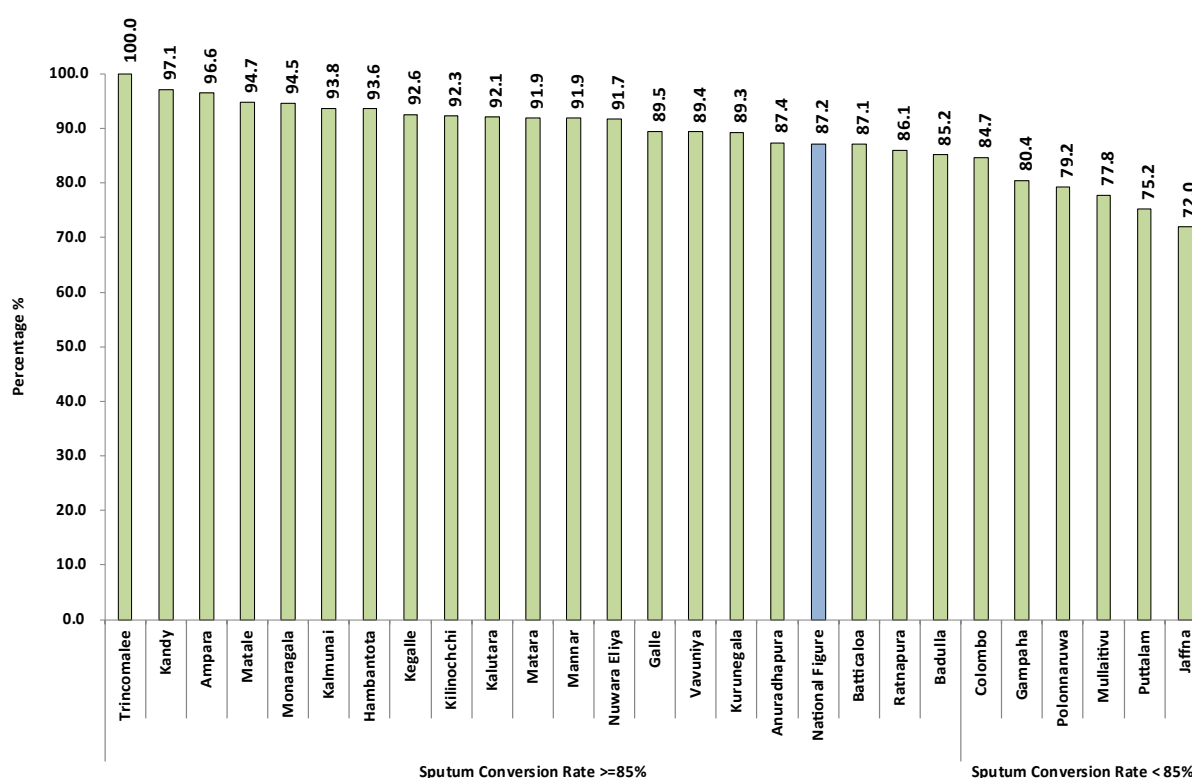


Figure 14: Sputum Conversion Percentage of New Smear Positive TB Cases by District in 2012

### ➤ Treatment Success Rate

In 2011, 4490 new smear positive cases were registered for treatment. Of these cases only 49 (1.1%) were in the category of Not Evaluated. The cure rate among registered cases was 3748 (83.5%) and a further 157 (3.5%) completed treatment, giving an overall treatment success rate of 87% (Table 21). The lowest treatment success rate was shown in Puttalam district (78.4%, 91 cases). Kandy, Kalmunai and Ratnapura districts were below the global target (85% of TSR). The highest was from Mullaitivu and Kilinochchi districts (100%). Treatment success of more than 85% was observed in 22 districts (Figure 15).

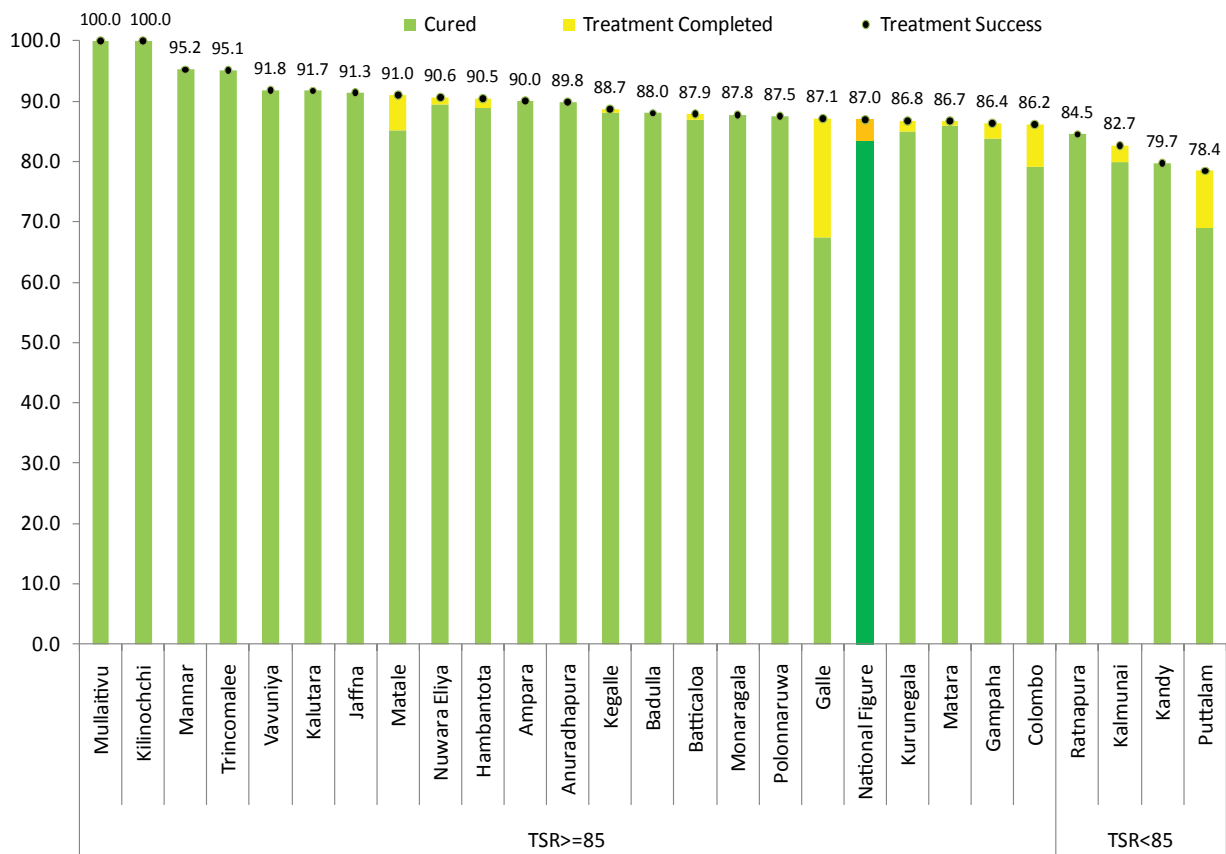


Figure 15: Treatment Success Rates of New Smear Positive TB Cases by District in 2011

### ➤ Treatment Failure Rate

Treatment failure rate among new sputum smear positive cases was 1.2% in 2011. Eleven districts had not reported any treatment failures in 2011. The highest failure rate was 4.2% (6 cases) which was reported from Badulla district (Table 21).

### ➤ Defaulter Rate

The defaulter rate among new sputum smear positive cases in 2011 was 4.7%. High defaulter rates were reported from Puttalam (12.9%), Kalmunai (9.3%) and Kandy (8.3%) while no cases were reported from six districts (Table 21).

### ➤ Death Rate

The death rate in new sputum smear positive cases was 5.4% in 2011. The highest death rate was reported from Matara district (11.7%). Batticaloa (9.3%), Kalmunai (8%), Ratnapura (7.3%) and Jaffna (6.7%) also accounted for higher death rates.

### Treatment Outcome of Re-Treatment Patients

In 2011, of the 395 registered re-treatment cases 271 cases were cured while another 25 cases had completed treatment giving a treatment success rate of 74.9%. The low treatment success rate in this group was mainly due to the high default rate (9.1%) and high death rate (8.1%). In addition there was a failure rate of 2.8% among re-treatment cases in 2011. Another 4.8% were not evaluated (Table 24).



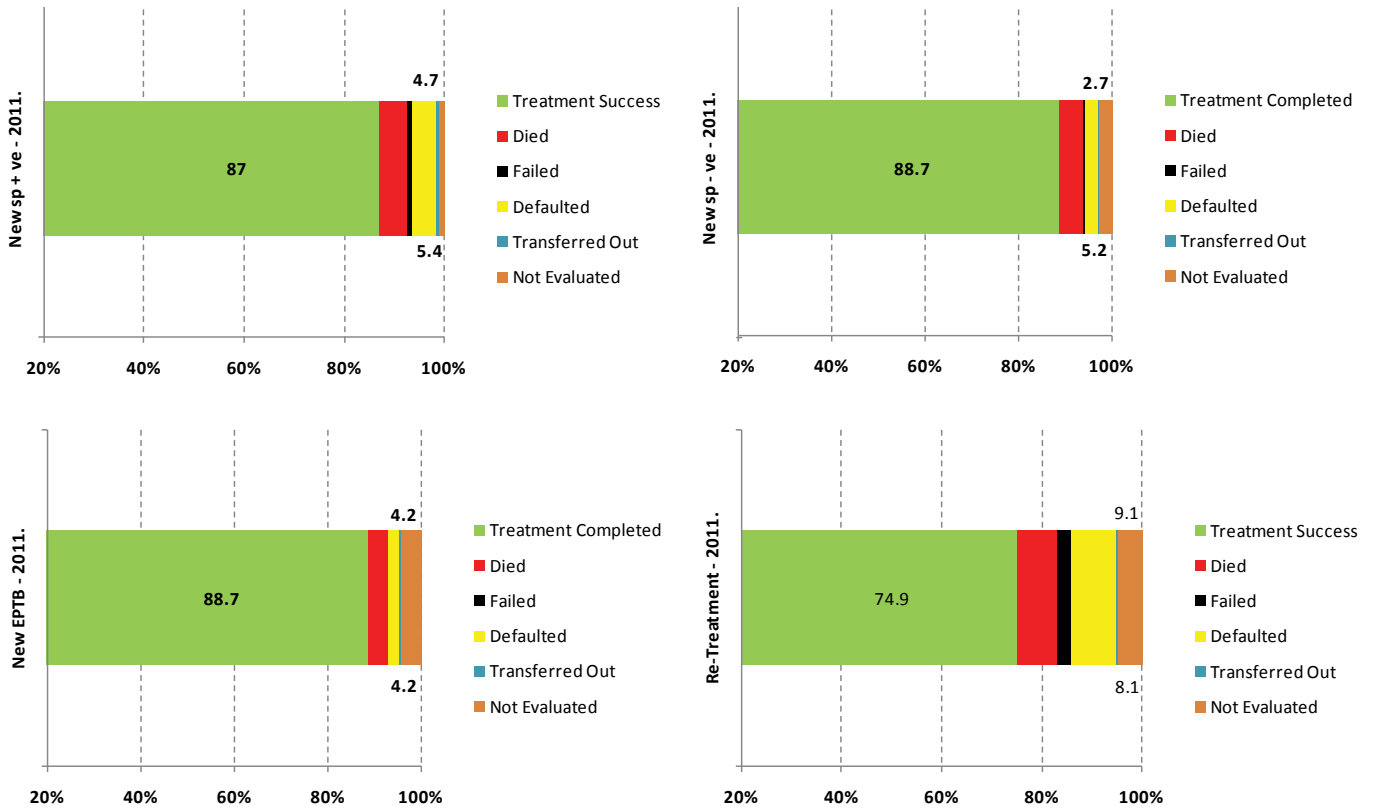


Figure 16: Treatment Outcome Summary of TB Patients (New Smear Positive, New Smear Negative, New EPTB and Re-Treatment) in 2011

### DOTS Coverage

Population coverage of DOTS in the country is 100% since 2010 (Figure 17).

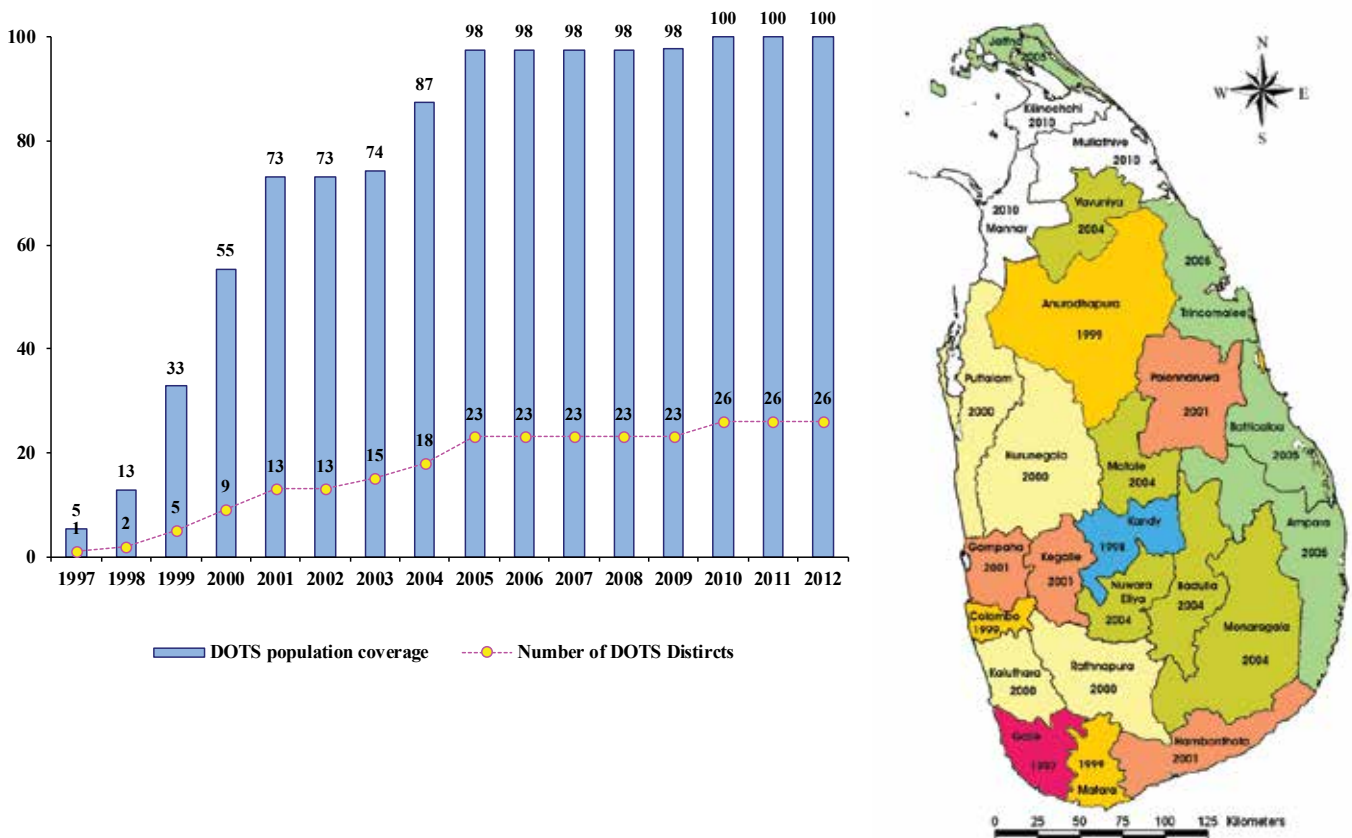


Figure 17: DOTS Coverage from 1997-2012 with Map of Year Achieved



**PART II**  
**Activity Report**



## Activities

The following activities were conducted under 6 main strategies of TB control.

### **Strategy 1: Improved access to quality services in order to enhance case finding and to further improve treatment outcomes**

#### **➤ Steps were taken to develop new documents or revise the existing policies, guidelines and manuals in accordance with current updates and development**

- ✓ *Revision of the existing National Strategic Plan for the period of 2012-2016.*
- ✓ *Revision of General Manual for TB control and Laboratory manual was further continued.*
- ✓ *Preliminary work on development of the Infection control plan for TB was initiated.*
- ✓ *Preparation of Management Guideline for Clinicians on Extra Pulmonary TB was further continued.*
- ✓ *A guideline for Practical Approach to Lung health (PAL) was printed and distributed.*
- ✓ *Training Manual on counseling for TB patients and patients with TB/HIV co-infection , their families and partners was completed.*
- ✓ *Management Guidelines for TB/HIV co-infection was completed.*

#### **➤ Steps were taken to strengthen the Diagnostic Services.**

- ✓ *The process of upgrading NTRL to a BSL3 laboratory following recommendations of the Monitoring Mission – 2009 was further continued.*
- ✓ *Regional laboratory network was further strengthened. Second regional culture laboratory was established at Ratnapura.*
- ✓ *NTRL provided technical guidance to strengthen the EQA facilities in the peripheral microscopy centers. Out of 174 functioning microscopy centers in district level excluding DCC laboratories, 152 were involved in EQA up to December 2012.*
- ✓ *NTRL has introduced WHO recommended new diagnostic technologies (Gene Xpert and Line Probe Assay) to ensure more reliable and timely detection of TB/ MDR-TB patients.*

➤ **Continuous supply of quality assured anti TB drugs was ensured.**

- ✓ *Procurement of Fixed Dose Combination of anti-TB drugs (FDC) through the Global Drug Facility (GDF) and Individual first line anti-TB drugs through the Medical Supplies Division of Ministry of Health was continued.*
- ✓ *The second line drugs were procured through the GDF/GLC mechanism.*
- ✓ *The Global Drug Facility provided paediatric drugs to the NPTCCD as a free grant to treat the childhood TB patients.*

➤ **Capacity building of health staff and other stake holders.**

- ✓ *Several programmes were carried out for health staff to update their knowledge on TB control. Community DOT providers were trained in order to maintain DOTS.*
- ✓ *Training programmes were held island wide for the data entry operators (DEOs) to increase the knowledge and skills on usage of the e-PIMS software effectively.*



➤ **Monitoring and evaluation of the TB control activities were further strengthened.**

- ✓ *Regular review meetings and supervisory visits were conducted to review the progress of TB control activities at district level.*
- ✓ *External review: The second Green Light Committee (GLC) monitoring mission visited Sri Lanka in December 2012 and provided several recommendations to NPTCCD to further strengthen the*

management of MDR-TB in the country. The team visited the WHO country office, NTRL, Chest Hospital Welisara, Central Drug Stores, Medical Supplies Division, National Drug Quality Assurance Laboratory and Drug Regulatory Authority of Ministry of Health during their mission.



➤ **Data recording and reporting systems further strengthened**

- ✓ *Electronic Patient Information Management System (e-PIMS) was upgraded and launched as a web based online data transmission facility to the NPTCCD network.*
- ✓ *The webpage of NPTCCD was regularly updated by the Ministry of Health. In addition, NPTCCD decided to develop a separate website for the NPTCCD and initial steps were taken with the service provider.*

**Strategy 2: Address MDR-TB, TB-HIV patients, TB contacts and patients with financial needs**

➤ **Provision of services for MDR-TB patients further strengthened**

- ✓ *The process of developing the guideline for “Programmatic Management of Drug-Resistant Tuberculosis (PMDT)” was further continued.*

➤ **TB/ HIV collaborative activities strengthened**

- ✓ *NPTCCD conducted the TB-HIV cross training at the central level to enhance identification and the clinical management of TB/HIV patients.*
- ✓ *A training manual for chest clinic staff was distributed to enhance screening, identification and management of TB/HIV co-infection.*
- ✓ *NSACP started the ART therapy for PLWHA and CPT treatments to the patients detected by the both TB and HIV programmes.*

➤ **Enhance patient support systems through other stakeholders**

- ✓ *NPTCCD has discussed with relevant authorities to increase the monetary benefit margin to maximum of Rs. 3,000 per patient for the period of six months.*

**Strategy 3: Contribute to health system strengthening based on primary health care**

- ✓ *Distribution of basic equipment for implementation of PAL in pilot areas was done.*

**Strategy 4: Engage all care providers in TB control and management of respiratory diseases**

➤ **Public-Public and Public-Private Mix approaches**

- ✓ *Two DOTS center facilities were established in Asiri Hospital, Narahenpita and Hemas Hospital, Wattala. In addition, initial steps were taken to establish two other DOTS centers in Galle and Kalutara districts.*
- ✓ *Provision of DOTS facilities continued in collaboration with Ayurvedic (indigenous medicine) practitioners.*
- ✓ *To strengthen TB control activities in private sector, NPTCCD took steps to sensitize the Ayurvedic GPs on TB control .*

**Strategy 5: Implement a tailored advocacy, communication and social mobilization campaign for TB and other respiratory diseases.**

➤ **Political and administrative commitment strengthened**

- ✓ *To strengthen the political and administrative commitment towards TB control, NPTCCD conducted a media seminar at Health Education Bureau with the participation of large number of media personnel and four advocacy meetings for other stakeholders were held.*

➤ **Community participation strengthened through public awareness**

- ✓ *NPTCCD published paper advertisements on TB and distributed printed IEC materials to the public.*
- ✓ *Awareness and screening programmes were conducted focusing the high-risk groups to detect new cases of TB and to reduce the transmission of TB.*





- ✓ Exhibitions were held in various locations in the country in order to create public awareness.



### ➤ World TB Day

- ✓ Commemorated on 24<sup>th</sup> March 2012 at the Bandaranayke Maha Vidyalaya, Gampaha under the theme of “Stop TB in My Lifetime”. In par with the national event, a verity of activities was conducted island wide by the staff of the District Chest Clinics.



## ➤ **World Asthma Day**

- ✓ *Commemoration of the World Asthma Day was held at the BMICH with participation of over 500 health professionals. This event was jointly organized with the Association of Pulmonologists of Sri Lanka.*

## **Strategy 6: Conduct operational research with a focus to improve programme performance**

- ✓ *NPTCCD has taken initial steps to conduct a study on “Piloting and scaling up TB and DM collaboration in Sri Lanka” with the technical and financial support of WHO Eli-Lilly grant.*
- ✓ *A Survey was carried out in 2012 among 5510 convicted prisoners in 15 larger prisons in Sri Lanka and prevalence of TB among them was identified as 1688 per 100,000 population which was 15 times more than the national estimates of prevalence (101 per 100,000 population).*
- ✓ *A study carried out using secondary data to determine characteristics and outcomes of tuberculosis patients who failed to smear convert at two months of intensive phase in 2012 revealed significant associations between heavy bacterial load at baseline and missing doses at the initial phase with late sputum conversion.*

## **Welfare and Other Activities**

*NPTCCD conducted several activities to enhance the interrelations between all the staff categories in the NPTCCD network.*

- ✓ *The annual cricket tournament organized by the GFATM was held at the Health Ground, with the participation of teams from GFATM, NPTCCD, AMC and NSACP.*
- ✓ *To celebrate the Wesak ceremony, NPTCCD organized a Preaching of Bana for the staff at the Public Health Complex.*
- ✓ *The Welfare Association of the NPTCCD organized a two-day annual trip to Nuwara Eliya.*

## Major Challenges

**The followings factors were identified as major challenges.**

- *High disease burden and a high defaulter rate are seen in Colombo district particularly in municipality area and adjoining districts due to socio-economic and cultural factors.*
- *Constraints in service delivery in the plantation sector.*
- *High incidence of TB among high risk social categories; prisoners, drug and alcohol addicts, slum-dwellers, neglected elderly people, external and internal migrant workers, internally displaced persons and resettling population etc.*
- *Presence of high-risk clinical groups such as immune compromised patients, patients on immunosuppressive therapy, patients with diabetes, chronic respiratory diseases, chronic renal failure etc.*
- *Constraints in integration of new diagnostic technologies.*
- *Constraints in human resources including respiratory physicians, medical officers and paramedical staff.*
- *Stigma related to tuberculosis.*
- *Inadequate social benefits and nutritional support for TB patients and their families.*



**PART III**  
**Administration Report**



## OPD Attendance and Ward Admissions

In 2012, 234,684 new patients were registered at chest clinics and Chest Hospital Welisara (Table 3). Out of these patients, 132,234 (56.3%) were self-referrals. Others included referrals from general health institutions or private practitioners (46465, 19.8%), contacts of TB patients (8150, 3.5%) and persons coming for medical examinations (47835, 20.4%).

Table 3: Utilization of TB/Respiratory Curative Care Facilities in 2012

Health Facility	Total OPD Attendance (First Visits)	No of beds	Inward patients*			
			TB		Non TB	
			Male	Female	Male	Female
Chest Clinics	178,812					
Chest Hospital Welisara	55,872	637	4171	1281	7852	3738
Chest Wards						
DGH Kalutara		60	93	45	289	103
PGH Badulla		36	134	82	476	253
DGH Matale		39	130	40	343	333
DH Eheliyagoda		63	106	18	0	0
DH Kopay		20	113	49	0	0
TH Kandy		64	424	246	1288	1144
DH Udugama		42	27	05	0	0
TH Batticaloa		19	84	32	20	08
BH Puttalam		13	71	13	04	05
PGH Kurunegala		57	48	38	251	132

\* Calculated by adding data of each quarter.

## 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 only at the National Tuberculosis Reference Laboratory at Welisara. Only culture facilities are available in regional laboratory, Kandy. Sputum cultures are being done for smear negative PTB cases, all re-treatment cases before initiation of anti TB treatment and on presumptive MDR TB cases.

Table 4: Utilization of Diagnostic Care Facilities in 2012

Institution	Sputum Microscopy	Sputum Culture Specimens		Culture of other Specimens	
	No. done	No. done	No. +ve	No. done	No. +ve
Microscopy Centres	121,485				
DCC Laboratories	218,196				
Culture Lab Kandy	19,553	1217	135	1137	34
NTRL		9329	1801	3732	222

### ➤ External Quality Assessment of Sputum Microscopy

Quality assessment of sputum smear microscopy is an important component of the National Programme. Slides are being sent from all laboratories of District Chest Clinics 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 2012, 22194 slides were checked for EQA and 17 (1.4%) false positives and 39 (0.2%) false negatives were identified (Table 5).

Table 5: EQA Results of Sputum Smear Microscopy in 2012

Initial Reading	No. of slides Checked	Reference Laboratory Reading		Percentage of Deviations
		No. + ve	No. - ve	
+ve slides	1227	1210	17	1.39
-ve slides	20,967	39	20,928	0.19

### X-Ray Facilities

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

The number of X-ray films of the two types consumed in 2012 at the Chest Hospital and Chest Clinics were as follows.

- ✓ **Number of Micro Films** : 19417 (+ 48 Rolls)
- ✓ **Number of Large Films** : 83225
- ✓ **Digital Films** : 12400
- ✓ **Total** : **115,042 (+ 48 Rolls)**



## **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 Miliary TB (Disseminated TB). In 2012, 99% of the all the new born babies have been vaccinated with BCG.



## Detailed Tables



Table 6: Notification of New TB Cases in Sri Lanka from 2003 – 2012

Year	PTB		EPTB		Total		PTB Positive	
	No	Rate	No	Rate	No	Rate	No	Rate
2003	7603	39.5	1709	8.9	9312	48.3	4739	24.6
2004	7164	36.7	1525	7.8	8689	44.6	4629	23.7
2005	7927	40.1	1521	7.7	9448	47.9	5241	26.5
2006	6771	33.9	1831	9.2	8602	43.0	4892	24.5
2007	6845	33.8	1969	9.7	8814	43.5	4805	23.7
2008	7041	34.3	2173	10.6	9214	44.9	4941	24.1
2009	7271	35.0	2372	11.4	9643	46.4	5186	25.0
2010	7055	33.5	2430	11.6	9485	45.1	4925	23.4
2011	6789	33.5	2420	11.9	9209	45.4	4465	22.0
2012	6169	30.4	2353	11.6	8522	42.1	4276	21.1

Source: Health 816 A

Table 7: Annual Mortality of All TB Cases from 2003-2012

Year	Estimated Mid Year population (In 000, s)	Mortality	
		Number	Rate per 100,000 population
2003	19,263	396	2.1
2004	19,495	422	2.2
2005	19,745	446	2.3
2006	20,001	347	1.7
2007	20,257	205	1.0
2008	20,517	355	1.7
2009	20,781	275	1.3
2010	21,037	395	1.9
2011	20,110	358	1.8
2012	20,264	203	1.0

Source: Health 814

Table 8: Distribution Rates of all TB cases by District of Residence in 2012

District	Estimated Mid-Year Population	No. of Cases Detected	No. of Cases Per 100,000 Population
Colombo	2,309,809	2,190	94.8
Gampaha	2,294,641	957	41.7
Kalutara	1,217,260	652	53.6
Kandy	1,369,899	639	46.6
Matale	482,229	143	29.7
Nuwara Eliya	706,588	204	28.9
Galle	1,058,771	492	46.5
Matara	809,344	223	27.6
Hambantota	596,617	110	18.4
Batticaloa	525,142	186	35.4
Ampara	648,057	254	39.2
Trincomalee	378,182	251	66.4
Kurunegala	1,610,299	557	34.6
Puttalam	759,776	204	26.9
Anuradhapura	856,232	306	35.7
Polonnaruwa	403,335	148	36.7
Badulla	811,758	222	27.3
Monaragala	448,142	105	23.4
Ratnapura	1,082,277	536	49.5
Kegalle	836,603	404	48.3
Jaffna	583,378	319	54.7
Vavuniya	171,511	84	49.0
Mannar	99,051	68	68.7
Mullaitivu	91,947	31	33.7
Kilinochchi	112,875	58	51.4
<b>Total</b>	<b>20,263,723</b>	<b>9,343</b>	<b>46.1</b>

Table 9: All TB Case Detection by District of Registration in 2012

District	New Cases			Relapse	Others			Treatment After Failure	Treatment After Default	Total		
	PTB SS +	PTB SS -	EPTB		Total	SS +	SS -				EPTB	Total
Colombo	1075	326	525	1926	84	32	30	38	100	21	59	2190
Gampaha	470	182	234	886	29	0	3	13	16	6	20	957
Kalutara	341	99	180	620	11	1	4	10	15	1	5	652
Kandy	209	197	165	571	6	6	27	17	50	9	3	639
Matale	57	35	45	137	1	0	2	2	4	1	0	143
Nuwara Eliya	96	43	49	188	3	0	7	6	13	0	0	204
Galle	228	121	109	458	19	2	3	5	10	3	2	492
Matara	124	18	55	197	2	3	8	11	22	2	0	223
Hambantota	47	18	36	101	3	1	2	3	6	0	0	110
Batticaloa	85	18	61	164	11	1	3	4	8	0	3	186
Ampara	29	22	11	62	1	0	0	1	1	0	0	64
Kaimunai	80	60	31	171	4	2	11	0	13	0	2	190
Trincomalee	66	134	41	241	7	0	1	0	1	1	1	251
Kurunegala	205	122	109	436	12	5	62	30	97	8	4	557
Puttalam	101	22	75	198	1	0	0	0	0	2	3	204
Anuradhapura	151	59	77	287	6	0	4	5	9	4	0	306
Polonnaruwa	53	53	36	142	2	0	1	1	2	1	1	148
Badulla	108	42	53	203	5	1	3	5	9	4	1	222
Monaragala	55	20	26	101	1	1	0	0	1	1	1	105
Ratnapura	287	71	153	511	16	0	1	0	1	5	3	536
Kegalle	189	81	114	384	6	0	4	5	9	2	3	404
Jaffna	107	74	115	296	10	0	6	3	9	2	2	319
Vavuniya	47	13	19	79	1	0	1	2	3	0	1	84
Mannar	37	17	13	67	1	0	0	0	0	0	0	68
Mullaitivu	9	8	10	27	2	0	1	0	1	1	0	31
Kilinochchi	13	34	7	54	1	0	2	1	3	0	0	58
<b>Total</b>	<b>4269</b>	<b>1889</b>	<b>2349</b>	<b>8507</b>	<b>245</b>	<b>55</b>	<b>186</b>	<b>162</b>	<b>403</b>	<b>74</b>	<b>114</b>	<b>9343</b>

Table 10: Distribution of New Cases of TB by Province in 2012

Province	Number of Patients											
	SS +	Rate	SS -	Rate	EPTB	Rate	All New	Rate	Re-Treatment	Rate	All TB	Rate
<b>Western</b>	1886	32.4	607	10.4	939	16.1	3432	59.0	236	4.1	3799	65.3
<b>Central</b>	362	14.1	275	10.7	259	10.1	896	35.0	23	0.9	986	38.5
<b>Sothorn</b>	399	16.2	157	6.4	200	8.1	756	30.7	31	1.3	825	33.5
<b>Northern</b>	213	20.1	146	13.8	164	15.5	523	49.4	21	2.0	560	52.9
<b>Eastern</b>	260	16.8	234	15.1	144	9.3	638	41.1	30	1.9	691	44.5
<b>North Western</b>	306	12.9	144	6.1	184	7.8	634	26.8	30	1.3	761	32.1
<b>North Central</b>	204	16.2	112	8.9	113	9.0	429	34.1	14	1.1	454	36.0
<b>Uva</b>	163	12.9	62	4.9	79	6.3	304	24.1	13	1.0	327	26.0
<b>Sabaragamuwa</b>	476	24.8	152	7.9	267	13.9	895	46.6	35	1.8	940	49.0
<b>Total</b>	<b>4269</b>	<b>21.1</b>	<b>1889</b>	<b>9.3</b>	<b>2349</b>	<b>11.6</b>	<b>8507</b>	<b>42.0</b>	<b>433</b>	<b>2.1</b>	<b>9343</b>	<b>46.1</b>



Table 11: Distribution of New Cases of TB by Age and Type in 2012

Age Group	Number of Patients						Rate	
	SS +	Rate	SS -	Rate	EPTB	Rate		All New
0 - 14	24	0.4	97	1.8	188	3.5	309	5.8
15 - 24	485	12.9	152	4.0	310	8.2	947	25.1
25 - 34	620	18.7	185	5.6	437	13.2	1242	37.4
35 - 44	666	25.4	194	7.4	408	15.6	1268	48.4
45 - 54	1010	62.7	362	22.5	427	26.5	1799	111.7
55 - 64	872	82.6	464	44.0	341	32.3	1677	158.8
65+	592	23.5	435	17.3	238	9.5	1265	50.3
<b>Total</b>	<b>4269</b>	<b>21.1</b>	<b>1889</b>	<b>9.3</b>	<b>2349</b>	<b>11.6</b>	<b>8507</b>	<b>42.0</b>

Table 12: Distribution of New Cases of TB by Age and Sex in 2012

Age Group	Male			Female			Total		
	Estimated Mid-Year Population	No	Rate	Estimated Mid-Year Population	No	Rate	Estimated Mid-Year Population	No	Rate
0 - 14	2,757,893	154	5.6	2,614,020	155	5.9	5,371,913	309	5.8
15 - 24	1,664,095	478	28.7	2,107,427	469	22.3	3,771,522	947	25.1
25 - 34	1,665,678	790	47.4	1,651,493	452	27.4	3,317,171	1242	37.4
35 - 44	1,082,083	851	78.6	1,540,043	417	27.1	2,622,126	1268	48.4
45 - 54	820,681	1292	157.4	790,285	507	64.2	1,610,966	1799	111.7
55 - 64	561,305	1196	213.1	494,435	481	97.3	1,055,740	1677	158.8
65 +	1,280,667	874	68.2	1,233,618	391	31.7	2,514,285	1265	50.3
<b>Total</b>	<b>9,832,401</b>	<b>5635</b>	<b>57.3</b>	<b>10,431,322</b>	<b>2872</b>	<b>27.5</b>	<b>20,263,723</b>	<b>8507</b>	<b>42.0</b>

Table 13: Age and Sex Distribution of All New TB Cases by District in 2012

District	0 -14		15 -24		25 -34		35 -44		45 -54		55 -64		65 -74		> 75		Total		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
	Colombo	39	37	104	90	186	88	207	81	321	131	104	127	67	42	27	1301	625	
Gampaha	8	7	45	41	85	53	89	55	137	52	37	60	32	22	14	595	291	886	
Kalutara	11	12	32	37	60	23	69	31	94	37	34	61	15	16	4	427	193	620	
Kandy	7	10	28	38	47	27	66	27	75	34	39	46	20	24	12	364	207	571	
Matale	4	3	10	9	7	7	19	0	25	7	11	10	4	4	0	96	41	137	
Nuwara Eliya	3	7	31	17	21	18	16	9	15	10	5	13	4	1	0	118	70	188	
Galle	2	11	25	37	46	36	37	25	63	19	33	25	14	17	8	275	183	458	
Matara	3	1	10	13	19	10	21	8	40	12	5	20	2	6	1	145	52	197	
Hambantota	0	0	3	9	8	5	12	4	9	4	4	13	5	8	5	65	36	101	
Batticaloa	7	2	9	9	12	8	14	14	26	8	7	9	4	9	1	111	53	164	
Ampara	4	0	0	0	5	4	4	4	11	2	4	10	2	2	0	46	16	62	
Kalmunai	0	2	11	6	8	7	12	7	34	12	14	17	4	3	0	119	52	171	
Trincomalee	10	14	24	9	13	12	19	15	35	13	17	14	13	3	3	145	96	241	
Kurunegala	5	2	12	14	37	13	44	21	77	29	25	37	25	18	7	300	136	436	
Puttalam	1	1	9	7	24	8	33	12	29	11	11	10	3	3	2	143	55	198	
Anuradhapura	3	4	17	20	34	15	34	9	47	17	42	21	3	7	2	205	82	287	
Polonnaruwa	2	4	3	2	14	7	11	9	18	10	11	17	5	2	3	91	51	142	
Badulla	3	4	11	23	37	16	17	8	24	13	8	6	7	7	1	123	80	203	
Monaragala	3	2	10	2	10	2	6	5	21	9	8	7	0	3	0	73	28	101	
Ratnapura	12	9	34	38	51	45	54	25	69	23	30	34	14	12	6	321	190	511	
Kegalle	17	7	20	31	27	25	29	22	54	22	18	29	15	10	5	239	145	384	
Jaffna	5	9	17	7	23	12	19	18	36	20	22	30	13	12	9	186	110	296	
Vavuniya	2	6	6	4	7	4	10	2	14	2	6	3	5	0	0	50	29	79	
Mannar	1	0	4	2	3	4	6	4	13	4	4	9	1	1	0	48	19	67	
Mullaitivu	1	0	1	1	2	1	1	1	2	3	6	3	1	0	1	16	11	27	
Kilinochchi	1	1	2	3	4	2	2	1	3	3	10	5	2	6	0	33	21	54	
Total	154	155	478	469	790	452	851	417	1292	507	481	636	280	238	111	5635	2872	8507	

Table 14: Age and Sex Distribution of New Smear Positive TB Cases by District in 2012

District	0-14		15-24		25-34		35-44		45-54		55-64		65-74		> 75		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
Colombo	3	4	60	38	98	44	136	35	68	175	54	72	26	28	9	797	278	1075
Gampaha	0	2	26	22	42	16	54	24	22	87	17	35	16	15	7	344	126	470
Kalutara	1	3	16	22	32	6	42	15	19	53	17	35	4	9	1	254	87	341
Kandy	0	1	9	19	22	10	36	9	8	18	11	20	3	6	3	145	64	209
Matale	0	0	4	3	5	3	11	0	1	8	4	5	2	2	0	44	13	57
Nuwara Eliya	0	1	20	13	12	10	9	3	7	8	2	4	1	0	0	60	36	96
Galle	1	0	12	15	22	17	22	12	9	35	12	14	4	8	5	154	74	228
Matara	1	0	5	9	12	4	14	4	7	18	1	13	0	6	1	98	26	124
Hambantota	0	0	1	3	5	3	7	2	0	5	2	7	0	5	2	35	12	47
Batticaloa	0	0	2	6	4	3	8	7	6	17	3	6	3	4	0	57	28	85
Ampara	0	0	0	0	3	2	3	2	1	7	3	2	0	1	0	21	8	29
Kalmunai	0	0	5	2	6	5	9	2	4	16	6	7	0	1	0	61	19	80
Trincomalee	0	0	10	4	3	3	5	2	4	9	3	4	3	1	1	46	20	66
Kurunegala	0	0	8	9	24	3	20	4	10	34	9	23	9	9	1	160	45	205
Puttalam	0	0	3	2	12	1	19	3	3	22	6	7	1	0	1	84	17	101
Anuradhapura	0	0	9	12	18	8	16	2	7	28	4	14	0	2	1	117	34	151
Polonnaruwa	0	0	2	0	5	3	3	0	2	11	6	8	1	1	0	41	12	53
Badulla	0	0	4	15	22	10	10	5	3	13	4	3	1	4	1	69	39	108
Monaragala	0	0	7	2	7	1	5	1	4	6	2	4	0	2	0	45	10	55
Ratnapura	0	2	23	24	33	26	31	11	12	34	15	20	6	5	2	189	98	287
Kegalle	1	4	10	16	14	14	19	10	4	31	6	15	6	2	1	128	61	189
Jaffna	0	0	3	2	10	6	11	7	5	18	6	8	4	7	5	72	35	107
Vavuniya	0	0	2	1	6	1	6	1	2	7	2	3	4	0	0	36	11	47
Mannar	0	0	2	2	1	0	6	0	2	8	3	5	1	0	0	29	8	37
Mullaitivu	0	0	0	0	1	1	1	0	0	2	1	1	0	0	0	7	2	9
Kilinochchi	0	0	0	1	1	0	1	1	2	2	1	1	0	2	0	8	5	13
<b>Total</b>	<b>7</b>	<b>17</b>	<b>243</b>	<b>242</b>	<b>420</b>	<b>200</b>	<b>504</b>	<b>162</b>	<b>211</b>	<b>672</b>	<b>200</b>	<b>336</b>	<b>95</b>	<b>120</b>	<b>41</b>	<b>3101</b>	<b>1168</b>	<b>4269</b>

Table 15: Age and Sex Distribution of New Smear Negative TB Cases by District in 2012

District	0 -14		15 -24		25 -34		35 -44		45 -54		55 -64		65 -74		> 75		Total		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Colombo	2	4	13	12	29	10	23	8	56	13	63	21	33	19	8	12	227	99	326
Gampaha	1	2	9	3	15	13	12	14	23	8	33	10	18	10	6	5	117	65	182
Kalutara	1	3	5	5	4	5	2	1	13	3	20	8	19	6	2	2	66	33	99
Kandy	1	6	5	7	11	7	18	5	22	11	39	14	21	6	16	8	133	64	197
Matale	1	2	0	2	1	2	2	0	7	2	8	2	4	0	2	0	25	10	35
Nuwara Eliya	1	3	2	0	4	4	3	2	3	1	8	2	7	2	1	0	29	14	43
Galle	0	3	7	14	9	8	10	3	17	5	10	13	8	7	6	1	67	54	121
Matara	0	0	1	0	2	0	2	1	4	1	2	0	4	1	0	0	15	3	18
Hambantota	0	0	1	1	0	0	0	0	3	1	3	0	3	3	0	3	10	8	18
Batticaloa	0	0	3	1	0	0	0	1	3	0	5	2	1	0	2	0	14	4	18
Ampara	1	0	0	0	1	0	0	1	5	1	3	1	6	2	1	0	17	5	22
Kalmunai	0	1	3	1	1	0	2	3	12	3	13	6	10	3	2	0	43	17	60
Trincomalee	4	14	11	3	6	6	7	12	13	9	17	11	9	8	2	2	69	65	134
Kurunegala	1	2	2	4	3	3	8	8	16	11	30	4	8	10	7	5	75	47	122
Puttalam	0	0	0	0	2	0	3	0	3	2	5	1	2	2	2	0	17	5	22
Anuradhapura	1	1	3	3	7	1	8	0	9	2	11	3	3	2	4	1	46	13	59
Polonnaruwa	1	3	0	1	1	3	3	2	5	5	9	4	8	4	1	3	28	25	53
Badulla	1	1	2	3	3	1	3	0	7	4	4	4	3	3	3	0	26	16	42
Monaragala	2	1	0	0	1	0	0	2	2	5	4	1	2	0	0	0	11	9	20
Ratnapura	2	2	3	2	5	1	5	4	9	5	11	5	9	2	3	3	47	24	71
Kegalle	11	3	2	6	3	2	3	1	8	7	14	2	7	5	5	2	53	28	81
Jaffna	1	7	3	4	6	1	4	2	9	5	9	5	8	7	2	1	42	32	74
Vavuniya	2	4	1	0	0	2	1	0	1	0	1	1	0	0	0	0	6	7	13
Mannar	0	0	1	0	0	0	0	3	3	1	3	1	4	0	1	0	12	5	17
Mullaitivu	0	0	0	0	0	0	0	1	0	1	3	1	1	0	0	1	4	4	8
Kilinochchi	1	0	1	2	1	1	1	0	2	1	6	8	4	2	4	0	20	14	34
<b>Total</b>	<b>35</b>	<b>62</b>	<b>78</b>	<b>74</b>	<b>115</b>	<b>70</b>	<b>120</b>	<b>74</b>	<b>255</b>	<b>107</b>	<b>334</b>	<b>130</b>	<b>202</b>	<b>104</b>	<b>80</b>	<b>49</b>	<b>1219</b>	<b>670</b>	<b>1889</b>

Table 16: Age and Sex Distribution of All New PTB Cases by District in 2012

District	0 -14		15 -24		25 -34		35 -44		45 -54		55 -64		65 -74		> 75		Total		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
	Colombo	5	8	73	50	127	54	159	43	281	81	238	75	105	45	36	21	1024	
Gampaha	1	4	35	25	57	29	66	38	108	30	120	27	53	26	21	12	461	191	652
Kalutara	2	6	21	27	36	11	44	16	79	22	73	25	54	10	11	3	320	120	440
Kandy	1	7	14	26	33	17	54	14	56	19	57	25	41	9	22	11	278	128	406
Matale	1	2	4	5	6	5	13	0	16	3	16	6	9	2	4	0	69	23	92
Nuwara Eliya	1	4	22	13	16	14	12	5	10	7	16	4	11	3	1	0	89	50	139
Galle	1	3	19	29	31	25	32	15	57	14	45	25	22	11	14	6	221	128	349
Matara	1	0	6	9	14	4	16	5	33	8	20	1	17	1	6	1	113	29	142
Hambantota	0	0	2	4	5	3	7	2	8	1	8	2	10	3	5	5	45	20	65
Batticaloa	0	0	5	7	4	3	8	8	19	6	22	5	7	3	6	0	71	32	103
Ampara	1	0	0	0	4	2	3	3	10	2	10	4	8	2	2	0	38	13	51
Kalmunai	0	1	8	3	7	5	11	5	29	7	29	12	17	3	3	0	104	36	140
Trincomalee	4	14	21	7	9	9	12	14	27	13	26	14	13	11	3	3	115	85	200
Kurunegala	1	2	10	13	27	6	28	12	58	21	64	13	31	19	16	6	235	92	327
Puttalam	0	0	3	2	14	1	22	3	24	5	27	7	9	3	2	1	101	22	123
Anuradhapura	1	1	12	15	25	9	24	2	39	9	39	7	17	2	6	2	163	47	210
Polonnaruwa	1	3	2	1	6	6	6	2	16	7	20	10	16	5	2	3	69	37	106
Badulla	1	1	6	18	25	11	13	5	20	7	17	8	6	4	7	1	95	55	150
Monaragala	2	1	7	2	8	1	5	3	16	9	10	3	6	0	2	0	56	19	75
Ratnapura	2	4	26	26	38	27	36	15	52	17	45	20	29	8	8	5	236	122	358
Kegalle	12	7	12	22	17	16	22	11	44	11	45	8	22	11	7	3	181	89	270
Jaffna	1	7	6	6	16	7	15	9	24	10	27	11	16	11	9	6	114	67	181
Vavuniya	2	4	3	1	6	3	7	1	13	2	8	3	3	4	0	0	42	18	60
Mannar	0	0	3	2	1	0	6	3	10	3	11	4	9	1	1	0	41	13	54
Mullaitivu	0	0	0	0	1	1	1	1	2	1	5	2	2	0	0	1	11	6	17
Kilinochchi	1	0	1	3	2	1	2	1	3	3	8	9	5	2	6	0	28	19	47
<b>Total</b>	<b>42</b>	<b>79</b>	<b>321</b>	<b>316</b>	<b>535</b>	<b>270</b>	<b>624</b>	<b>236</b>	<b>1054</b>	<b>318</b>	<b>1006</b>	<b>330</b>	<b>538</b>	<b>199</b>	<b>200</b>	<b>90</b>	<b>4320</b>	<b>1838</b>	<b>6158</b>

Table 17: Age and Sex Distribution of New EPTB Cases by District in 2012

District	0 -14		15 -24		25 -34		35 -44		45 -54		55 -64		65 -74		> 75		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Total		Total		Total		Total		Total		Total		Total		Total		Total	
Colombo	34	29	31	34	48	38	40	50	37	29	22	22	22	6	6	277	248	525
Gampaha	7	3	10	16	23	17	29	22	29	10	7	6	6	1	2	134	100	234
Kalutara	9	6	11	10	24	12	15	15	11	9	7	5	5	1	1	107	73	180
Kandy	6	3	14	12	14	10	19	15	14	14	5	11	2	1	1	86	79	165
Matale	3	1	6	4	1	2	9	4	1	5	1	2	0	0	0	27	18	45
Nuwara Eliya	2	3	9	4	4	4	5	3	2	1	2	1	0	0	0	29	20	49
Galle	1	8	6	8	15	11	6	5	15	8	3	3	3	2	2	54	55	109
Matara	2	1	4	4	5	6	7	4	6	4	3	1	0	0	0	32	23	55
Hambantota	0	0	1	5	3	2	1	3	4	2	3	2	3	0	0	20	16	36
Batticaloa	7	2	4	2	6	6	7	2	3	2	2	1	1	3	1	40	21	61
Ampara	3	0	0	0	1	2	1	1	0	0	2	0	0	0	0	8	3	11
Kalmunai	0	1	3	3	1	2	5	5	5	2	0	1	0	0	0	15	16	31
Trincomalee	6	0	3	2	4	3	8	0	1	3	1	2	0	0	0	30	11	41
Kurunegala	4	0	2	1	10	7	19	8	6	12	6	6	2	1	1	65	44	109
Puttalam	1	1	6	5	10	7	11	9	7	4	1	0	1	1	1	42	33	75
Anuradhapura	2	3	5	5	9	6	10	7	8	5	4	1	1	0	0	42	35	77
Polonnaruwa	1	1	1	1	5	7	2	3	4	1	1	0	0	0	0	22	14	36
Badulla	2	3	5	5	12	5	4	6	1	0	0	3	0	0	28	25	53	
Monaragala	1	1	3	0	2	1	5	0	3	5	1	0	1	0	1	17	9	26
Ratnapura	10	5	8	12	13	18	17	6	10	10	5	6	4	1	1	85	68	153
Kegalle	5	0	8	9	10	9	10	11	8	10	7	4	3	2	58	56	114	
Jaffna	4	2	11	1	7	5	12	10	17	11	14	2	3	3	72	43	115	
Vavuniya	0	2	3	3	1	1	1	0	0	3	0	1	0	0	8	11	19	
Mannar	1	0	1	0	2	4	0	1	0	0	0	0	0	0	7	6	13	
Mullaitivu	1	0	1	1	1	0	0	2	1	1	1	1	1	0	5	5	10	
Kilinochchi	0	1	1	0	2	1	0	0	2	0	0	0	0	0	5	2	7	
<b>Total</b>	<b>112</b>	<b>76</b>	<b>157</b>	<b>153</b>	<b>255</b>	<b>182</b>	<b>238</b>	<b>189</b>	<b>190</b>	<b>151</b>	<b>98</b>	<b>81</b>	<b>38</b>	<b>21</b>	<b>1315</b>	<b>1034</b>	<b>2349</b>	

Table 18: Distribution of Treatment Outcome of All Forms of TB by District in 2011

District	Cured		Treatment Completed		Treatment Success		Died		Failure		Defaulted		Transferred Out		Not Evaluated		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	914	43.8	871	41.8	1785	85.6	85	4.1	11	0.5	145	7.0	5	0.2	55	2.6	2086
Gampaha	556	45.2	493	40.1	1049	85.4	60	4.9	13	1.1	71	5.8	5	0.4	31	2.5	1229
Kalutara	357	53.4	264	39.5	621	92.8	29	4.3	3	0.4	9	1.3	0	0.0	7	1.0	669
Kandy	234	27.3	467	54.5	701	81.8	50	5.8	13	1.5	36	4.2	0	0.0	57	6.7	857
Matale	59	31.7	113	60.8	172	92.5	6	3.2	1	0.5	3	1.6	1	0.5	3	1.6	186
Nuwara Eliya	79	34.8	121	53.3	200	88.1	20	8.8	1	0.4	3	1.3	0	0.0	3	1.3	227
Galle	169	34.9	252	52.1	421	87.0	19	3.9	0	0.0	17	3.5	23	4.8	4	0.8	484
Matara	114	46.3	95	38.6	209	85.0	26	10.6	2	0.8	1	0.4	0	0.0	8	3.3	246
Hambantota	56	49.6	43	38.1	99	87.6	4	3.5	0	0.0	5	4.4	0	0.0	5	4.4	113
Batticaloa	105	49.1	76	35.5	181	84.6	21	9.8	0	0.0	3	1.4	0	0.0	9	4.2	214
Ampara	29	34.1	42	49.4	71	83.5	5	5.9	1	1.2	2	2.4	1	1.2	5	5.9	85
Kalmunai	66	31.9	106	51.2	172	83.1	19	9.2	0	0.0	13	6.3	0	0.0	3	1.4	207
Trincomalee	62	12.7	413	84.3	475	96.9	14	2.9	0	0.0	1	0.2	0	0.0	0	0.0	490
Kurunegala	205	31.1	369	55.9	574	87.0	39	5.9	11	1.7	25	3.8	0	0.0	11	1.7	660
Puttalam	85	39.0	81	37.2	166	76.1	10	4.6	3	1.4	23	10.6	0	0.0	16	7.3	218
Anuradhapura	140	48.3	124	42.8	264	91.0	15	5.2	2	0.7	0	0.0	0	0.0	9	3.1	290
Polonnaruwa	75	43.4	80	46.2	155	89.6	10	5.8	2	1.2	0	0.0	5	2.9	1	0.6	173
Badulla	140	48.1	126	43.3	266	91.4	14	4.8	7	2.4	1	0.3	0	0.0	3	1.0	291
Monaragala	43	33.6	72	56.3	115	89.8	7	5.5	1	0.8	5	3.9	0	0.0	0	0.0	128
Ratnapura	271	47.6	216	38.0	487	85.6	34	6.0	7	1.2	18	3.2	8	1.4	15	2.6	569
Kegalle	167	44.3	165	43.8	332	88.1	25	6.6	1	0.3	7	1.9	5	1.3	7	1.9	377
Jaffna	107	30.5	207	59.0	314	89.5	12	3.4	0	0.0	10	2.8	0	0.0	15	4.3	351
Vavuniya	47	60.3	25	32.1	72	92.3	3	3.8	1	1.3	2	2.6	0	0.0	0	0.0	78
Mannar	21	55.3	15	39.5	36	94.7	2	5.3	0	0.0	0	0.0	0	0.0	0	0.0	38
Mullaitivu	3	20.0	10	66.7	13	86.7	0	0.0	2	13.3	0	0.0	0	0.0	0	0.0	15
Kilinochchi	22	45.8	23	47.9	45	93.8	1	2.1	0	0.0	0	0.0	0	0.0	2	4.2	48
<b>Total</b>	<b>4126</b>	<b>39.9</b>	<b>4869</b>	<b>47.1</b>	<b>8995</b>	<b>87.1</b>	<b>530</b>	<b>5.1</b>	<b>82</b>	<b>0.8</b>	<b>400</b>	<b>3.9</b>	<b>53</b>	<b>0.5</b>	<b>269</b>	<b>2.6</b>	<b>10329</b>

Table 19: Distribution of Treatment Outcome of All Forms of New (PTB and EPTB) Cases by District in 2011

District	Cured		Treatment Completed		Died		Failure		Defaulted		Transferred Out		Not Evaluated		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	772	43.1	782	43.7	68	3.8	9	0.5	112	6.3	5	0.3	42	2.3	1790
Gampaha	510	44.7	482	42.2	53	4.6	8	0.7	58	5.1	4	0.4	27	2.4	1142
Kalutara	321	52.9	244	40.2	25	4.1	2	0.3	8	1.3	0	0.0	7	1.2	607
Kandy	220	27.6	433	54.3	45	5.6	11	1.4	34	4.3	0	0.0	54	6.8	797
Matale	57	31.8	110	61.5	4	2.2	1	0.6	3	1.7	1	0.6	3	1.7	179
Nuwara Eliya	76	35.0	115	53.0	20	9.2	0	0.0	3	1.4	0	0.0	3	1.4	217
Galle	157	33.8	247	53.2	19	4.1	0	0.0	16	3.4	22	4.7	3	0.6	464
Matara	110	48.0	93	40.6	22	9.6	2	0.9	1	0.4	0	0.0	1	0.4	229
Hambantota	56	50.5	43	38.7	4	3.6	0	0.0	4	3.6	0	0.0	4	3.6	111
Batticaloa	93	48.9	70	36.8	17	8.9	0	0.0	2	1.1	0	0.0	8	4.2	190
Ampara	27	33.3	42	51.9	4	4.9	1	1.2	1	1.2	1	1.2	5	6.2	81
Kalmunai	60	31.1	102	52.8	19	9.8	0	0.0	12	6.2	0	0.0	0	0.0	193
Trincomalee	58	11.9	413	85.0	14	2.9	0	0.0	1	0.2	0	0.0	0	0.0	486
Kurunegala	186	31.6	332	56.4	32	5.4	11	1.9	20	3.4	0	0.0	8	1.4	589
Puttalam	80	39.0	81	39.5	9	4.4	2	1.0	20	9.8	0	0.0	13	6.3	205
Anuradhapura	132	47.8	120	43.5	14	5.1	2	0.7	0	0.0	0	0.0	8	2.9	276
Polonnaruwa	70	41.9	79	47.3	10	6.0	2	1.2	0	0.0	5	3.0	1	0.6	167
Badulla	125	49.2	106	41.7	14	5.5	6	2.4	1	0.4	0	0.0	2	0.8	254
Monaragala	43	33.6	72	56.3	7	5.5	1	0.8	5	3.9	0	0.0	0	0.0	128
Ratnapura	256	47.3	208	38.4	33	6.1	6	1.1	16	3.0	8	1.5	14	2.6	541
Kegalle	156	43.5	161	44.8	25	7.0	1	0.3	6	1.7	5	1.4	5	1.4	359
Jaffna	95	28.5	201	60.4	12	3.6	0	0.0	10	3.0	0	0.0	15	4.5	333
Vavuniya	45	60.8	23	31.1	3	4.1	1	1.4	2	2.7	0	0.0	0	0.0	74
Mannar	20	54.1	15	40.5	2	5.4	0	0.0	0	0.0	0	0.0	0	0.0	37
Mullaitivu	2	16.7	10	83.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	12
Kilinochchi	21	44.7	23	48.9	1	2.1	0	0.0	0	0.0	0	0.0	2	4.3	47
<b>Total</b>	<b>3748</b>	<b>39.4</b>	<b>4607</b>	<b>48.5</b>	<b>476</b>	<b>5.0</b>	<b>66</b>	<b>0.7</b>	<b>335</b>	<b>3.5</b>	<b>51</b>	<b>0.5</b>	<b>225</b>	<b>2.4</b>	<b>9508</b>



Table 20: Distribution of Treatment Outcome of All New PTB Cases by District in 2011

District	Cured		Treatment Completed		Died		Failure		Defaulted		Transferred Out		Not Evaluated		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	772	60.9	316	24.9	47	3.7	9	0.7	93	7.3	5	0.4	26	2.1	1268
Gampaha	510	61.9	202	24.5	50	6.1	8	1.0	45	5.5	1	0.1	8	1.0	824
Kalutara	321	75.0	73	17.1	22	5.1	2	0.5	7	1.6	0	0.0	3	0.7	428
Kandy	220	37.3	266	45.1	30	5.1	10	1.7	30	5.1	0	0.0	34	5.8	590
Matale	57	44.2	64	49.6	2	1.6	1	0.8	2	1.6	1	0.8	2	1.6	129
Nuwara Eliya	76	52.8	53	36.8	11	7.6	0	0.0	2	1.4	0	0.0	2	1.4	144
Galle	157	45.1	143	41.1	14	4.0	0	0.0	15	4.3	17	4.9	2	0.6	348
Matara	110	67.1	33	20.1	18	11.0	2	1.2	1	0.6	0	0.0	0	0.0	164
Hambantota	56	70.0	16	20.0	2	2.5	0	0.0	4	5.0	0	0.0	2	2.5	80
Batticaloa	93	76.2	14	11.5	10	8.2	0	0.0	2	1.6	0	0.0	3	2.5	122
Ampara	27	39.7	32	47.1	4	5.9	1	1.5	1	1.5	0	0.0	3	4.4	68
Kalmunai	60	35.9	79	47.3	18	10.8	0	0.0	10	6.0	0	0.0	0	0.0	167
Trincomalee	58	13.8	350	83.1	12	2.9	0	0.0	1	0.2	0	0.0	0	0.0	421
Kurunegala	186	43.7	189	44.4	22	5.2	10	2.3	16	3.8	0	0.0	3	0.7	426
Puttalam	80	60.6	24	18.2	7	5.3	2	1.5	16	12.1	0	0.0	3	2.3	132
Anuradhapura	132	63.5	56	26.9	13	6.3	2	1.0	0	0.0	0	0.0	5	2.4	208
Polonnaruwa	70	59.3	33	28.0	9	7.6	2	1.7	0	0.0	4	3.4	0	0.0	118
Badulla	125	71.4	33	18.9	10	5.7	6	3.4	1	0.6	0	0.0	0	0.0	175
Monaragala	43	42.2	49	48.0	5	4.9	1	1.0	4	3.9	0	0.0	0	0.0	102
Ratnapura	256	69.2	55	14.9	29	7.8	5	1.4	13	3.5	5	1.4	7	1.9	370
Kegalle	156	62.4	68	27.2	16	6.4	1	0.4	5	2.0	3	1.2	1	0.4	250
Jaffna	95	40.8	111	47.6	11	4.7	0	0.0	7	3.0	0	0.0	9	3.9	233
Vavuniya	45	78.9	6	10.5	3	5.3	1	1.8	2	3.5	0	0.0	0	0.0	57
Mannar	20	80.0	4	16.0	1	4.0	0	0.0	0	0.0	0	0.0	0	0.0	25
Mullaitivu	2	33.3	4	66.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6
Kilinochchi	21	51.2	17	41.5	1	2.4	0	0.0	0	0.0	0	0.0	2	4.9	41
<b>Total</b>	<b>3748</b>	<b>54.4</b>	<b>2290</b>	<b>33.2</b>	<b>367</b>	<b>5.3</b>	<b>63</b>	<b>0.9</b>	<b>277</b>	<b>4.0</b>	<b>36</b>	<b>0.5</b>	<b>115</b>	<b>1.7</b>	<b>6896</b>

Table 21: Distribution of Treatment Outcome of New Sputum Positive TB Cases by District in 2011

District	Cured		Treatment Completed		Treatment Success		Died		Failure		Defaulted		Transferred Out		Not Evaluated		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	772	79.1	69	7.1	841	86.2	35	3.6	7	0.7	74	7.6	3	0.3	16	1.6	976
Gampaha	510	83.7	16	2.6	526	86.4	35	5.7	8	1.3	35	5.7	0	0.0	5	3.2	609
Kalutara	321	91.7	0	0.0	321	91.7	21	6.0	2	0.6	5	1.4	0	0.0	1	1.3	350
Kandy	220	79.7	0	0.0	220	79.7	14	5.1	8	2.9	23	8.3	0	0.0	11	15.1	276
Matale	57	85.1	4	6.0	61	91.0	2	3.0	0	0.0	1	1.5	1	5.9	2	10.8	67
Nuwara Eliya	76	89.4	1	1.2	77	90.6	6	7.1	0	0.0	1	1.2	0	0.0	1	4.5	85
Galle	157	67.4	46	19.7	203	87.1	7	3.0	0	0.0	11	4.7	12	21.7	0	0.0	233
Matara	110	85.9	1	0.8	111	86.7	15	11.7	1	0.8	1	0.8	0	0.0	0	0.0	128
Hambantota	56	88.9	1	1.6	57	90.5	2	3.2	0	0.0	3	4.8	0	0.0	1	6.3	63
Batticaloa	93	86.9	1	0.9	94	87.9	10	9.3	0	0.0	2	1.9	0	0.0	1	3.4	107
Ampara	27	90.0	0	0.0	27	90.0	1	3.3	1	3.3	1	3.3	0	0.0	0	0.0	30
Kalmunai	60	80.0	2	2.7	62	82.7	6	8.0	0	0.0	7	9.3	0	0.0	0	0.0	75
Trincomalee	58	95.1	0	0.0	58	95.1	3	4.9	0	0.0	0	0.0	0	0.0	0	0.0	61
Kurunegala	186	84.9	4	1.8	190	86.8	10	4.6	9	4.1	10	4.6	0	0.0	0	0.0	219
Puttalam	80	69.0	11	9.5	91	78.4	6	5.2	2	1.7	15	12.9	0	0.0	2	6.1	116
Anuradhapura	132	89.8	0	0.0	132	89.8	11	7.5	2	1.4	0	0.0	0	0.0	2	4.7	147
Polonnaruwa	70	87.5	0	0.0	70	87.5	4	5.0	2	2.5	0	0.0	4	19.5	0	0.0	80
Badulla	125	88.0	0	0.0	125	88.0	10	7.0	6	4.2	1	0.7	0	0.0	0	0.0	142
Monaragala	43	87.8	0	0.0	43	87.8	3	6.1	1	2.0	2	4.1	0	0.0	0	0.0	49
Ratnapura	256	84.5	0	0.0	256	84.5	22	7.3	4	1.3	12	4.0	4	5.0	5	6.9	303
Kegalle	156	88.1	1	0.6	157	88.7	11	6.2	1	0.6	5	2.8	2	4.3	1	2.4	177
Jaffna	95	91.3	0	0.0	95	91.3	7	6.7	0	0.0	1	1.0	0	0.0	1	3.2	104
Vavuniya	45	91.8	0	0.0	45	91.8	1	2.0	1	2.0	2	4.1	0	0.0	0	0.0	49
Mannar	20	95.2	0	0.0	20	95.2	1	4.8	0	0.0	0	0.0	0	0.0	0	0.0	21
Mullaitivu	2	100.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
Kilinochchi	21	100.0	0	0.0	21	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	21
<b>Total</b>	<b>3748</b>	<b>83.5</b>	<b>157</b>	<b>3.5</b>	<b>3905</b>	<b>87.0</b>	<b>243</b>	<b>5.4</b>	<b>55</b>	<b>1.2</b>	<b>212</b>	<b>4.7</b>	<b>26</b>	<b>0.6</b>	<b>49</b>	<b>1.1</b>	<b>4490</b>

Table 22: Distribution of Treatment Outcome of New Sputum Negative TB Cases by District in 2011

District	Treatment Completed		Died		Failure		Defaulted		Transferred Out		Not Evaluated		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	247	84.6	12	4.1	2	0.7	19	6.5	2	0.7	10	3.4	292
Gampaha	186	86.5	15	7.0	0	0.0	10	4.7	1	0.5	3	1.4	215
Kalutara	73	93.6	1	1.3	0	0.0	2	2.6	0	0.0	2	2.6	78
Kandy	266	84.7	16	5.1	2	0.6	7	2.2	0	0.0	23	7.3	314
Matale	60	96.8	0	0.0	1	1.6	1	1.6	0	0.0	0	0.0	62
Nuwara Eliya	52	88.1	5	8.5	0	0.0	1	1.7	0	0.0	1	1.7	59
Galle	97	84.3	7	6.1	0	0.0	4	3.5	5	4.3	2	1.7	115
Matara	32	88.9	3	8.3	1	2.8	0	0.0	0	0.0	0	0.0	36
Hambantota	15	88.2	0	0.0	0	0.0	1	5.9	0	0.0	1	5.9	17
Batticaloa	13	86.7	0	0.0	0	0.0	0	0.0	0	0.0	2	13.3	15
Ampara	32	84.2	3	7.9	0	0.0	0	0.0	0	0.0	3	7.9	38
Kalmunai	77	83.7	12	13.0	0	0.0	3	3.3	0	0.0	0	0.0	92
Trincomalee	350	97.2	9	2.5	0	0.0	1	0.3	0	0.0	0	0.0	360
Kurunegala	185	89.4	12	5.8	1	0.5	6	2.9	0	0.0	3	1.4	207
Puttalam	13	81.3	1	6.3	0	0.0	1	6.3	0	0.0	1	6.3	16
Anuradhapura	56	91.8	2	3.3	0	0.0	0	0.0	0	0.0	3	4.9	61
Polonnaruwa	33	86.8	5	13.2	0	0.0	0	0.0	0	0.0	0	0.0	38
Badulla	33	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	33
Monaragala	49	92.5	2	3.8	0	0.0	2	3.8	0	0.0	0	0.0	53
Ratnapura	55	82.1	7	10.4	1	1.5	1	1.5	1	1.5	2	3.0	67
Kegalle	67	91.8	5	6.8	0	0.0	0	0.0	1	1.4	0	0.0	73
Jaffna	111	86.0	4	3.1	0	0.0	6	4.7	0	0.0	8	6.2	129
Vavuniya	6	75.0	2	25.0	0	0.0	0	0.0	0	0.0	0	0.0	8
Mannar	4	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4
Mullaitivu	4	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4
Kilinochchi	17	85.0	1	5.0	0	0.0	0	0.0	0	0.0	2	10.0	20
<b>Total</b>	<b>2133</b>	<b>88.7</b>	<b>124</b>	<b>5.2</b>	<b>8</b>	<b>0.3</b>	<b>65</b>	<b>2.7</b>	<b>10</b>	<b>0.4</b>	<b>66</b>	<b>2.7</b>	<b>2406</b>

Table 23: Distribution of Treatment Outcome of EPTB Cases by District in 2011

District	Treatment Completed		Died		Failure		Defaulted		Transferred Out		Not Evaluated		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	466	89.3	21	4.0	0	0.0	19	3.6	0	0.0	16	3.1	522
Gampaha	280	88.1	3	0.9	0	0.0	13	4.1	3	0.9	19	6.0	318
Kalutara	171	95.5	3	1.7	0	0.0	1	0.6	0	0.0	4	2.2	179
Kandy	167	80.7	15	7.2	1	0.5	4	1.9	0	0.0	20	9.7	207
Matale	46	92.0	2	4.0	0	0.0	1	2.0	0	0.0	1	2.0	50
Nuwara Eliya	62	84.9	9	12.3	0	0.0	1	1.4	0	0.0	1	1.4	73
Galle	104	89.7	5	4.3	0	0.0	1	0.9	5	4.3	1	0.9	116
Matara	60	92.3	4	6.2	0	0.0	0	0.0	0	0.0	1	1.5	65
Hambantota	27	87.1	2	6.5	0	0.0	0	0.0	0	0.0	2	6.5	31
Batticaloa	56	82.4	7	10.3	0	0.0	0	0.0	0	0.0	5	7.4	68
Ampara	10	76.9	0	0.0	0	0.0	0	0.0	1	7.7	2	15.4	13
Kalmunai	23	88.5	1	3.8	0	0.0	2	7.7	0	0.0	0	0.0	26
Trincomalee	63	96.9	2	3.1	0	0.0	0	0.0	0	0.0	0	0.0	65
Kurunegala	143	87.7	10	6.1	1	0.6	4	2.5	0	0.0	5	3.1	163
Puttalam	57	78.1	2	2.7	0	0.0	4	5.5	0	0.0	10	13.7	73
Anuradhapura	64	94.1	1	1.5	0	0.0	0	0.0	0	0.0	3	4.4	68
Polonnaruwa	46	93.9	1	2.0	0	0.0	0	0.0	1	2.0	1	2.0	49
Badulla	73	92.4	4	5.1	0	0.0	0	0.0	0	0.0	2	2.5	79
Monaragala	23	88.5	2	7.7	0	0.0	1	3.8	0	0.0	0	0.0	26
Ratnapura	153	89.5	4	2.3	1	0.6	3	1.8	3	1.8	7	4.1	171
Kegalle	93	85.3	9	8.3	0	0.0	1	0.9	2	1.8	4	3.7	109
Jaffna	90	90.0	1	1.0	0	0.0	3	3.0	0	0.0	6	6.0	100
Vavuniya	17	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	17
Mannar	11	91.7	1	8.3	0	0.0	0	0.0	0	0.0	0	0.0	12
Mullaitivu	6	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6
Kilinochchi	6	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6
<b>Total</b>	<b>2317</b>	<b>88.7</b>	<b>109</b>	<b>4.2</b>	<b>3</b>	<b>0.1</b>	<b>58</b>	<b>2.2</b>	<b>15</b>	<b>0.6</b>	<b>110</b>	<b>4.2</b>	<b>2612</b>

Table 24: Distribution of Treatment Outcome of Retreatment TB Cases by District in 2011

District	Cured		Treatment Completed		Treatment Success		Died		Failure		Defaulted		Transferred Out		Not Evaluated		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	64	66.0	11	11.3	75	77.3	7	7.2	2	2.1	10	10.3	0	0.0	3	3.1	97
Gampaha	43	65.2	2	3.0	45	68.2	5	7.6	2	3.0	10	15.2	0	0.0	4	6.1	66
Kalutara	35	85.4	0	0.0	35	85.4	4	9.8	1	2.4	1	2.4	0	0.0	0	0.0	41
Kandy	10	52.6	1	5.3	11	57.9	3	15.8	2	10.5	1	5.3	0	0.0	2	10.5	19
Matale	1	33.3	0	0.0	1	33.3	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	3
Nuwara Eliya	3	100.0	0	0.0	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3
Galle	12	66.7	3	16.7	15	83.3	0	0.0	0	0.0	1	5.6	1	5.6	1	5.6	18
Matara	2	33.3	0	0.0	2	33.3	1	16.7	0	0.0	0	0.0	0	0.0	3	50.0	6
Hambantota	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	1	50.0	2
Batticaloa	10	71.4	0	0.0	10	71.4	3	21.4	0	0.0	1	7.1	0	0.0	0	0.0	14
Ampara	2	50.0	0	0.0	2	50.0	1	25.0	0	0.0	1	25.0	0	0.0	0	0.0	4
Kalmunai	6	85.7	0	0.0	6	85.7	0	0.0	0	0.0	1	14.3	0	0.0	0	0.0	7
Trincomalee	4	100.0	0	0.0	4	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4
Kurunegala	15	68.2	0	0.0	15	68.2	3	13.6	0	0.0	3	13.6	0	0.0	1	4.5	22
Puttalam	3	30.0	0	0.0	3	30.0	1	10.0	1	10.0	3	30.0	0	0.0	2	20.0	10
Anuradhapura	4	80.0	0	0.0	4	80.0	1	20.0	0	0.0	0	0.0	0	0.0	0	0.0	5
Polonnaruwa	5	100.0	0	0.0	5	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5
Badulla	12	92.3	0	0.0	12	92.3	0	0.0	0	0.0	0	0.0	0	0.0	1	7.7	13
Monaragala	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Ratnapura	15	55.6	8	29.6	23	85.2	1	3.7	1	3.7	2	7.4	0	0.0	0	0.0	27
Kegalle	11	84.6	0	0.0	11	84.6	0	0.0	0	0.0	1	7.7	0	0.0	1	7.7	13
Jaffna	9	100.0	0	0.0	9	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	9
Vavuniya	2	100.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
Mannar	1	100.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
Mullaitivu	1	33.3	0	0.0	1	33.3	0	0.0	2	66.7	0	0.0	0	0.0	0	0.0	3
Kilinochchi	1	100.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
<b>Total</b>	<b>271</b>	<b>68.6</b>	<b>25</b>	<b>6.3</b>	<b>296</b>	<b>74.9</b>	<b>32</b>	<b>8.1</b>	<b>11</b>	<b>2.8</b>	<b>36</b>	<b>9.1</b>	<b>1</b>	<b>0.3</b>	<b>19</b>	<b>4.8</b>	<b>395</b>

Table 25: Distribution of Treatment Outcome of Other TB Cases by District in 2011

District	Cured		Treatment Completed		Died		Failure		Defaulted		Transferred Out		Not Evaluated		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	78	39.2	78	39.2	10	5.0	0	0.0	23	11.6	0	0.0	10	5.0	199
Gampaha	3	14.3	9	42.9	2	9.5	3	14.3	3	14.3	1	4.8	0	0.0	21
Kalutara	1	4.8	20	95.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	21
Kandy	4	9.8	33	80.5	2	4.9	0	0.0	1	2.4	0	0.0	1	2.4	41
Matale	1	25.0	3	75.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4
Nuwara Eliya	0	0.0	6	85.7	0	0.0	1	14.3	0	0.0	0	0.0	0	0.0	7
Galle	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
Matara	2	18.2	2	18.2	3	27.3	0	0.0	0	0.0	0	0.0	4	36.4	11
Hambantota	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Batticaloa	2	20.0	6	60.0	1	10.0	0	0.0	0	0.0	0	0.0	1	10.0	10
Ampara	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	4	57.1	0	0.0	0	0.0	0	0.0	0	0.0	3	42.9	7
Trincomalee	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kurunegala	4	8.2	37	75.5	4	8.2	0	0.0	2	4.1	0	0.0	2	4.1	49
Puttalam	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	33.3	3
Anuradhapura	4	44.4	4	44.4	0	0.0	0	0.0	0	0.0	0	0.0	1	11.1	9
Polonnaruwa	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
Badulla	3	12.5	20	83.3	0	0.0	1	4.2	0	0.0	0	0.0	0	0.0	24
Monaragala	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	1	100.0	1
Kegalle	0	0.0	4	80.0	0	0.0	0	0.0	0	0.0	0	0.0	1	20.0	5
Jaffna	3	33.3	6	66.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	9
Vavuniya	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
Mannar	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
Kilinochchi	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
<b>Total</b>	<b>107</b>	<b>25.1</b>	<b>237</b>	<b>55.6</b>	<b>22</b>	<b>5.2</b>	<b>5</b>	<b>1.2</b>	<b>29</b>	<b>6.8</b>	<b>1</b>	<b>0.2</b>	<b>25</b>	<b>5.9</b>	<b>426</b>

Table 26: Distribution of Sputum Conversion of New PTB Cases at the End of the Intensive Phase by District in 2012

District	Negative		Positive		Died		Defaulted		Transferred Out		No Result		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	911	84.7	18	1.7	32	3.0	19	1.8	0	0.0	95	8.8	1075
Gampaha	378	80.4	15	3.2	31	6.6	17	3.6	1	0.2	28	6.0	470
Kalutara	314	92.1	11	3.2	11	3.2	3	0.9	0	0.0	2	0.6	341
Kandy	203	97.1	0	0.0	2	1.0	1	0.5	0	0.0	3	1.4	209
Matale	54	94.7	2	3.5	1	1.8	0	0.0	0	0.0	0	0.0	57
Nuwara Eliya	88	91.7	3	3.1	5	5.2	0	0.0	0	0.0	0	0.0	96
Galle	204	89.5	2	0.9	12	5.3	0	0.0	8	3.5	2	0.9	228
Matara	114	91.9	1	0.8	8	6.5	0	0.0	0	0.0	1	0.8	124
Hambantota	44	93.6	0	0.0	1	2.1	2	4.3	0	0.0	0	0.0	47
Batticaloa	74	87.1	0	0.0	6	7.1	2	2.4	0	0.0	3	3.5	85
Ampara	28	96.6	0	0.0	1	3.4	0	0.0	0	0.0	0	0.0	29
Kalmunai	75	93.8	0	0.0	3	3.8	1	1.3	0	0.0	1	1.3	80
Trincomalee	66	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	66
Kurunegala	183	89.3	5	2.4	11	5.4	0	0.0	0	0.0	6	2.9	205
Puttalam	76	75.2	2	2.0	3	3.0	0	0.0	1	1.0	19	18.8	101
Anuradhapura	132	87.4	13	8.6	5	3.3	0	0.0	0	0.0	1	0.7	151
Polonnaruwa	42	79.2	4	7.5	3	5.7	0	0.0	1	1.9	3	5.7	53
Badulla	92	85.2	6	5.6	7	6.5	0	0.0	1	0.9	2	1.9	108
Monaragala	52	94.5	3	5.5	0	0.0	0	0.0	0	0.0	0	0.0	55
Ratnapura	247	86.1	13	4.5	10	3.5	8	2.8	1	0.3	8	2.8	287
Kegalle	175	92.6	5	2.6	7	3.7	2	1.1	0	0.0	0	0.0	189
Jaffna	77	72.0	2	1.9	6	5.6	2	1.9	0	0.0	20	18.7	107
Vavuniya	42	89.4	0	0.0	2	4.3	0	0.0	1	2.1	2	4.3	47
Mannar	34	91.9	1	2.7	1	2.7	1	2.7	0	0.0	0	0.0	37
Mullaitivu	7	77.8	1	11.1	0	0.0	0	0.0	0	0.0	1	11.1	9
Kilinochchi	12	92.3	1	7.7	0	0.0	0	0.0	0	0.0	0	0.0	13
<b>Total</b>	<b>3724</b>	<b>87.2</b>	<b>108</b>	<b>2.5</b>	<b>168</b>	<b>3.9</b>	<b>58</b>	<b>1.4</b>	<b>14</b>	<b>0.3</b>	<b>197</b>	<b>4.6</b>	<b>4269</b>

Table 27: Distribution of Sputum Conversion of Retreatment PTB Cases at the End of the Intensive Phase by District in 2012

District	Negative		Positive		Died		Defaulted		Transferred Out		No Result		Total
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	116	70.7	8	4.9	4	2.4	5	3.0	0	0.0	31	18.9	164
Gampaha	18	32.7	3	5.5	10	18.2	6	10.9	2	3.6	16	29.1	55
Kalutara	15	88.2	2	11.8	0	0.0	0	0.0	0	0.0	0	0.0	17
Kandy	10	55.6	2	11.1	0	0.0	0	0.0	0	0.0	6	33.3	18
Matale	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2
Nuwara Eliya	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3
Galle	21	87.5	2	8.3	0	0.0	1	4.2	0	0.0	0	0.0	24
Matara	3	75.0	0	0.0	0	0.0	1	25.0	0	0.0	0	0.0	4
Hambantota	2	66.7	0	0.0	1	33.3	0	0.0	0	0.0	0	0.0	3
Batticaloa	12	85.7	0	0.0	0	0.0	0	0.0	1	7.1	1	7.1	14
Ampara	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1
Kalmunai	4	66.7	0	0.0	0	0.0	0	0.0	0	0.0	2	33.3	6
Trincomalee	8	88.9	0	0.0	1	11.1	0	0.0	0	0.0	0	0.0	9
Kurunegala	19	79.2	3	12.5	2	8.3	0	0.0	0	0.0	0	0.0	24
Puttalam	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	100.0	6
Anuradhapura	9	90.0	1	10.0	0	0.0	0	0.0	0	0.0	0	0.0	10
Polonnaruwa	2	50.0	0	0.0	1	25.0	0	0.0	0	0.0	1	25.0	4
Badulla	7	70.0	2	20.0	1	10.0	0	0.0	0	0.0	0	0.0	10
Monaragala	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	2	66.7	3
Ratnapura	19	79.2	0	0.0	0	0.0	3	12.5	0	0.0	2	8.3	24
Kegalle	9	81.8	0	0.0	2	18.2	0	0.0	0	0.0	0	0.0	11
Jaffna	11	78.6	2	14.3	0	0.0	0	0.0	0	0.0	1	7.1	14
Vavuniya	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	2
Mannar	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1
Mullaitivu	1	33.3	0	0.0	0	0.0	1	33.3	0	0.0	1	33.3	3
Kilinochchi	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1
<b>Total</b>	<b>294</b>	<b>67.9</b>	<b>25</b>	<b>5.8</b>	<b>24</b>	<b>5.5</b>	<b>17</b>	<b>3.9</b>	<b>3</b>	<b>0.7</b>	<b>70</b>	<b>16.2</b>	<b>433</b>



# Maps



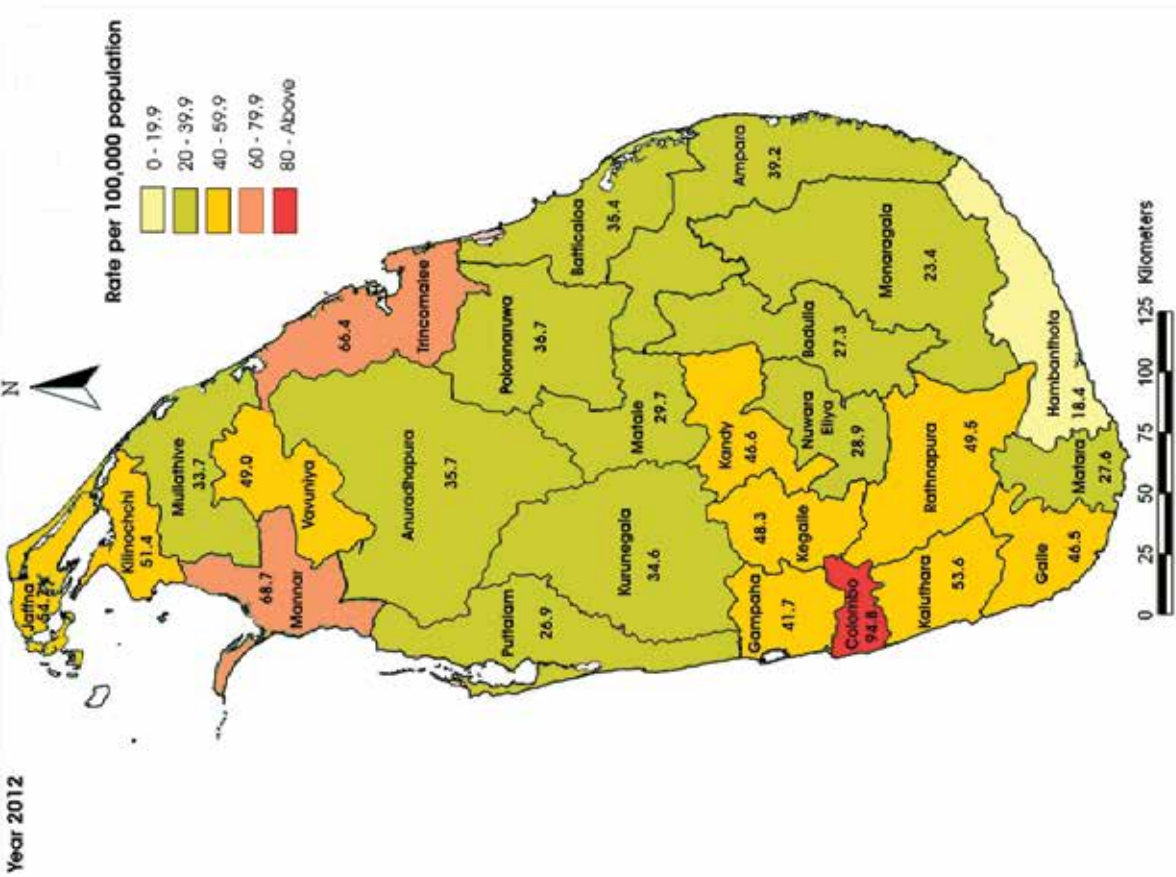


Figure 18: Map of Case Notification Distribution of TB in 2012

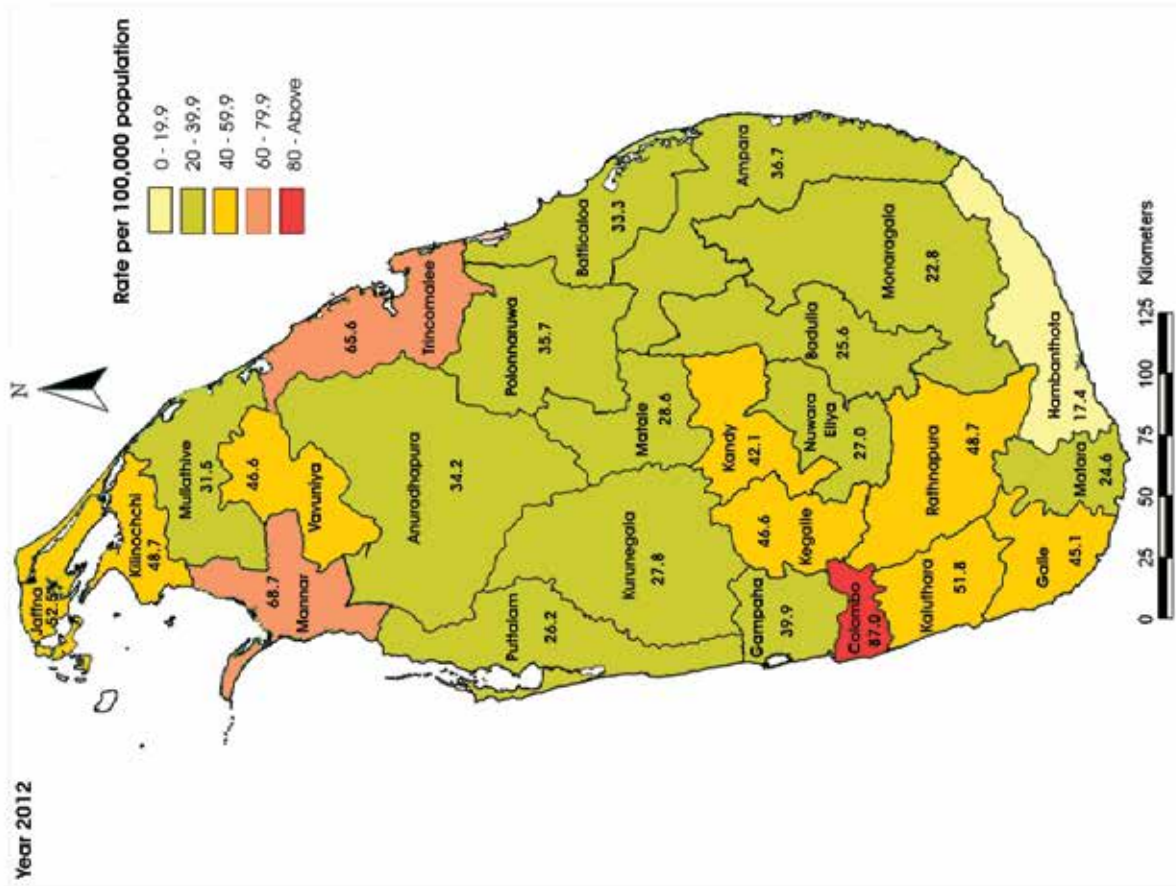


Figure 19: Map of Case Incidence Distribution of TB in 2012

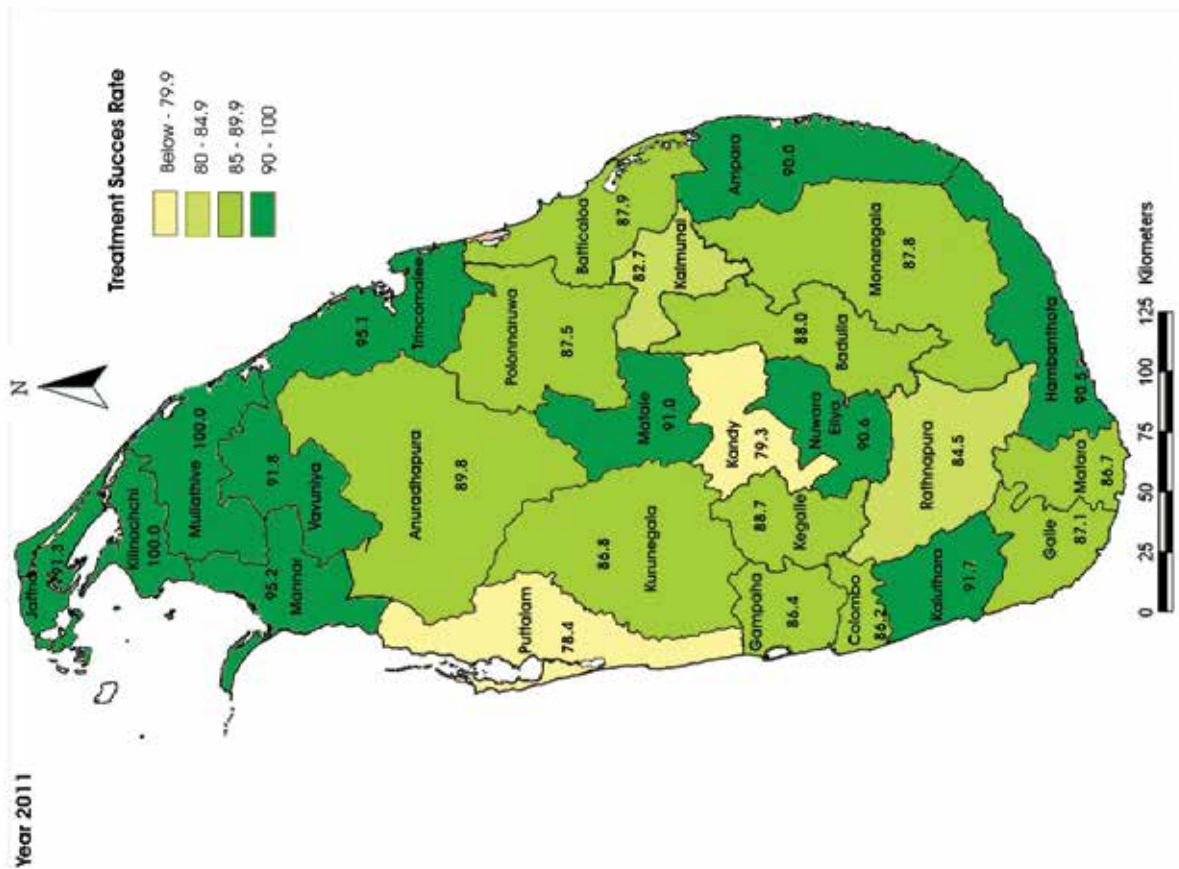


Figure 21: Map of Treatment Success Distribution of TB Cases in 2012

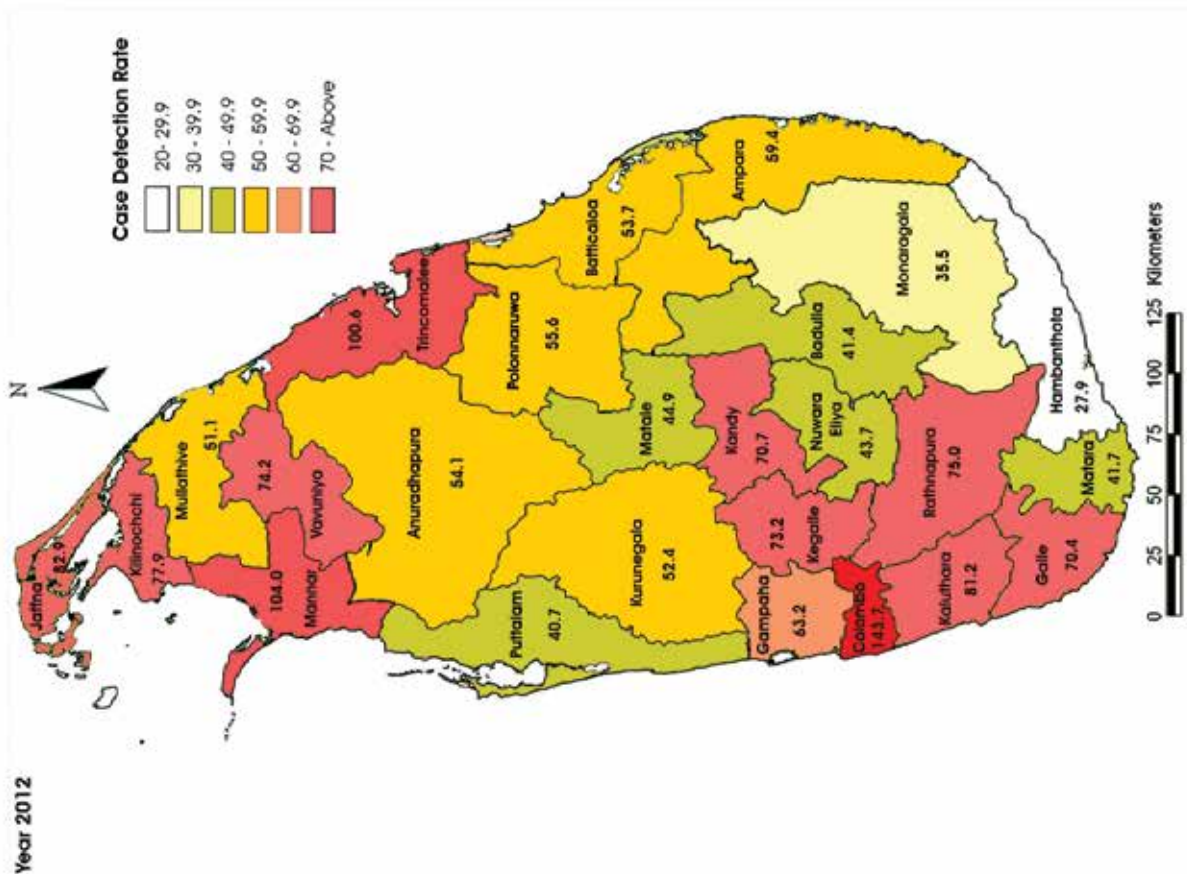


Figure 20: Map of Case Detection Distribution of TB in 2012

# Annexure



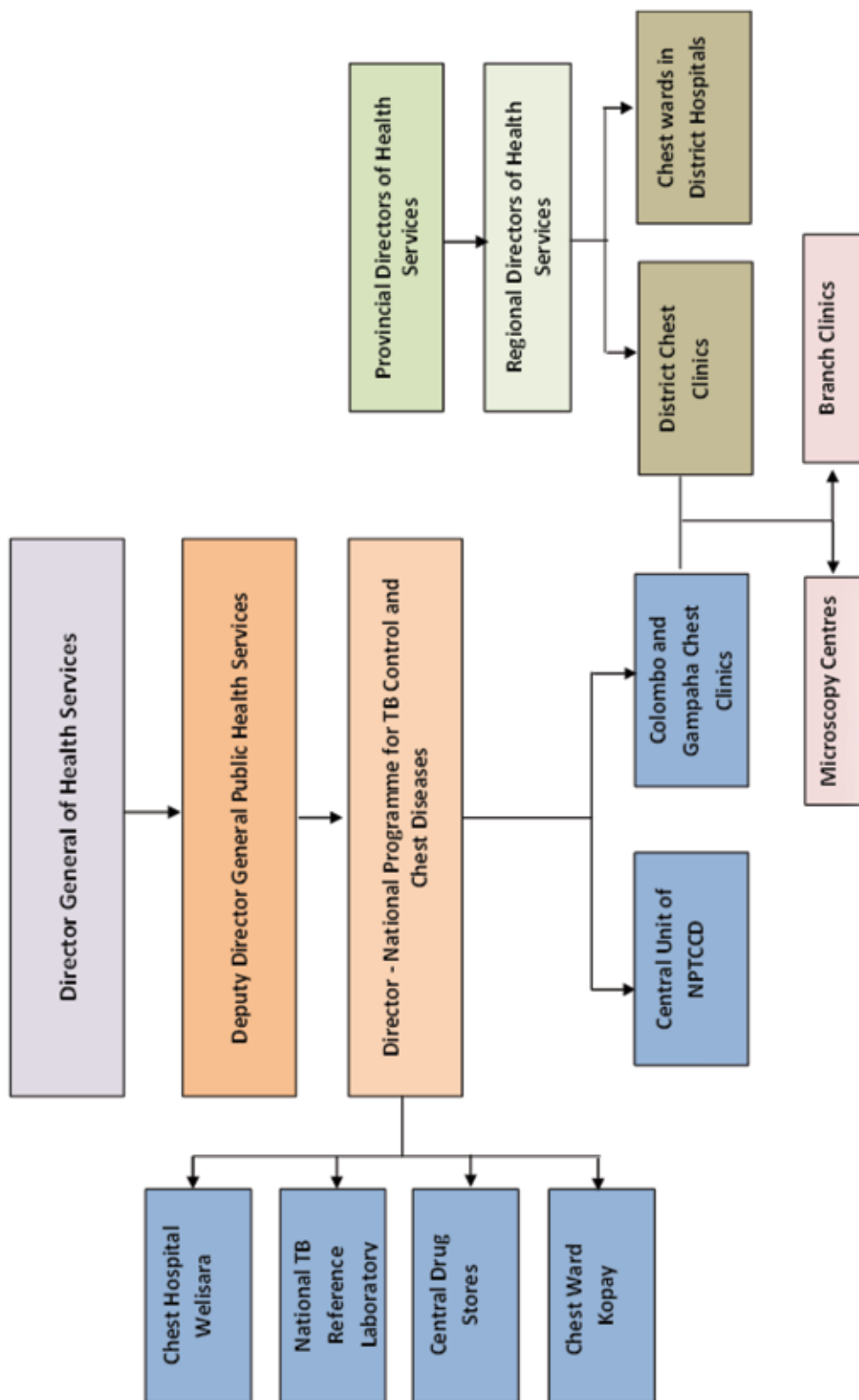


Figure 22: Organizational Structure of National TB Control Programme (2012)

Table 28: Provision of Financial Assistance to TB Patients in 2012

Province	Total No. of Patients	No. of Patients who Received TB Assistance	Percentage of Patients who Received TB Assistance	Total Amount (Rs.)	Average Amount per Patient (Rs.)
Western	3,799	49	1.3	280,100	5716.3
Central	986	232	23.5	904,900	3900.4
Southern	825	253	30.7	288,101	1138.7
Eastern	691	375	54.3	677,100	1805.6
North Western	761	98	12.9	202,750	2068.9
North Central	454	Not Documented			
Sabaragamuwa	940	57	6.1	202,200	3547.4
Uva	327	246	75.2	Not Documented	
Northern	560	205	36.6	683,865	3335.9
<b>Total</b>	<b>9343</b>	<b>1515</b>	<b>16.2</b>	<b>3,239,016</b>	<b>2,138.0</b>

Table 29: Expenditure from Consolidated Funds in 2012

Object Title	Amount (Rs.)
<b>Capital Expenditure</b>	9,498,549.76
<b>Recurrent Expenditure</b>	101,438,883.35
<b>1. Personal Emoluments</b>	87,183,411.79
<b>2. Travelling Expenses</b>	1,282,500.57
<b>3. Supplies and Requests</b>	2,729,011.01
<b>4. Repairs and Maintains</b>	3,147,828.15
<b>5. Transportation and Communication</b>	5,517,001.09
<b>6. Other Expenditure</b>	1,579,130.74
<b>Total</b>	<b>110,937,433.11</b>



Table 30: Distribution of Sources of Funding for TB Activities in 2012 (in USD)

Activity	Funding Source and Amount (USD)			
	Government	GFATM	WHO/Other Grants	Total
<b>Routine programme management activities*</b>	612,149.51	571,971.61	14,000.00	1,198,121.12
<b>Staff working for TB control</b>	1,940,552.95	331,641.24	0.00	2,272,194.19
<b>Procurement of drugs</b>	5,024.87	501,041.73	0.00	506,066.60
<b>Laboratory supplies and equipment</b>	36,600.59	179,657.82	0.00	216,258.41
<b>Management of MDR-TB (excluding drugs cost)</b>	0.00	40,896.09	0.00	40,896.09
<b>PPM, TB/HIV, ACSM and community engagement</b>	0.00	498,839.58	0.00	498,839.58
<b>Surveys and research</b>	0.00	46,861.00	8,500.00	55,361.00
<b>Other activities (Including technical assistance, PAL)</b>	0.00	95,939.17	76,454.83	172,394.00
<b>Total</b>	<b>2,594,327.92</b>	<b>2,266,848.24</b>	<b>98,954.83</b>	<b>4,960,130.99</b>

\*Including Supervision, Capacity Building and Infrastructure Development

Table 31: Training Programmes Carried out at Central Level in 2012

Training Programme	Participant Category	Number of Programmes	Number Trained	Conducted By
<b>In-service training for Microscopists and TB Assistants</b>	Microscopist/TB Assistant	6	48	Central Laboratory
<b>Modular training for DTCOs, Medical Officers, RMOs and AMOs</b>	DTCO / MO/ RMO/ AMO	01	20	NPTCCD
<b>Training of DEOs on ePIMS</b>	Data Entry Operators	02	53	NPTCCD
<b>Basic computer skills training for the senior and middle level staff of NPTCCD</b>	NPTCCD staff	5	82	NPTCCD

Table 32: Training Programmes carried out at Provincial and District Levels in 2012

Training Programme	Participants category	Number of Programmes	Number Trained
<b>Training of Medical Officers in public, unlinked public health and private sector</b>	MO, RMO and AMO	39	718
<b>Provincial and district level training for Ayurvedic Physicians</b>	Ayurvedic physicians	5	245
<b>Training of Nurses and PHIs at chest clinics, chest wards and other staff at other health facilities both in public and unlinked public health sector</b>	Nurses, PHIs	20	637
<b>Training of DOT providers in the public and private sector</b>	Formal and Informal Community leaders	18	373

Table 33: International Level Training programmes, Meetings and Workshops in 2012

Meeting/ Training Programme / Regional Workshops	Participants	Country Held	Organized By
<b>Foreign training on mass media and communication (May 2012)</b>	DTCO, Senior Registrar, PHI	Malaysia	GFATM/
<b>Regional training on research methodology for protocol development for TB and HIV Programme (July 2012)</b>	CRP and DTCO	Bhutan	SAARC
<b>Foreign training on project management (October 2012)</b>	DTCO and MO	Malaysia	GFATM/ IUATLD
<b>WHO MDR-TB Training</b>	CRP and DTCO	Thailand	WHO

Table 34: Regional Training Programmes/Meetings and Workshops in Foreign Countries in 2012 under R-06 TB Grant, SAARC and SEARO-WHO

Programme/Meeting/Workshop	Participants	Country Held	Organized By
SAARC regional microbiologist TOT for culture and drug susceptibility testing on TB	Microbiologist and MO	India	SAARC
Regional meeting on TB technical assistance for planning, implementing and monitoring the WHO-GFATM	Director (NPTCCD ) and MO	Indonesia	WHO
SAARC governing board meeting for TB/HIV (October 2012)	Director (NPTCCD)	Nepal	SAARC
SAARC Regional expert group meeting of TB programme managers to finalize the draft SAARC regional strategy for the control/Elimination of TB (6-7 December 2012)	Director (NPTCCD) and Senior Registrar	Nepal	SAARC/ GFATM
Workshop on Procurement and Supply Management	Accountant/ GFATM (TB)	India	GFATM
Workshop to accelerate implementation TB/HIV activities	Deputy Director (CHW)	Nepal	WHO
SAARC regional meeting of TB Programme Managers for programme review and Management of Cross Border issues (December 2012)	DDG (PHS)	Maldives	SAARC/ GFATM

Table 35: Supervision and Monitoring Activities carried out by Central Level Staff in 2012

Type of Activity	Implementation Level	Activity Done by	No of Programs
Supervision	District	NPTCCD	07
	District	NTRL	26
Review Meetings	Central Level	NPTCCD	06
	District	DCC/ NPTCCD	12
	PHI Review meeting	NPTCCD	01
Advisory Committee	Central	NPTCCD	04

Table 36: External Technical Assistance in 2012

Purpose	Facilitator(s)	Duration	Organized by	Funded by
<b>Global Drug Facility Mission in Sri Lanka</b>	Microbiologist and MO	April 2012	WHO/GDF	WHO-SEARO / GFATM
<b>Evaluation of Drug Resistance TB in Sri Lanka</b>	Dr. Vineet Bhatiya	December 2012	WHO/GLC	WHO-SEARO / GFATM

Table 37: Health Education Activities carried out in 2012

Activity	Location and Date	No of Programmes Held / No of IEC Developed
<b>“Dayata Kirula” exhibition</b>	February 2012 at Oyamaduwa in Anuradhapura district	7 days
<b>“Parisara Muthuro” exhibition</b>	Kotikawatta, Negombo, Kollonnawa and Kalutara	6 programmes
<b>Other Exhibitions</b>	Borellesgamuwa Maha Vidyalaya, Ananda Vidyalaya - Elpitiya, Vijaya Kumarathunga Hall Wadduwa, Wiz Kid Expo at Kolonnawa NIHS, Kalutara	5 programmes
<b>IEC materials</b>	Booklets in three languages Leaflets in three languages Posters in three languages Banners in three languages	5,500 200,000 25,000 1,500

# සුවසන රෝග බෝවීම වළකවු !

**බබ**

කහිනවීම, නිවීනවීම

ආවේණික බෝවීමක් වන බැවින් අනෙකුත් අයට බෝවීමට හේතු විය හැකිය.

විවේණිකව පත් වීමට පෙර පමණක් පමණක් අනෙකුත් අයට බෝවීමට හේතු විය හැකිය.

සවිම වැඩි කළහොත් වැඩි ප්‍රමාණයේ පැහැර දීමට හේතු විය හැකිය.

**සවිම වැඩි කළහොත් වැඩි ප්‍රමාණයේ පැහැර දීමට හේතු විය හැකිය.**

සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.

# සෞඛ්‍ය රෝගය අනාගත පරපුරට දායාද නොකරවු!

සෞඛ්‍ය රෝගය විය නැත.

ආවේණිකව හෝ වෙනත් ආකාරයට බෝ විය හැකිය.

සෞඛ්‍ය රෝගය විය නැත.

සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.

# සෞඛ්‍ය රෝගය අනාගත පරපුරට දායාද නොකරවු!

සෞඛ්‍ය රෝගය විය නැත.

ආවේණිකව හෝ වෙනත් ආකාරයට බෝ විය හැකිය.

සෞඛ්‍ය රෝගය විය නැත.

සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.

# සෞඛ්‍ය රෝගය අනාගත පරපුරට දායාද නොකරවු...

**ලෝක සෞඛ්‍ය සංවිධානය - චාරිකා 24**

# සෞඛ්‍ය රෝගය වැළැක්වීමේ ක්‍රමය :

- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.
- සෞඛ්‍ය සේවා මධ්‍යස්ථාන සහ ප්‍රාදේශීය සෞඛ්‍ය සේවා මධ්‍යස්ථානවලින් නිදහස්ව පැහැර දීමට හේතු විය හැකිය.

# Top in my Lifetime

# STOP THE SPREAD OF RESPIRATORY DISEASES!

**You**

Cover your mouth and nose when you cough and sneeze

or

Use a handkerchief or tissue

...then wash your hands.

**Protect other - Protect yourself !**

National Programme for Tuberculosis Control & Chest Diseases  
Ministry of Health

Figure 23: IEC Materials Produced and Paper Advertisements Published in 2012

