



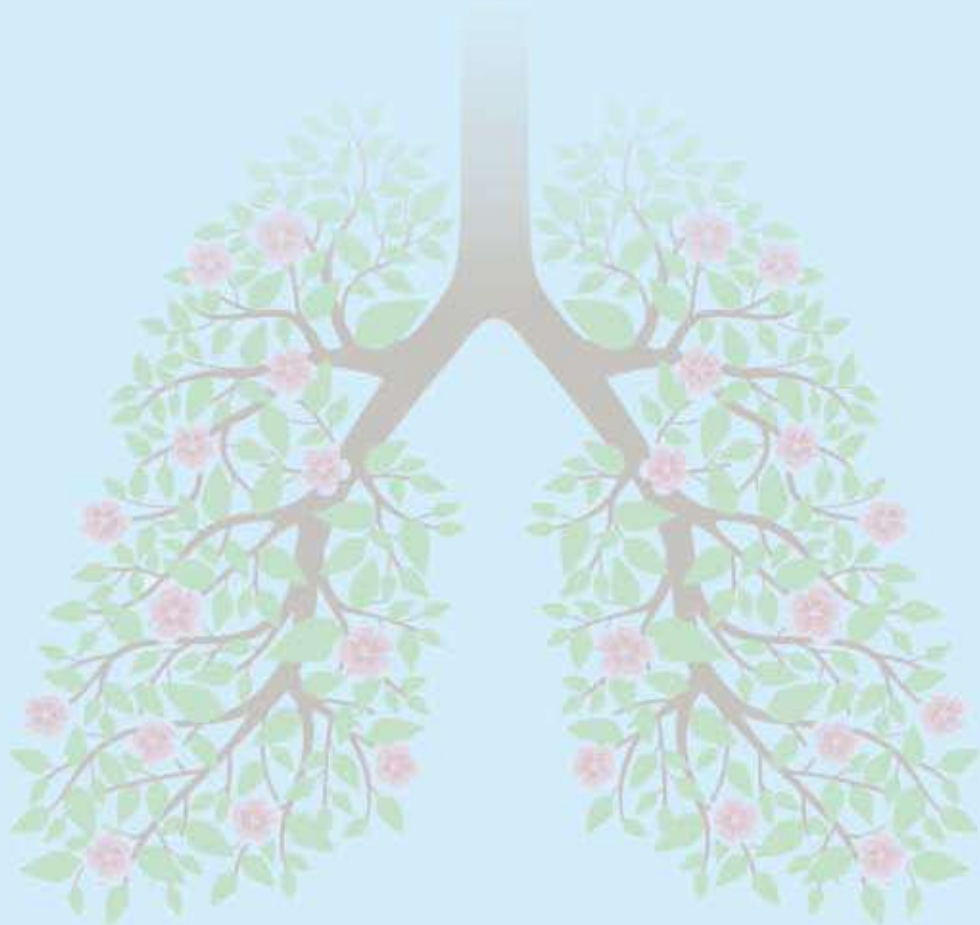
सत्यमेव जयते

Government of India

TB INDIA 2016

REVISED NATIONAL TB CONTROL PROGRAMME

ANNUAL STATUS REPORT



UNITE TO END TB



Central TB Division
Directorate General of Health Services
Ministry of Health and Family Welfare, Nirman Bhawan, New Delhi - 110108
www.tbcindia.gov.in







जगत प्रकाश नड्डा
Jagat Prakash Nadda



सत्यमेव जयते



FOREWORD

Tuberculosis remains a major public health problem despite noteworthy socio-economic development, advances and availability of technology. It is a curable disease but still millions of people suffer every year and a number of them die from this infectious disease resulting in devastating social & economic impact.

2. India is a signatory to “The End TB Strategy” that calls for a world free of tuberculosis, with measurable aims of a 50% and 75% reduction in incidence and related deaths, respectively, by 2025, and corresponding reductions of 90% and 95% by 2035. Sustainable Development Goals (SDGs) which came into effect from 1st January 2016 require that all three dimensions of sustainable development – economic, social and environmental – are addressed in an integrated manner to ensure that “no one is left behind”. As a step towards achieving the SDGs and End TB Strategy, the Revised National Tuberculosis Control Programme (RNTCP) is adopting newer strategies and tools to ensure universal access to quality TB care.

3. The RNTCP is coping with challenges like development of resistance to anti-TB drugs with expansion of rapid molecular diagnostic by CBNAAT and use of Bedaquiline, a new anti-TB drug through conditional access under Programmatic Management of Drug Resistant TB.

4. The program is also expanding collaborative activities to address co-morbidities like associated HIV, diabetes, smoking and making great progress in Case Based Web Based IT system (Nikshay) for tracking of individual TB cases. For reaching unreached TB patients and to link them to RNTCP services, citizen centric missed call centre have been launched in the states of Punjab, Haryana, Chandigarh and Delhi.

5. The Union Government is firmly committed and will ensure all necessary help to achieve vision of “TB-free India.”

(Jagat Prakash Nadda)

३४८, ए-स्कंध, निर्माण भवन, नई दिल्ली-110011
348, A-Wing, Nirman Bhawan, New Delhi-110011
Tele : (O) : +91-11-23061647, 23061661, 23061751, Telefax : 23062358, 23061648
E-mail: hfwminister@gov.in





भानु प्रताप शर्मा
B.P. Sharma
Secretary



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health & Family Welfare
Ministry of Health & Family Welfare

MESSAGE

Tuberculosis has remained a disease of Public Health Importance since ages and is known to inflict large quantum of socio-economic cost on the society.

Each year, about 2.2 million people develop TB in India and an estimated 220,000 people die from the disease. The Revised National TB Control Programme (RNTCP) till date has treated over 19 million patients and thus saved an additional three million lives. The cure rates under RNTCP have consistently been above 85%. TB Millennium Development Goals of 50 per cent reduction in the prevalence of TB and reducing TB death by 50 per cent as compared to 1990 have been achieved.

Policymakers, administrators, RNTCP programme managers, staff and health workers across the country have shown a high degree of dedication and commitment in working towards the common goal of TB free India. Challenges of drug resistance, HIV, diabetes, smoking and other social determinants of TB are being addressed with appropriate measures. "Nikshay" the case based web based reporting system developed under RNTCP will ensure better surveillance and treatment of TB cases. Launch of citizen centric missed call centre in the states of Punjab, Haryana, Chandigarh and Delhi will help to reach unreached TB patients. Massive network of molecular diagnosis being established will improve services for MDRTB.

Despite notable successes, RNTCP faces many challenges including of enhanced case notifications rate, Drug Resistances achieving higher treatment success rates, addressing co-morbidities etc. All stakeholders will need to work together to successfully address these challenges.

I am glad that the central TB Division is bringing out its annual publication "TB India 2016" that highlights all that has been done in the last year and where the program has the scope to improve.

I take this opportunity to reiterate the commitment of Department of Health and Family Welfare, Government of India, to provide all support to achieve the mission of TB Mukta Bharat.

(B.P. Sharma)

कमरा नं 156, ए-स्कंध, निर्माण भवन, नई दिल्ली-110011
Room No. 156, A-Wing, Nirman Bhawan, New Delhi-110011
Tele : (O) 011-23061863, Fax : 011-23061252, E-mail : secyhfw@gmail.com



Dr. Jagdish Prasad

M.S. M.Ch., FIACS

Director General of Health Services



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
स्वास्थ्य सेवा महानिदेशालय
निर्माण भवन, नई दिल्ली & 110011

Government of India
Ministry of Health & Family Welfare
Directorate General of Health Services
Nirman Bhavan, New Delhi - 110 108
Tel.: 23061063, 23061438 (O), 23061924 (F)
दिनांक@Dated: 15.02.2016

MESSAGE

We have adopted new ideas and strategies under TB Control for Zero deaths, disease and suffering due to tuberculosis. By year 2020 our goal should be to significantly reduce TB burden in India by ensuring universal access to quality assured TB care.

The Revised National TB Control Program (RNTCP) will soon roll-out daily regimen for treatment of new drug sensitive TB cases using fixed dose combination in 104 districts in five states. The results from the ongoing National Drug Resistance Survey result will help to formulate strategies to design appropriate regimen for controlling DR-TB.

All districts in the country are linked with rapid molecular diagnostics CBNAAT and LPA. The program is enhancing its diagnostic capacity by additional CBNAAT machines for diagnosis of MDR-TB and TB in selected key populations such as people suspected of having drug resistance TB, People Living with HIV-AIDS, children as well as extra pulmonary cases. With 24 laboratories certified for performing second line DST, we are poised to detect additional resistance to second line anti-TB drugs that will allow modification of regimen early to improve treatment outcome of patients. To improve outcome amongst DR-TB patients, a new drug bedaquiline is planned to be introduced in six referral sites initially to establish its safety profile among Indian patients.

In the coming years our case based web based IT system e-Nikshay will help to achieve 100% notification including that from the private sector. IVR calls, SMS will be sent to patients to confirm the drug uptake. To enhance Nikshay implementation, reduce the time lag in data entry and also for managing information at the supervisory level, tablets will be soon provided to supervisory staff.

The involvement of multiple stakeholders including the civil society is essential for TB control activities in the country. With notification of all TB cases being mandatory, efforts are being made to ensure that all cases treated outside the program are notified and TB patients are diagnosed and treated with existing Standards of TB care in India.

(Dr. Jagdish Prasad)



Dr. Sunil D. Khaparde

M.D., Ph.D.
Dy. Director General
Head, Central TB Division
Project Director RNTCP



Telephone - +91-11-23062980

Telefax - +91-11-23063226

E-mail : ddgtab@rntop.org

भारत सरकार

Government of India

स्वास्थ्य सेवा महानिदेशालय

Directorate General of Health Services

स्वास्थ्य एवं परिवार कल्याण मंत्रालय

निर्माण भवन, नई दिल्ली - 110 108

Nirman Bhavan, New Delhi - 110 108

दिनांक@Dated: 15.02.2016

PREFACE

TB India 2016 is an annual publication from Central TB Division wherein a comprehensive status of TB control activities in the country has been compiled. The compilation is released every year on 24 March, World TB Day.

The Revised National TB Control Programme (RNTCP) has been applauded for its public health prospective. The program has seen many new initiatives and policy changes in the last one year. RNTCP has envisaged "Universal Access to Quality TB Diagnosis and Treatment" in line with "Standards of TB Care in India." We have planned to roll-out daily regimen for treatment of new drug sensitive TB cases in 104 districts in five states. The Fixed Dose Combination of anti-TB drugs will be according to patient's weight. The implementation of daily regimen will thus ensure optimum dosage and reduced pill burden with improved treatment outcomes.

Bedaquiline has been given approval for use along with the background regimen under conditional access through the RNTCP PMDT programme. RNTCP recently rolled-out base line second line drug susceptibility testing to detect additional resistance to second line anti-TB drugs. At present there are 24 laboratories certified for performing second line DST across the country. In addition to the existing 121 CBNAAT machines, the program will provide enhanced rapid molecular diagnostics for drug resistance suspects, PLHIV, paediatrics and extra pulmonary TB by addition of another 500 CBNAAT machines.

To make RNTCP service more patient centric a dedicated toll free number with a call centre is being started by making use of ICT to provide patient counselling and treatment support services in states of Punjab, Haryana, Chandigarh and Delhi.

RNTCP and National Program for Prevention and Control of Cancer, Diabetes, CVD & Stroke (NPCDCS) jointly developed framework for collaboration which aim to reduce morbidity and mortality by doing bi-directional screening, early detection and prompt management of Diabetes Mellitus (DM) and TB. In another initiative, National Tobacco Control Program is working in synergy with RNTCP for development and implementation of collaborative framework.

We have laid down strategies for involvement of all care providers to strengthen notification, promote ban on serology, rational use of anti-TB drugs, early identification and referral of TB suspect for diagnosis and increase community awareness. The WHO Global TB report 2015 praised India's efforts for 29% increase in notifications during last year.

I'm thankful to officers and staff of Ministry of Health and Family Welfare, Directorate General Health Services, and State Governments for their continued support and endeavours for betterment for the program. I also acknowledge the support of partners who have pledged to come together for a common cause. RNTCP fraternity will strive further to do the good work as the years continue with renewed enthusiasm and dedication.


(Dr. Sunil D. Khaparde)

ABBREVIATIONS

ACSM	Advocacy, Communication and Social Mobilization
AIDS	Acquired Immune Deficiency Syndrome
AIIMS	All India Institute of Medical Sciences
ANSV	Annual Negative Slide Volume
ART	Anti-Retroviral Therapy
ARTI	Annual Risk of Tuberculosis Infection
ASHA	Accredited Social Health Activist
CBCI	Catholic Bishop's Conference of India
CGHS	Central Government Health Scheme
CHAI	Catholic Health Association of India
CHC	Community Health Centre
CII	Confederation of Indian Industries
CMAI	Christian Medical Association of India
CTD	Central TB Division
DALYs	Disability Adjusted Life Years
DBS	Domestic Budgeting Source
DDG	Deputy Director General
DFID	Department for International Development
DGHS	Director General of Health Services
DMC	Designated Microscopy Centre
DOTS	Directly Observed Treatment Short Course
DRS	Drug Resistance Surveillance
DRTB	Drug Resistant Tuberculosis
DST	Drug Susceptibility Testing
DTC	District Tuberculosis Centre
DTO	District Tuberculosis Officer
E	Ethambutol

EPTB	Extra-pulmonary Tuberculosis
EQA	External Quality Assessment
GMSD	Government Medical Store Depot
Gol	Government of India
GFATM	The Global Fund to Fight against AIDS, Tuberculosis and Malaria
H	Isoniazid
HBCs	High Burden Countries
HIV	Human Immuno Deficiency Virus
HRD	Human Resource Development
IAC	IEC Advisory Committee
ICB	International Competitive Bidding
ICELT	International Centre for Excellence in Laboratory Training
ICMR	Indian Council of Medical Research
ICTC	Integrated Counselling and Testing Centre
IDSP	Integrated Disease Surveillance Project
IEC	Information, Education and Communication
IMA	Indian Medical Association
IPT	Isoniazid Preventive Therapy
IRL	Intermediate Reference Laboratory
IUALTD	International Union Against Tuberculosis and Lung Disease
JMM	Joint Monitoring Mission
KAP	Knowledge, Attitude and Practices
LT	Laboratory Technician
MDGs	Millennium Development Goals
MDRTB	Multi Drug Resistant TB

MIS	Management Information System
MO	Medical Officer
Mo-HFW	Ministry of Health and Family Welfare
MOTC	Medical Officer-Tuberculosis Control
MoU	Memorandum of Understanding
NACO	National AIDS Control Organisation
NACP	National AIDS Control Programme
NCDC	National Centre for Disease Control
NEP	New Extra Pulmonary
NGO	Non Governmental Organisation
NIRT	National Institute of Research in Tuberculosis
NJI-MOD	National Jalma Institute of Mycobacterial and Other Diseases
NRHM	National Rural Health Mission
NRL	National Reference Laboratory
NSN	New Smear Negative
NSP	New Smear Positive
NTF	National Task Force
NTI	National Tuberculosis Institute
NTP	National Tuberculosis Programme
NUHM	National Urban Health Mission
OR	Operational Research
OSE	On-Site Evaluation
PHC	Primary Health Centre
PHI	Peripheral Health Institution
PLHIV	People Living with HIV and AIDS
PP	Private Practitioner
PPM	Public-Private Mix
PSU	Public Sector Unit
PTB	Pulmonary Tuberculosis

PWB	Patient-Wise Box
QA	Quality Assurance
R	Rifampicin
RBRC	Random Blinded Re-Checking
RCH	Reproductive and Child Health
RNTCP	Revised National Tuberculosis Control Programme
S	Streptomycin
SDS	State Drug Store
SHGs	Self Help Groups
SOP	Standard Operating Procedure
SPR	Slide Positivity Rate
STC	State TB Cell
STDC	State Tuberculosis Training & Demonstration Centre
STF	State Task Force
STLS	Senior TB Laboratory Supervisor
STO	State TB Officer
STS	Senior Treatment Supervisor
TB	Tuberculosis
TU	Tuberculosis Unit
UHC	Urban Health Centre
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
WHO	World Health Organization
WVI	World Vision India
XDR-TB	Extensively Drug Resistant TB
Z	Pyrazinamide
ZTF	Zonal Task Force



CONTENTS

Chapter No.	Content	Page Number
Executive summary and Forewords		
1.	CTD Activities 2015	1
2.	TB disease burden in India	7
3.	RNTCP Implementation status	11
3.1	Diagnosis of TB	11
3.2	Treatment of TB	25
4.	TB Surveillance in India	27
5.	Partnership	37
6.	RNTCP Planning	51
7.	Budgeting & Finance	55
8.	Policy Updates/New Initiatives	61
9.	Procurement & Logistics Management	67
10.	Advocacy, communication and social Mobilisation	73
11.	Research	81
12.	Monitoring & Evaluation	85
13.	Human Resource	87
14.	Infrastructure	95
15.	RNTCP case finding and treatment outcome Performance, 1999-2015	99
16.	Initiatives & Success Stories from Grassroot	135



Executive Summary

The Revised National TB Control Programme (RNTCP) is bringing out its Annual Status report “TB India 2016” summarizing implementation status, various policy updates and activities undertaken during the year 2015.

RNTCP aims for Universal Access for quality diagnosis and treatment for all TB patients in the community and a target of “reaching the unreached”. We have achieved the TB Millennium Development Goals and STOP TB target of 50 per cent reduction in TB prevalence and mortality due to TB. India is a signatory to World Health Assembly which has endorsed Sustainable Development Goals and global ‘End TB Strategy’ that calls for a world free of tuberculosis, with measurable aims of 50% and 75% reduction in incidence and related deaths, respectively, by 2025, and corresponding reductions of 90% and 95% by 2035 as well as zero catastrophic expenditure due to TB. Our Vision 2020 is to significantly reduce TB burden in India by ensuring universal access to quality assured TB care as per Standards for TB Care in India (STCI).

In 2015, RNTCP covered a population of 1.28 billion. A total of 91,32,306 TB suspects were examined by sputum smear microscopy and 14,23,181 cases were registered for treatment. 79% of all registered TB cases knew their HIV status. 93% HIV infected TB patients were initiated on CPT and 92% were initiated on ART.

To ensure quality case management, notification of all TB cases in Nikshay is the first step to close the gap of missing TB cases in India. WHO Global TB report 2015 appreciated India’s efforts for substantial increase of TB case notification. Strengthening Surveillance System will ensure that appropriate measures can be taken by

the programme to implement quality TB diagnosis and treatment as per STCI. In other words, mandatory TB Notification, STCI, Nikshay are the tools for strengthening surveillance.

RNTCP has quality assured laboratory network of 13,886 microscopy centres for sputum smear microscopy. At present under the program there are 64 RNTCP certified Culture & DST laboratories in the country which includes laboratories from Public sector (IRL, Medical College), Private and NGO laboratories. Twenty five laboratories under the program are certified for SLD. To improve outcome amongst DR-TB patients, a new drug bedaquiline is planned to be introduced in six referral sites initially to establish its safety profile among Indian patients. The entire country is covered for baseline SLD for MDR-TB patients. Currently 121 Cartridge Based Nucleic Acid Amplification (CBNAAT) sites provide rapid decentralized diagnosis of MDR-TB, TB in high risk group PLHIV and Paediatric presumptive including EP-TB case. Procurement of another 500 CBNAAT machines is being undertaken.

RNTCP has planned to roll-out daily regimen for treatment of new drug sensitive TB cases in 104 districts in five states. The Fixed Dose Combination of first-line anti-TB drugs will be according to patient’s weight for adults also. The implementation of daily regimen will thus ensure optimum dosage and reduced pill burden with expectedly improved treatment outcomes.

To make RNTCP service more patient centric; a dedicated toll free number with a call centre has been started using ICT to provide patient counselling and treatment support services in states of Punjab, Haryana, Chandigarh and Delhi, named as missed call campaign.

The NRL Coordination Committee deliberated on roles and responsibilities of the NRL and stewardship for DR-TB services, SLDST and inclusion of drugs for panel testing, DST guided treatment and single comprehensive training for laboratory personnel. The National Committee of Operational Research has approved a study for the Validation of second line LPA for detecting resistance to Fluoroquinolones, Aminoglycosides (Kanamycin, Amikacin) and Cyclic Peptides (Capreomycin).

RNTCP and National Program for Prevention and Control of Cancer, Diabetes, CVD & Stroke (NPCDCS) have jointly developed a framework for collaboration which aims to reduce morbidity and mortality by doing bi-directional screening, early detection and prompt management of Diabetes Mellitus (DM) and TB. RNTCP and National Tobacco Control Programme are also working in synergy for development and implementation of a framework for collaboration.

To replace the Binocular Microscopes and to provide better and faster diagnostic equipments for the management of drug sensitive TB, programme has procured 2500 LEDs during the year 2015 for distribution to high work load settings. Further, 1500 BMs have been procured during the year.

In 2015, the Joint Monitoring Mission (JMM) brought together a team of national and international experts from the Ministry of Health, civil society, implementing partners, technical and developmental agencies to review the progress, challenges, gaps and strategies of India's tuberculosis (TB) control efforts.

The first National Consultation on 'Nutritional Support to Tuberculosis Patients' was organized to discuss challenges and highlight resources needed to effectively develop and implement a nutrition support plan for TB patients across the country.

'Call to Action' initiative was launched in India by the Hon'ble Minister of Health and Family Welfare. This is an initiative under the global Challenge TB project funded by USAID and led by The Union South East Asia (USEA) office in India.

CTD has been a Principal Recipient (PR) of the Global Fund grants. The program has completed the implementation of Single Stream Funding Grant on 30th September 2015 with 100% utilization of funds. The

next implementation period under TGF Funding Model (FM) grant is from 01st October 2015 to 31st December 2017. The grant would support in scaling up of program activities across country including establishment of 15 Liquid culture laboratories, deployment of additional 200 CBNAAT machines, procurement of First line and Second line drugs, strengthening of supply chain management system, scale up of Public Financial management system (PFMS), etc. The proposed sub-recipients under the FM are: States of Andhra Pradesh, Bihar, Chhattisgarh, Haryana, Jharkhand, Karnataka, Orissa, Telangana, Uttarakhand, Catholic Bishops Conference of India (CBCI), Indian Council for Medical Research (ICMR), Indian Medical Association (IMA), Foundation for Innovative and New Diagnostics (FIND), Tata Institute of Social Sciences (TISS), Tibetan Voluntary Health Association (TVHA) and World Health Organization (WHO).

With support from World Bank, CTD is implementing the "Accelerating Universal Access to Early and Effective Tuberculosis Care" Project with an IDA Credit (5376-IN) of US\$ 100 million. The development objective of the project is to support the aims of India's National Strategic Plan (NSP) for Tuberculosis Control to expand the provision and utilization of quality diagnosis and treatment services for people suffering from tuberculosis.

Synergistic efforts of all stakeholders involved in TB control in India are the key towards realising the goal of "Universal access to TB care and treatment for all". RNTCP has successful partnerships with Indian Medical Association (IMA), Catholic Bishops' Conference of India (CBCI), Foundation for Innovative New Diagnostics (FIND), World Vision and The UNION. From strengthening notification from private sector, scaling up diagnosis for drug resistance TB, engagement of communities and Community Systems Strengthening, partners have complemented RNTCP's efforts towards universal access to TB care. Involvement of more than 360 medical colleges in RNTCP is through DMCs, DOT Centers and DRTB Centers.

The ensuing chapters of the annual report provide detailed description of the activities that have been summarized above.

1

CHAPTER

ACTIVITIES UNDERTAKEN IN 2015



www.tbcindia.gov.in
www.nikshay.gov.in

1

CHAPTER

Central TB Division: activities undertaken in 2015

January

1. National RNTCP Review Meeting with State Tuberculosis Officers of all States/Union Territories on 6th – 8th January, 2015 at Bhubaneswar, Odisha. The programme was also attended by RNTCP Consultants and Directors of Central level TB Institutes. The DGHS conducted the review on 6th January, 2015.
2. Zonal Task Force meeting for involvement of Medical Colleges under RNTCP for East Zone on 15th – 16th January, 2015, at Bhubaneswar, Odisha.
3. Management and Leadership training for RNTCP programme managers in collaboration with the International Union against Tuberculosis and Lung Diseases, from 19th to 24th January, 2015.
4. Zonal Task Force meeting for involvement of Medical Colleges under RNTCP for South Zone-1 on 22nd – 23rd January, 2015, at Hyderabad, Telangana State.
5. Training of Trainers (TOT) on Standards for TB Care in India (STCI) for Indian Medical Association (IMA) on 24th – 25th January, 2015, at National Tuberculosis Institute (NTI), Bengaluru, Karnataka.
6. RNTCP Central Internal Evaluation (CIE) of Telangana State was organized from 27th – 31st January, 2015. During the CIE, two districts (Warangal and Mahbubnagar) were visited.

February

7. Training of Trainers (TOT) on Standards for TB Care in India (STCI) on 16th – 17th February and 19th – 20th February, 2015, at National Tuberculosis Institute (NTI), Bengaluru, Karnataka.
8. Zonal Task Force meeting for involvement of Medical Colleges under RNTCP for North Zone on 13th – 14th February, 2015, at Chandigarh.
9. RNTCP Central Internal Evaluation (CIE) of Tripura State was organized from 23rd – 26th February, 2015. During the CIE, two districts (West and South Tripura) were visited.

March

10. Review of RNTCP was taken by Secretary (Deptt of Health & FW) at Nirman Bhawan on 2nd March, 2015.
11. 8th National Co-ordination Committee meeting of Global Fund Single Stream Funding TB Grant, was held on 12th-13th March, 2015 at Patna, Bihar.
12. National Task Force Workshop for Involvement of Medical Colleges under RNTCP from 14th – 15th March, 2015, at Shimla, Himachal Pradesh.
13. World Tuberculosis Day was observed on 24th March, 2015.

April

14. The World Health Organization (WHO), the

Government of India (GoI) and other technical and donor partners conducted the Joint Monitoring Mission (JMM) to review India's Revised National TB Control Programme (RNTCP) from 10 to 23 April, 2015.

15. Modular training in RNTCP at NTI, Bangalore was conducted during 13-25th April
16. The Hon'ble Minister of Health and Family Welfare launched the 'Call to Action for TB Free India' on 23rd April, 2015. The Call to Action for TB Free India is a fore runner to the Intensified TB Control Plan - TB free India, developed by the Revised National TB Control Programme, India. The Call to Action will kick start and catalyse GoI efforts to accelerate TB prevention and care in partnership with all stakeholders.

May

17. Modular training in RNTCP at NTI, Bangalore was conducted during 18-30th May
18. RNTCP Central Internal Evaluation (CIE) of Kerala was organized from 27th April to 01st May, 2015; during the CIE, two districts (Ernakulum and Pathanamthitta) were visited.

June

19. Modular training in RNTCP at NTI, Bangalore was conducted during 15-27th June
20. Modular training at NITRD, New Delhi on 20th April to 2nd May 2015 & 29th to 11th July 2015
21. Training of master trainers on STCI was held on 01st to 2nd June, 2015 at NTI Bangalore
22. RNTCP Central Internal Evaluation (CIE) of Jammu and Kashmir was organized from 15th – 19th June, 2015; during the CIE, two districts (Jammu and Srinagar) were visited.

July

23. Modular Training on RNTCP conducted at NITRD from 31st August to 1st September 2015

24. Review meeting with civil societies representatives by JS (Public Health) on 14th July 2015
25. Programme Management of Drug Resistant TB and TBHIV regional reviews conducted for East Zone (15th to 17th July)

August

26. Review of RNTCP by Hon'ble HFM on 14th August and 21st August 2015
27. Programme Management of Drug Resistant TB and TBHIV regional reviews conducted for west zone on 25th to 27th August 2015
28. Workshop on development of Guidelines for EPTB 14- 18 July, 2015 at AIIMS, New Delhi
29. Workshop for reviewing and updating the Technical and Operational Guidelines of RNTCP at NITRD from 17th to 19th August 2015
30. National Task force core committee meeting on 21st August 2015

September

31. National Biannual RNTCP Review meeting of State TB Officers at Nagpur from 14 to 16 September 2015
32. Training on procurement & Logistics Management for North East States representative at NTI, Bangalore on 28-30 September 2015
33. Workshop on initiation Validation for 2nd Line DST on LPA version 2.0 at NTI, Bangalore on 30th September 2015

October

34. Global fund HFM Grant Framework agreement signed by DEA for grant implementation from 01st October 2015
35. Scoping meeting for roll out of daily regimen under RNTCP in Mumbai from 27 to 28 October 2015

November

36. Zonal Task force meeting for North zone held on 18-19 November 2015 at Lucknow
37. Zonal Task force meeting for South zone held on 23-24 November 2015 at Kerala
38. Zonal Task force meeting for East zone held on 26-27 November 2015 at Kolkata
39. National Technical working group meeting for PPM held on 23rd November 2015 at Delhi
40. Meeting on Bedaquiline conditional access programme at ICMR HQ on 6th November 2015
41. National level sensitization for CBNAAT at NTI, Bangalore from 16- 17 November 2015
42. National level sensitization for CBNAAT at Jaipur from 23-24 November 2015
43. National level sensitization for CBNAAT at Jalma Agra from 26-27 November 2015
44. Capacity building workshop on Roll out of daily therapy in Sikkim state from 17- 18 November 2015
45. National level capacity building workshop on TBHIV on 23-24 November 2015 at Bangalore
46. AIC assessment on ART centres ongoing

December

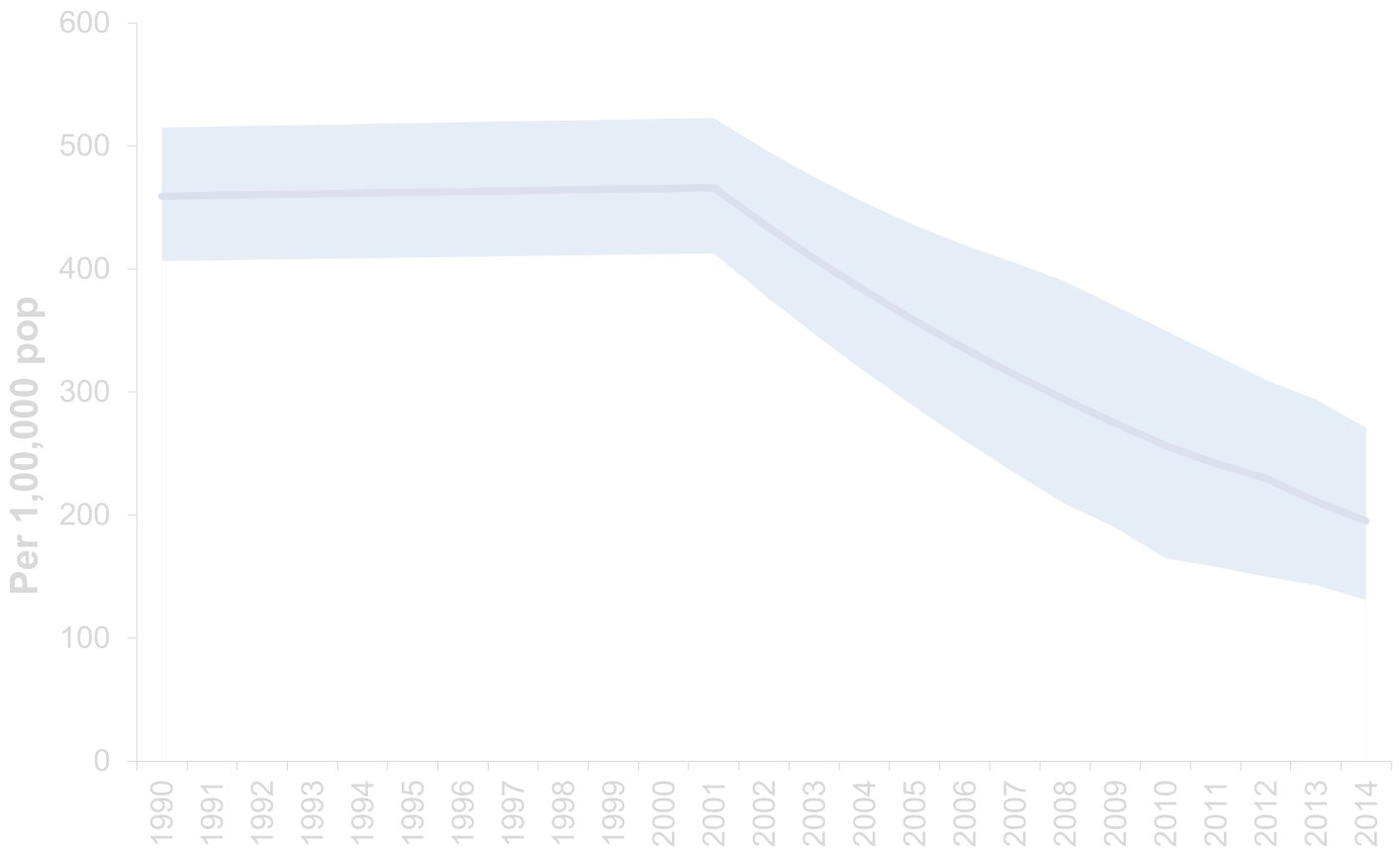
47. Meeting of all partners from other than public sector held on 18th December, 2016
48. Zonal Task Force meeting conducted for the for South 1 Zone on 10-11 December 2015 at Visakhapatnam.
49. Training on expansion of CBNAAT testing was conducted in 300 sites across 35 states/ UTs except A & N Island from 16-22 December 2015 at different venues

2

CHAPTER

TB DISEASE BURDEN IN INDIA

TB Prevalence India



www.tbcinidia.gov.in
www.nikshay.gov.in

2

CHAPTER

TB disease burden in India

Though India is the second-most populous country in the world one fourth of the global incident TB cases occur in India annually. As per WHO Global TB Report, 2015, out of the estimated global annual incidence of 9.6 million TB cases, 2.2 million were estimated to have occurred in India.

WHO estimated burden of tuberculosis in India

TB burden	Number (Millions) (95% CI)	Rate Per 100,000 Persons (95% CI)
Incidence	2.2 (2.0–2.3)	167 (156–179)
Prevalence	2.5 (1.7–3.5)	195 (131–271)
Mortality	0.22 (0.15–0.35)	17 (12–27)

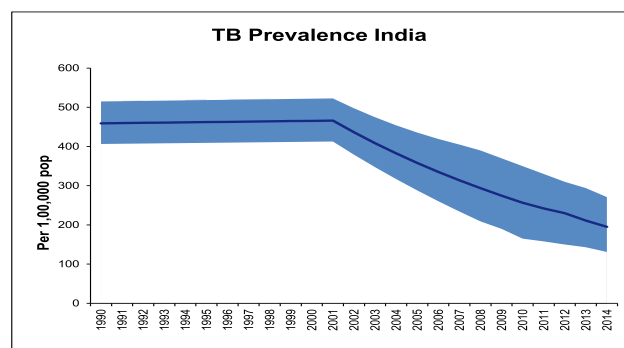
TB burden	Number (Millions) (95% CI)	Percentage (95% CI)
HIV among estimated incident TB patients	-	5.0% (4.5%–5.4%)
MDR-TB among notified pulmonary TB patients	0.071 (0.057–0.085)	-
MDR-TB among notified New pulmonary TB patients	0.024 (0.021–0.029)	2.2% (1.9–2.6%)

MDR-TB among notified Re-treatment pulmonary TB patients	0.047 (0.035–0.059)	15% (11–19%)
--	---------------------	--------------

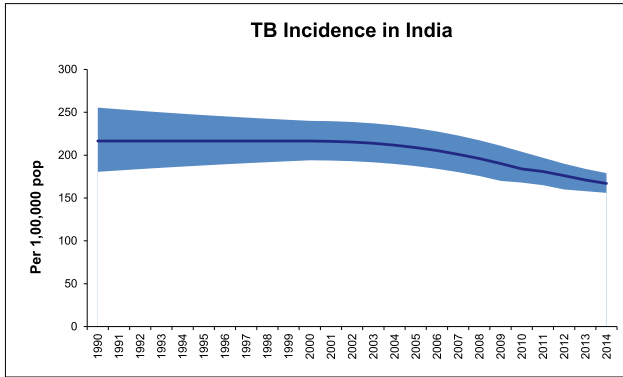
As per current WHO estimates, India’s TB control programme is on track as far as reduction in disease burden is concerned. There is 58% reduction in TB mortality rate by 2014 as compared to 1990 level. Similarly there is 55% reduction in TB prevalence rate by 2014 as compared to 1990 level and also, the incidence is on declining trend.

These estimations were based on RNTCP data, 7 Prevalence surveys in India conducted between 2007-2010, National ARTI surveys, mortality surveys conducted in 2005.

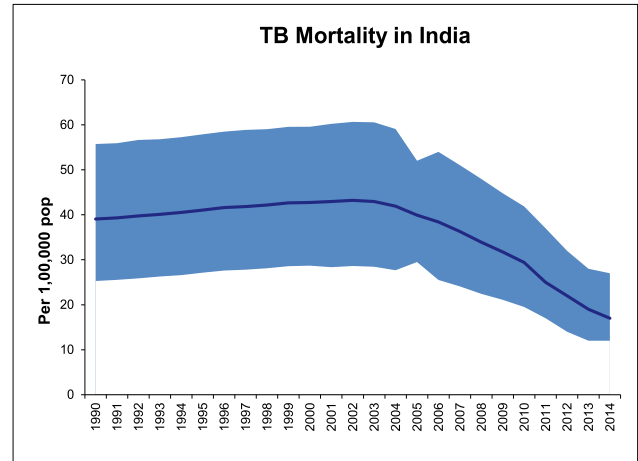
Tuberculosis prevalence per lakh population has reduced from 465 in year 1990 to 195 in 2013. In absolute numbers, prevalence has reduced from 40 lakhs to 25 lakhs annually.



Tuberculosis incidence per lakh population has reduced from 216 in year 1990 to 167 in 2014.



Tuberculosis mortality per lakh population has reduced from 38 in year 1990 to 17 in 2012. In absolute numbers, mortality due to TB has reduced from 3.3 lakhs to 2.2 lakhs annually.



3

CHAPTER

RNTCP Implementation status



www.tbcindia.gov.in
www.nikshay.gov.in

3

CHAPTER

RNTCP implementation status

3.1 Diagnosis

Diagnosis of Tuberculosis is done primarily using Smear Microscopy. The nationwide network of designated sputum smear microscopy laboratories under RNTCP provides appropriate and accessible quality assured services for TB diagnosis. Quality assurance for the sputum smear microscopy is implemented through a three tier system consisting of National Reference Laboratories (NRL), Intermediate Reference Laboratory (IRL) and Designated Microscopy Centres (DMCs). To meet the standards of internationally recommended diagnostic practices for TB, the programme provides quality reagents and equipment to the laboratory network. An inbuilt routine system has been designed for sputum microscopy External Quality Assessment (EQA) and for supervision and monitoring of the diagnostic systems by the RNTCP Senior TB Laboratory Supervisor (STLS) locally and by the Intermediate (State level) and National Reference Laboratory network for RNTCP at higher levels. The programme has a certification procedure for the Culture and Drug Susceptibility Testing performed by solid, liquid and Molecular (Line Probe Assay) diagnostic methods, with a quality assurance protocol based upon WHO and Global Laboratory Initiative recommendations.

Quality Assured Laboratory services: RNTCP has established a nationwide laboratory network, encompassing 13,886 DMCs, which are being

supervised by the IRL at State level, and the NRL & Central TB Division at the National level.



National Reference Laboratories (NRL): The six NRLs under the programme are National Institute for Research in Tuberculosis (NIRT), Chennai; National Tuberculosis Institute (NTI) Bangalore; National Institute of TB & Respiratory Diseases (NITRD) Delhi, and National Japanese Leprosy Mission for Asia (JALMA) Institute of Leprosy and other Mycobacterial Diseases, Agra., Regional Medical Research Centre (RMRC), Bhubaneswar and Bhopal Memorial Hospital and Research Centre, (BMHRC), Bhopal. The last two NRLs have been designated recently and the states have been redistributed among the 6 NRLs. The NRLs work closely with the IRLs, monitor and supervise the IRL's activities and also impart periodic training for the IRL staff in EQA sputum smear microscopy, Culture & DST, LPA and CB NAAT.

Human Resource comprising of three microbiologists and four laboratory technicians have been provided by the RNTCP on a contractual basis to each NRL for supervision and monitoring of laboratory activities.

The NRL microbiologist and laboratory supervisor / technician visits each assigned state at least once a year for 2 to 3 days as a part of on-site evaluation under the RNTCP EQA protocol.

NRL	States and Union Territories (UTs) Assigned for EQA	Total nos. of IRLs assigned	Total nos. of states/ UTs assigned	No of OSE conducted during the year (2015)
NTI, Bangalore	Karnataka, Maharashtra, Rajasthan	5	3	5
NIRT , Chennai	Tamil Nadu, Puducherry, Kerala, Gujarat, Andaman & Nicobar, Telangana, Andhra Pradesh, Dadar & Nagar Haveli, Daman & Diu, Lakshadweep	5	9	0
NITRD, New Delhi	Delhi, Jammu & Kashmir, Chandigarh, Punjab, Haryana, Bihar, Himachal Pradesh	8	7	8
JALMA Agra	Uttar Pradesh, Uttarakhand	3	2	2
RMC, Bhubaneswar	Odhis, Meghalaya, Assam, Tripura, West Bengal, Sikkim, Arunachal Pradesh, Manipur, Nagaland, Mizoram	6	10	10
BMHRC, Bhopal	Madhya Pradesh, Chhattisgarh, Jharkhand, Goa	4	4	4

Intermediate Reference Laboratory (IRL): One IRL has been designated in the STDC / Public Health Laboratory /Medical College of the respective state. In larger states like Uttar Pradesh, Madhya Pradesh and Maharashtra two IRLs have been designated. The functions of IRL include supervision and monitoring of EQA activities, providing Mycobacterial culture and DST services and conduct of Drug Resistance

Surveys (DRS). The IRL ensures the proficiency of staff in performing smear microscopy activities by providing technical training to district and sub-district laboratory technicians and STLs. The IRLs undertake on-site evaluation to each district in the state, at least once a year, during which the STLs are panel tested.

Culture and DST Laboratories(C & DST): In addition to IRLs, the programme also involves the Microbiology Department of Medical colleges for providing diagnostic services for drug resistance Tuberculosis, Extra-Pulmonary Tuberculosis (EP-TB) and research. The RNTCP provides additional human resources, equipments and trainings to C & DST laboratories.

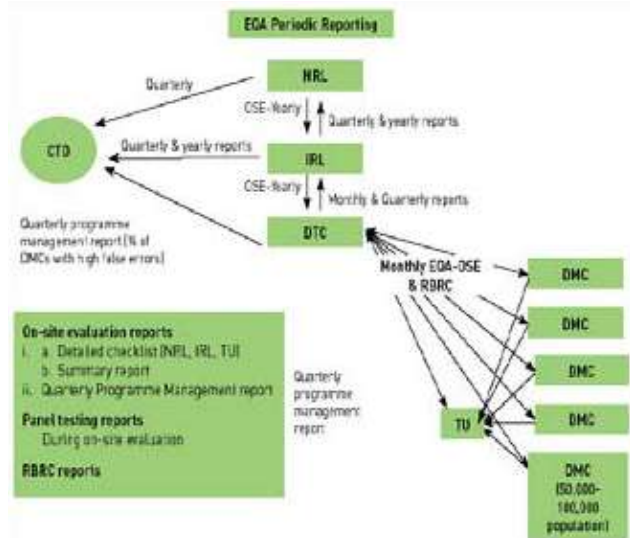
Designated Microscopy Centre (DMC): The most peripheral laboratory under the RNTCP network is the DMC which serves a population of around 100,000 (50,000 in tribal and hilly areas). Currently all the districts in the country are implementing EQA. For quality improvement purposes, the NRL OSE recommendations to IRLs and districts are discussed in the RNTCP laboratory NRL coordination committee meetings and National Expert Committee for Diagnosis and Management of Tuberculosis. Quality improvement workshops for the state level TB officers and laboratory managers are conducted at NRLs based on the observations of the NRL-OSEs. These workshops focus on issues such as human resources, trainings, AMC for binocular microscopes, quality specifications for ZN stains, RBRC blinding and coding issues, bio-medical waste disposal, infection control measures etc.

External Quality Assurance

The Quality Assurance activities include:

- On-Site Evaluation (OSE),
- Panel Testing –(PT)
- Random Blinded Rechecking (RBRC)

The schematic representation of the EQA reporting process is shown in the diagram.



The National Expert Committee on Diagnosis and Management of Tuberculosis under RNTCP is a merger of the National Laboratory Committee and National DOTS Plus Committee. This expert committee provides technical guidelines for diagnosis and management of all forms of Tuberculosis.

At present under the program there are 64 RNTCP certified Culture and DST laboratories in the country which includes laboratories from Public sector (IRL, Medical College), Private and NGO laboratories. The breakup of these laboratories by technology is given below:

- **Solid Culture Certification:** 45 laboratories certified for solid C & DST.
- 6 NRLs (NTI-Bangalore, NIRT-Chennai, JALMA-Agra, NIRTD- New Delhi, BMHRC-Bhopal and RMRC-Bhubaneswar)
- 22 IRLs (Hyderabad, Raipur, Delhi, Ahmedabad, Karnal, Ranchi, Thiruvananthapuram, Goa, Nagpur, Indore, Dharampur, Cuttack, Puducherry, Ajmer, Lucknow, Kolkata, Dehradun, Chennai, Pune, Jammu, Srinagar and Patiala)
- 7-Medical colleges (PGIMER-Chandigarh, AIIMS-Dept. of Medicine-New Delhi, JJ Hospital-Mumbai, SMS- Jaipur and MGIMS-Wardha,

- MPSMS, Jamnagar; B J Medical College, Pune)
- 4 NGOs (BPHRC-Hyderabad, Choithram Hospital - Indore and DFIT Nellore, SVIMS-Tirupati)
- 4 -ICMR institutes (RMRC-Port Blair, RMRC Dibrugar, DMRC Jodhpur and RMRC- Jabalpur)
- 2 Private laboratories (CMC-Vellore and Microcare- Surat)

The proficiency testing for solid is in progress for 5 IRLs (Assam, Karnataka, Manipur, and Arunachal Pradesh,) for RNTCP certification. RNTCP also encourages the Laboratories from Medical Colleges, ICMR, Private sector and NGO sector to apply for certification by providing technical assistance and training of the human resources at National Reference Laboratories.

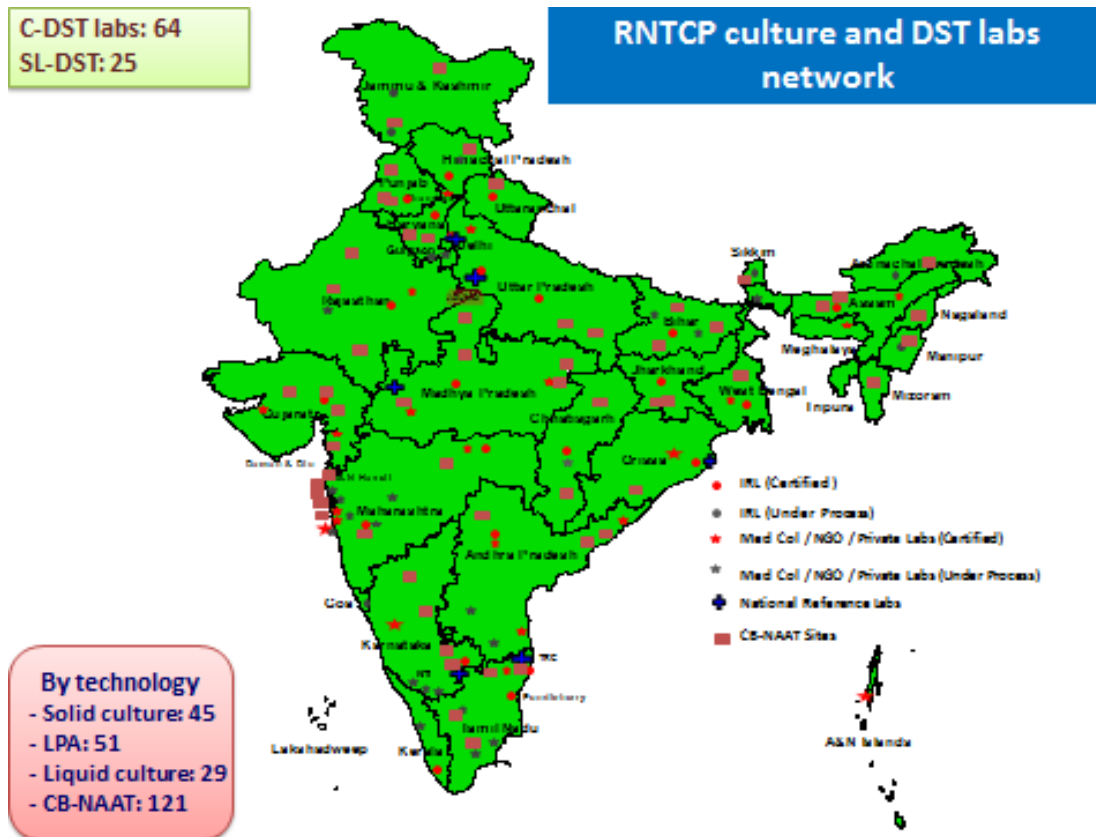
- Liquid Culture Certification: 28 laboratories certified by RNTCP for liquid culture.
- 4 NRL (NTI, Bangalore, NIRT-Chennai, JALMA - Agra and NITRD-New Delhi)
- 14 IRLs (Ahmedabad, Kolkata, Nagpur, Delhi, Trivandrum, Puducherry, Bangalore, Pune, Indore, Chennai, Cuttack, Guwahati, Lucknow and Hyderabad)
- 5 Medical Colleges (SMS Jaipur, MPSMS Jamnagar, JJ Mumbai, AIIMS Medicine, PGI Chandigarh)
- 4 Private laboratories (Metropolish, SRL-Mumbai, SRL –Kolkata, Shankar Nethralaya-Chennai)
- 1 NGO Laboratories (P D Hinduja- Mumbai)

Proficiency testing for liquid culture is ongoing for other IRLs and C & DST labs) for certification. RNTCP is in process of establishing 40 Bio safety level-3 laboratories for liquid culture as per laboratory scale up plan for liquid culture in selected Intermediate Reference laboratories and C & DST laboratories at Medical Colleges.

- Line probe Assay (LPA): The Line Probe Assay is a molecular diagnostic test which can provide the DST results within one day. RNTCP has completed the demonstration and evaluation phase in selected laboratories and based upon the evidence adopted the policy for rapid diagnosis of MDR-TB by LPA. Total 51 laboratories are certified by RNTCP.
- 6 NRLs (NTI-Bangalore, NIRT-Chennai, JALMA -Agra , BMHRC-Bhopal and NITRD- New Delhi, RMRC Bhubaneswar)
- 24 IRLs (Guwahati, Hyderabad, Delhi, Dehradun, Ahmedabad, Karnal, Raipur , Ranchi, Thiruvananthapuram, Nagpur, Pune, Patna, Indore, Cuttack, Chennai, Puducherry, Ajmer, Kolkata, Lucknow, Dharampur, Bangalore , Agra, Srinagar and Patiala)
- 14 Medical Colleges (Aurangabad, Vishakhapatnam, AIIMS-Dept. Of Medicine-New Delhi , Govt. Med. College-Jamnagar, JJ Hospital-Mumbai , SMS- Jaipur, SNM-Jodhpur , NBMC-Silliguri, PGI Chandigarh , KIMS Hubli, BHU Varanasi, AMU Aligarh, AIIMS-Dept. of Laboratory Medicine-New Delhi and GTB Sewaree Mumbai)
- 5 NGOs (DFIT-Darbanga, DFIT-Nellore, BPHRC-Hyderabad, Nazerath-Shillong and P D Hinduja-Mumbai)
- 2 private laboratories (Metropolis-Mumbai and Subharti Medical College, Meerut)

The work for establishment of LPA laboratories at (GMC Bhagalpur-Bihar, GMC Madurai-Tamil Nadu, Raichur Medical College -Karnataka, Gwalior Medical College -Madhya Pradesh and IRL Jammu – Jammu & Kashmir) is in various stage and will be completed in due course of time.

Figure showing C&DST laboratory network under RNTCP



Second Line DST(SLD) : 25 laboratories that certified for SLD that includes 5 NRLs (NIRT-Chennai, NTI-Bangalore and NIRTD-New Delhi, JALMA-Agra and RMRC -Bhubaneswar.), 13 IRLs (Trivandrum, Delhi, Pune, Nagpur, Ahmedabad, Cuttack, Chennai, Puducherry, Guwahati, Indore, Kolkata, Lucknow and Bangalore); 5 Medical colleges (Jamnagar, JJ Mumbai, AIIMS Medicine, SMS Jaipur and PGI Chandigarh), 1 NGO- P D Hinduja and 1 Private-SRL Mumbai) are certified under RNTCP for SLD. Baseline SLD for MDR-TB patients has been rolled out across the country by linking States and UTs to the certified laboratories. The RNTCP has plans to scale up liquid culture facilities for Second Line DST to 40 laboratories.

Training of the Human resource for Laboratories:

RNTCP’s National Reference Laboratories conduct trainings of Microbiologist, Senior Laboratory

Technician and Laboratory Technician in modular training in solid culture DST, EQA in sputum smear microscopy, Liquid Culture DST, Second Line DST, Preventive maintenance of Microscope.

International Centre for Excellence in Laboratory Training (ICELT): The center at NTI Bangalore is supporting training of the laboratory staff in technologies like Line Probe Assay, CB-NAAT, Liquid culture, Biosafety & safe practices in laboratories.

National Reference Laboratories Coordination Committee Meeting:

The CTD conducts NRL coordination meetings to update on the laboratory issue, newer development, discussing finding on on-site evaluation visit of IRLs and C & DST labs, study finding, and deliberate on coordination issue with state and IRLs as per RNTCP plan. NRL Coordination Committee Meeting was held

on 19th -20th May 2015 at NITRD New Delhi. The discussions included: Roles and responsibilities of the NRL and stewardship for DR-TB services, SLDST and inclusion of drugs for panel testing, DST guided treatment- pilot, Modifications in certification and recertification of laboratories under RNTCP, Recording and reporting (EQA, Quarterly Performance), Training and Retraining plan and on-site training, Planning for 300 CBNAAT machines and Annual Maintenance Contract (AMC) for lab equipment.

Newer initiatives by the RNTCP for diagnostic services:

Expanding CBNAAT Services:

The time to diagnosis of TB and Drug Resistant TB has been significantly reduced with the availability of Cartridge Based Nucleic Acid Amplification Testing, which is a rapid molecular assay that detects M. tuberculosis and Rifampicin resistance. The test is fully automated and provides results within two hours. Currently, there are 121 Machines providing

services to the Programme. To enhance laboratory capacity for the diagnosis of MDR-TB and TB in special populations such as children and People Living with HIV/AIDS, 300 additional CBNAAT machines have been provided by Government of India to cover all states. With the availability of these machines all districts in the country will either have a machine or will be linked to the neighbouring district having the machine. Ten batches of National level training of trainers was organized for the State and District officials with the objective to review the sites preparation, train the state/district level officials and key technical staff as master trainers on expanding CBNAAT services, to develop operation plans to expand access to CBNAAT for diagnosis of DR TB and TB among key populations including innovative models for private sector engagement, to understand technical aspects on handling and troubleshooting on the Xpert machines and to orient on the recording reporting requirements. The schedule of the trainings conducted is as below:

SL. No	Venue	Participating states	No of Sites	Dates
1	NTI, Bangalore	Karnataka, Odisha	28	16-17 November 2015
2	NIRT, Chennai	Tamil Nadu, Telangana, Kerala, Lakshadweep, Puducherry, Andhra Pradesh	30	21-22 December 2015
3	Jaipur	Gujarat, Daman & Diu, Dadra & Nagar Haveli, Rajasthan	30	23-24 November 2015
4	Patna	Bihar	25	07-08 December 2015
5	Guwahati	Tripura, Sikkim, Nagaland, Manipur, Meghalaya, Mizoram, Assam, Arunachal Pradesh	28	17-18 December 2015
6	JALMA, Agra	Uttar Pradesh, Uttarakhand	42	26-27 November 2015
7	Pune	Maharashtra, Goa	28	14-15 December 2015
8	NITRD, Delhi	Delhi, Haryana, Punjab, Chandigarh, Jammu and Kashmir, Himachal Pradesh	30	04-05 December 2015
9	Kolkata	West Bengal	25	10-11 December 2015
10	BMHRC, Bhopal	Madhya Pradesh, Chhattisgarh, Jharkhand	34	01-02 December 2015

Second line LPA Validation:

The National Committee of Operational Research has approved a study for the Validation of LPA for detecting resistance to Fluoroquinolones, Aminoglycosides (Kanamycin, Amikacin) and Cyclic Peptides (Capreomycin) in Programme Setting in India using MTBDRsl® test (Hain Lifescience). A workshop was conducted on 30th September 2015 for Laboratory In charge and Microbiologist study sites at NTI Bangalore. The sites are, NIRT Chennai, NITRD-Delhi, NDTBC-Delhi, IRL Ahmedabad and JJ hospital, Mumbai. The objectives of workshop were: to sensitize about the study protocol, study procedure, recording and reporting and supervision and monitoring. Following the workshop, site trainings were conducted and the sites have initiated sample intake for the study.

Baseline 2nd line DST services

Having covered the entire country under PMDT services the next step was towards providing universal DST, was rolling out baseline 2nd line DST. Initial experience of roll out in six states showed encouraging results in terms of interim patient outcomes. There are 25 laboratories certified for performing SLDST and other laboratories in the process of being certified. Baseline 2nd line DST services are provided across the country by linking all states and UTs to these certified laboratories.

TB Lab Bio-Safety Training:

Proper operation of diagnostic TB laboratories requires the implementation of modern biological safety (biosafety) standards. These standards target protecting laboratory personnel from infection within the laboratory (primary containment) and protecting the environment outside the laboratory (secondary containment). They also include a system for the safe shipment/delivery of diagnostic materials.

Training on TB Laboratory Biosafety was held at NTI Bangalore on the 26th and 27th November 2015. This training was organized by the Central TB Division (CTD) with the support from FIND under EXPAND TB



project. Microbiologists from 30 C& DST Labs across the country nominated by CTD participated in this training.

The training emphasized on the need and scope for bio-safety in a TB lab, risk based grading system for TB labs, understand available infrastructural, equipment and work related issues in the TB Lab for bio-safety and their importance to reduce risk of infection and safety requirements from NABL/ISO perspective.

TB Lab Management Training:

The Laboratory Management Training was organized at The Park Hotel at Hyderabad from 14-18 December 2015 jointly by CTD, FIND and NRLs under EXPAND TB Project. It was attended by Microbiologists and Technical Officers from 45 TB C&DST labs across the country. The training aimed at providing overview



of various aspects of TB Lab management through experience sharing. It covered various aspects of lab management under broader ambit of Quality Systems Essentials including Equipment management, Stock management, Sample management, Human resource management, Data management and Nikshay application, Work/activity management, Safety including bio safety management.

Comprehensive training:

It was decided in the NRL coordination committee meeting that independent training for each of the laboratory technologies need to be replaced with a comprehensive training. Following which all phenotypic and genotypic methods of Mycobacterial

Culture and DST have been integrated into a single comprehensive training for laboratory personnel. From June 2015 onwards comprehensive training is being provided for all lab personnel.



List of laboratories under RNTCP certification

Sr. No	Name of the States	Sr. No of Laboratory	Name of Laboratory	Type of Technology		
				Solid	LPA	Liquid
1	Andaman & Nicobar	1	RMRC Port Blair	C	B	B
2	Andhra Pradesh	2	IRL Hyderabad	C	C	C
		3	Govt Medical College, Vishakhapatnam	P	C	
		4	BPHRC, Hyderabad	C	C	
		5	DFIT Lab, Nellore	C	C	
		6	SVIMS Medical College, Tirupati	C		
3	Arunachal Pradesh	7	IRL Naharlagun	P		
4	Assam	8	IRL Guwahati (Guwahati Medical College),	P	C	C
		9	RMRC Dibrugarh	C		
5	Bihar	10	IRL Patna	P	C	
		11	RMRI Patna	P		
		12	Central Diagnostics, Patna		P	P
		13	DFIT Lab, Darbhanga	P	C	
6	Chandigarh	14	PGI Chandigarh	C	C	C
7	Chhattisgarh	15	IRL Raipur	C	C	P
8	Delhi	16	NITRD, Delhi	C	C	C
		17	IRL Delhi (New Delhi TB Centre)	C	C	C
		18	Department of Medicine, AIIMS	C	C	C
		19	Department of Laboratory Medicine, AIIMS		C	P
		20	Department of Microbiology, AIIMS,	P		P
		21	Department of Microbiology, Safdarjung Hospital	P		
9	Goa	22	IRL Goa	C		
10	Gujarat	23	IRL Ahmedabad	C	C	C
		24	Govt Medical College, Jamnagar	C	C	C
		25	Govt Medical College, Surat	P		
		26	Microcare, Surat	C		

Sr. No	Name of the States	Sr. No of Laboratory	Name of Laboratory	Type of Technology		
				Solid	LPA	Liquid
11	Haryana	27	IRL Karnal	C	C	P
		28	Quest Diagnostics, Gurgaon			P
		29	SRL, Gurgaon			P
12	Himachal Pradesh	30	IRL Dharampur	C	C	
		31	Govt Medical College, Tanda	P		
13	Jammu & Kashmir	32	IRL Jammu (Jammu Medical College)	C		
		33	IRL Srinagar	C	C	
		34	Sher-I-Kashmir Institute of Medical Sciences Soura Srinagar			
14	Jharkhand	35	IRL Ranchi (Itki TB sanatorium)	C	C	P
		36	RIMS, Ranchi			P
15	Karnataka	37	NTI, Bangalore	C	C	C
		38	IRL Bangalore	P	C	C
		39	SRL, Bangalore			P
		40	KIMS, Hubli	P	C	
		41	KMC, Manipal		P	P
		42	JSS Medical college, Mysore	P		
16	Kerala	43	IRL Thiruvananthapuram	C	C	C
		44	Calicut Medical College, Calicut	P		
17	Madhya Pradesh	45	IRL Indore	C	C	C
		46	BMHRC, Bhopal	C	C	
		47	Choitram Hospital Indore	C		
		48	RMRCT, Jabalpur	C		
18	Maharashtra	49	IRL Nagpur	C	C	C
		50	IRL Pune	C	C	C
		51	PD Hinduja Hospital, Mumbai		C	C
		52	Government Medical College, Aurangabad	P	C	
		53	SRL, Mumbai			C
		54	JJ hospital Mumbai	C	C	C
		55	KJ Soumiya Medical college, Mumbai	P		

Sr. No	Name of the States	Sr. No of Laboratory	Name of Laboratory	Type of Technology		
				Solid	LPA	Liquid
		56	KEM Hospital Mumbai	P		
		57	Sewari TB Hospital, Mumbai	P	C	
		58	Metropolis Healthcare, Mumbai		C	C
		59	B J Medical College, Pune	C		
		60	MGIMS, Wardha	C		
19	Manipur	61	IRL Imphal, Manipur	P	P	
20	Meghalaya	62	Nazreth Hospital, Shillong		C	P
21	Orissa	63	IRL Cuttack	C	C	C
		64	RMRC, Bhubaneswar	C	C	
22	Puducherry	65	IRL Pondicherry	C	C	C
23	Punjab	66	IRL Patiala	C	C	P
		67	Govt. Medical College, Faridkot	P		
		68	Dayanand Medical College , Ludhiana		P	
		69	SRL Amritsar		P	
24	Rajasthan	70	IRL Ajmer	C	C	P
		71	SMS Jaipur	C	C	C
		72	SN Medical college, Jodhpur	P	C	
		73	DMRC Jodhpur	C		
		74	RNT Medical College, Udaipur	P		
		75	Kota Medical College, Kota	P		
25	Sikkim	76	IRL Gangtok, Sikkim	P		
26	Tamil Nadu	77	NIRT (TRC) Chennai	C	C	C
		78	IRL Chennai	C	C	C
		79	VRF Referral Laboratory, SankarNethralaya			C
		80	CMC Vellore	C		P
		81	Madurai Medical College, Madurai	P		
		82	PSG Medical College, Coimbatore	P		
		83	Trichy Medical Colleges, Trichy	P		
27	Uttar Pradesh	84	JALMA, Agra	C	C	C
		85	IRL Lucknow (CSMMU, earlier KGMU)	C	C	C

Sr. No	Name of the States	Sr. No of Laboratory	Name of Laboratory	Type of Technology		
				Solid	LPA	Liquid
		86	IRL Agra	P	C	P
		87	Sri Ram Murti Medical College, Bareilly			P
		88	IMS, Banaras Health University, Varanasi	P	C	P
		89	MLN Medical College, Allahabad	P		
		90	Subharti Medical college, Meerut		C	P
		91	JN Medical College, Aligarh	P	C	
		92	SGPGIMS., Lucknow			P
		93	RMLIMS, Lucknow			
28	Uttarakhand	94	RIIMS, Etawah	P	P	
		95	IRL Dehradun	C	C	
29	West Bengal	96	Microbiology Department IGMC Shimla			P
		97	IRL Kolkata	C	C	C
		98	SRL Kolkata			C
		99	North Bengal Medical college, Siliguri	P	C	P
		100	Bengal TB Association ,Kolkata		P	

(The UT's of D&N Haveli, Daman & Diu, Lakshwadeep and the States of Mizoram and Tripura are linked to their nearest CDST laboratories)

C: RNTCP Certified Laboratories

P: Certification in process

Chapter 3.2: Treatment of TB

Treatment of TB:

Worldwide, 9.6 million people are estimated to have fallen ill with TB in 2014. India, Indonesia and China had the largest number of cases: 23%, 10% and 10% of the global total, respective. India is implementing WHO endorsed DOTS strategy under a national programme-RNTCP. National coverage of DOTS strategy was achieved in the year 2006 and RNTCP is currently the world's largest DOT programme. Since inception RNTCP has treated more than 19 million TB patients under DOTS by utilizing a network of over 4 lakh DOT providers. This has resulted in saving more than 3.5 million additional lives. RNTCP has tested 9,21,390 presumptive DR TB cases, >1,05,000 MDR TB/ Rif resistance diagnosed and initiated >93,000 DR TB patients on treatment. The 3rd phase of RNTCP implementation started in 2012 as National Strategic Plan 2012-17 which envisions "Universal access to quality TB care".

The success rate of >85% has been accomplished by the use of standardized treatment regimens, delivered in an uninterrupted manner in patient-wise boxes, provided to patients free of cost under direct observation of a DOT provider. With an ambitious goal of providing universal access to high quality diagnosis and treatment for all TB patients (including HIV-associated and drug resistant TB) the programme has adapted new treatment strategies in light of changing global treatment guidelines, TB epidemic and knowledge gained from in country research and programme implementation.

DOT being the back bone of RNTCP, the programme is also taking measures to make it more patients friendly and flexible i.e., decentralized community based DOT with enhanced provider incentives, patient incentives especially in difficult areas, improved use of IT and telecommunication to track patients in a setting of improved web-based, case-based surveillance systems. The programme is taking

cautious and informed decisions to ensure that the core elements of success to date are not lost while innovations are evaluated and incorporated into the programme.

Treatment regimen

A standardized four drug (Category –I, HRZE), six month, intermittent (thrice weekly) regimen is used to treat all new TB cases under RNTCP. The non-responders and failures of first line treatment are offered C&DST (At least Rif -Xpert MTB/Rif® or INH & Rif- Line Probe Assay). The Drug sensitive treatment experienced TB patients are treated using



a standardized five drug (Category II, HRZES), eight month and intermittent (thrice weekly) regimen.

In order to transition the country to the updated guidelines for pediatric treatment in the STCI, which follow the current WHO dosing guidelines, the government has decided to introduce a daily dosing regimen using child-friendly fixed dosage combinations (FDCs). The procurement of anti-TB drugs in daily fixed dose combination (FDC) has been initiated. Treatment with FDCs of anti-TB drugs will be in six weight bands for pediatric patients. An option for family members to provide Directly Observed Treatment (DOT) to pediatric patients has been incorporated in the guidelines

The Rif resistant/ Multi Drug Resistant TB (MDR TB) patients are treated with a standardized six drug (Category IV, Ethionamide, Cycloserine, Levofloxacin, Kanamycin, Ethambutol and Pyrazinamide), 24-27 month, daily regimen. The non-responders and failures are offered second line anti TB drug DST (Floroquinolone and aminoglycoside). The Extensively Drug Resistant (XDR) TB cases are treated with the drugs to which MTB is sensitive (Category V) for up to 30 months daily regimen.

Country expanded access to baseline 2nd line DST to all Rifampicin resistant / MDR TB cases at the initiation of treatment. The patients diagnosed with FLQ/Inj resistance are treated with modified category IV regimen whereas the FLQ/ Inj resistance among non-responders and failures of Category IV are treated with category V regimen.

Organization of treatment services under Programmatic Management of Drug Resistant TB

Treatment of Drug resistant TB is much more complex and lengthy in comparison to treatment of Drug sensitive TB and requires special care during treatment which is made more cumbersome due to adverse drug reactions. Under RNTCP, DR TB patients are treated primarily on ambulatory basis after a brief period of in-patient care at initiation of treatment. The facilities for initiating treatment are designated as DR TB centres and are normed at 1 per 10 million population across the country. The DR TB centre has a formal committee which comprises of various specialities and is the committee which decides regimens and dosages. A DR TB patient once stabilized on treatment is then referred to a decentralized identified DOT centre from where he is provided DOT. A linked DR TB centre is a decentralized clinical unit under a DR TB centre which provides treatment services but reporting lies with the parent DR TB centre



Currently there is a network of 136 DR TB centres across the country supported by 50 linked DR TB centres, district level DR TB centres and DR TB OPDs.

Outcomes:

Indian RNTCP is the world's largest DOTS programme achieving global targets of case finding and treatment success rate but the same success has not been achieved with PMDT. The treatment success rates under the programme are well below 50% (46%) with ~ 20% each death and lost to follow up. The HIV rates among Drug sensitive and Drug resistant TB are comparable at 4%-5%. The major attributable factors observed for poor treatment outcomes in the country are resistance to FLQ, Ethambutol, lower BMI and previously treatment episodes. Cumulative outcomes of 31365 MDR TB patients have been reported till date out of which 14632 (47%) have been successfully treated whereas 6811 (22%) and 6229 (20%) died and defaulted respectively

Newer initiatives

- Daily regimen for all forms of TB in five states
- Daily regimen for all TB/HIV co-infected patients across the country
- Pilots for Universal access to TB care
- Bedaquiline Conditional Access Program

Please refer to the section on policy updates and new initiatives for details

4

CHAPTER

TB Surveillance in India



REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

(MINISTRY OF HEALTH AND FAMILY WELFARE, GOVERNMENT OF INDIA)

HOME FAQs CONTACT US



About RNTCP

In India today, two deaths occur every three minutes from tuberculosis (TB). But these deaths can be prevented. With proper care and treatment, TB patients can be cured and the battle against TB can be won.

Tuberculosis (TB) is an infectious disease caused by a Bacterium, *Mycobacterium tuberculosis*. It spread through the air by a person suffering from TB. A single patient can infect 10 or more people in a year.

India has a long and distinguished tradition of research in TB. Studies from the Tuberculosis Research Centre in Chennai and the National Tuberculosis Institute in Bangalore provided key knowledge to improve treatment of TB patients all around the world.

Modern anti-TB treatment can cure virtually all patients. It is, however, very important that treatment be taken for the prescribed duration, which in every case is a minimum of 6 months. Because treatment is of such a long duration and patients feel better after just 1-2 months, and because many TB patients face other problems such as poverty and unemployment, treatment is often interrupted.

Sign in to Nikshay

User Name:

Password:



www.tbcinidia.gov.in
www.nikshay.gov.in

4

CHAPTER

TB surveillance in India with Nikshay (Case Based online software)

Background: RNTCP since implementation followed international guidelines for recording and reporting for Tuberculosis Control Programme with minor modifications. Epi-info based EPI-CENTRE software was being used for the purpose of electronic data transmission from district level upwards. Initially DOS version was in use and the programme shifted to windows version in 2007. However, the data available at district, state or national level was in aggregated form, with a lead time of >4 months, excluding private sector and neither could help much for TB burden estimation or individual case management or monitoring. To address this Central TB Division (CTD) in collaboration with National Informatics Centre (NIC) undertook the initiative to develop a Case Based Web online (cloud) application named Nikshay.

Initial Objectives:

1. Facilitate tracking and monitoring of individual TB patient
2. Automated reporting
3. Online referral / transfer mechanism
4. Eliminate lead time in reporting
5. Aid focused supervision areas
6. Database for higher analysis
7. Real-time programme management

Long term Objectives:

1. Linking the TB Database with UID (2016-17)

- a. social protection schemes
- b. e-payments / incentives

2. GIS based disease pattern studies (geographical understanding for epi-foci, using GIS for Contact tracing/identification of local / focal epidemics of MDR-TB, outbreaks investigation of XDR-TB)

This software was launched in May 2012 and has following functional components.

- Master management
- User details
- TB Patient registration & details of diagnosis, DOT Provider, HIV status, Follow-up, contact tracing, Outcomes
- Details of solid and liquid culture & DST, LPA, CBNAAT details
- DR-TB patient registration with details
- Referral and transfer of patients
- Private health facility registration and TB Notification
- Mobile application for TB notification
- SMS alerts to patients on registration
- SMS alerts to programme officers
- Automated periodic Reports
 - Case Finding
 - Sputum conversion

- Treatment outcome
- TU and District level Programme Management

Data security / confidentiality:

Security audit of Nikshay application is done as per guidelines of Department of IT. Password protection is applicable for each level of user. Password reset facility is available at higher users in hierarchy. Access to relevant information for each user, based on defined functions.

Data quality:

Since the software do not itself generate information and almost all information is digitized from the source which exists in the programme; the inherent quality of data of the programme is transferred. Transcription errors if any are being evaluated by the programme in implementation research mode. However, Nikshay already has internal validations for most of the variables based on the logic flow and conditionality's. But a judgement of choice of stricter validations against the availability of complete and accurate information; is also an opportunity to improve processes in the programme. It started with certain mandatory fields which were defined and these now ensure completeness of information regarding those variables e.g. DOT provider details. Unwanted characters avoided at entry. Regular feedback from administrator to check bugs if any, has been established. Most importantly data point formats of Metadata and Data Standards (MDDS) have been followed in the development of this could application. In future, this will be the basis for system integration and interoperability to set an example of EMR/EHR.

Implementation challenges:

Many of the PHCs in the country do not have adequate ICT infrastructure like computer, internet connectivity and Data Entry Operator. Also intermittent electricity supply hampers the data entry and use of Nikshay. Also patient treatment cards need to be brought

to TU/Block level or even at district level in certain areas for data entry. Slow internet / web connectivity in some places and incomplete treatment cards at many places also slows down the process.

However, support from NRHM in terms of ICT infrastructure and data entry operators has significantly contributed to use of Nikshay software across the country.

Ongoing progress in Nikshay:

Till 31st December 2015, over 5.5 million TB cases have been digitized.

System integration for Notification:

Currently many medical software are in use especially in private sector being used by private practitioners and hospitals to manage information on patients. API has been developed for system integration for web service to successfully receive information in Nikshay from these various medical software, so that TB notification is simplified for these private users and they do not need to separately use Nikshay application or its portal. This API has been successfully used by initiatives like UATBC and Apollo chain of hospitals for use by private sector.

Use of Tablet computers (PDA):

Mobile / Tablet version of Nikshay application has been developed and tested. This will be deployed after procurement of tablet PCs for all TB Units in the country in 2016. To ensure higher connectivity for updation of TB treatment details, Follow-up details, outcomes etc the Tablet PC / smart phone for each TB Unit (STS & STLS) would help in utilization of Nikshay and its effectiveness will be enhanced. Hand held devices will also be useful for capturing GPS coordinates of patient and facility for GIS mapping and identifying clustering and epidemic prediction. The tablets will be used by the peripheral supervisory staff for maximum patient and programme benefit. GIS based mapping of TB patients and identification of hot-spots / epidemic prediction ability will be

developed in Nikshay with predictive analytics in 2016.

Bar coded system for drugs supply chain management:

Drugs management has been a challenge in RNTCP since the beginning. Programme has devised mechanism to provide patient wise drug boxes. All these boxes of anti-TB drugs are supplied with GS-1 compliant car codes. Next module in Nikshay is being developed to use this bar coding to manage 'drug supply chain system' right from manufactures till point of consumption. The tracking of each drug box will be possible using the bar code scanners using Nikshay at GMSDs, State Drug Stores, District Drug Stores, TB Units and Peripheral Health Facilities. Each drug box will be finally linked with TB patient record. This module will help in tracking drug stocks at all level including the shelf life, also reconciliation of each box for tally with patients will be possible in 2016. This would prevent pilferage (if any) and aid in preventing stock-outs. Also, reporting on drugs will be real-time, delay in information compilation will be avoided and automation in reporting will smoothen drugs management.

Way ahead:

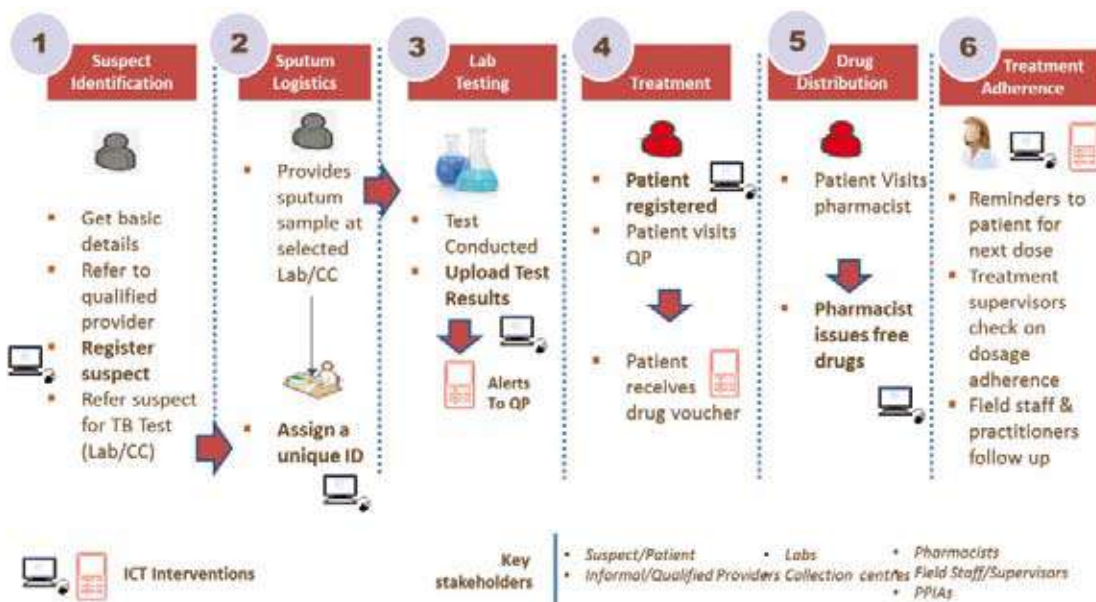
Nikshay is continuously evolving and still not yet fully developed following functionalities are planned in Nikshay which will be developed & deployed by CTD and NIC.

1. Scale-up of e-Payments to DOT Provider remuneration
2. E-Payments of salaries of contractual staff
3. Treatment Adherence with SMS gateway
4. Operational Research Proposal tracking system
5. HRD module (e-trainings)
6. Financial Management module (SOE)
7. GIS based patient mapping (epidemic prediction)
8. Call Centre for Notification support, incentives to private practitioners, linking with PDS for nutritional support, drug cost reimbursement with e-voucher

Most of these modules will be developed in 2016-17.

However, most important component of call center based Notification support system for country-

e-Nikshay enabling TB Control Programme



wide scale-up of universal access to Free TB care, including private sector will only be possible after implementation of 'e-Nikshay'.

'e-Nikshay':

Electronically enabled Commitment and Accountability for Treatment (Rx) and Empowerment of stakeholders is a ECARE proposal for enhanced Nikshay with a Goal to-

"Enhance Nikshay to engage ecosystem stakeholders towards effective, timely and quality assured diagnosis & effective treatment of TB through ICT enabled state-of-art surveillance system."

Detailed Project Report (DPR) approved by Ministry of Health & Family Welfare (MOHFW) is could not be funded previously by submitted to Department of Electronics and Information Technology (DEITY under e-Governance as a Mission Mode Project (MMP).

Now e-Nikshay is proposed to be funded under World Bank loan to RNTCP.

The key objectives of e-Nikshay are as below:

1. Establish ICT enabled state-of-art surveillance system with system utilization by 100% stakeholders by 2017
2. Ensure 100% notification of TB cases at diagnosis (microbiologically confirmed & clinical) by 2017
3. Facilitate continuous monitoring and treatment

adherence for all TB patients registered with eNikshay by 2018

4. Enable tracking of all registered TB patients across TB control lifecycle, geographies, transfers and referrals by 2018
5. Ensure registration of all healthcare establishments across public and private sector by 2016
6. Ensure participation of 30% private practitioners in e-Nikshay by 2015 & 100% participation by 2017.
7. 50% reduction in patient and health system delays by 2016
8. Ensure universal access to free drugs across public and private sector by 2016.
9. Ensure 100% access to clinical decision support to frontline health workers and practitioners by 2018.
10. Enable real time & direct transfer of incentives to private providers, chemists & frontline health workers by 2018.
11. Improving treatment outcomes including case detection rates to 85% and cure rates to 90% by 2017.
12. Enabling timely nutritional support to all registered TB patients during the course of TB control lifecycle by 2018.
13. Identification of each and every TB suspect (chest symptomatic) by 2020

TB treatment adherence will be enhanced using innovations:



"Pill-in-Hand" adherence monitoring



- Daily real-time information and pro-active algorithm to minimize interruption
- Targeted reminders, incentives, and follow-ups
- Engagement of patients with 2-way communication

TB patient database in e-Nikshay will be linked with Aadhar (UIDAI) and online Public Distribution System (PDS) for transferring benefits to the TB patients; while the call center / clinical decision support contact center will be central to notification and treatment related support.

To achieve the overall goal and underlying objectives, e-Nikshay will require revision across key activities and processes. It will also result in improvement across critical service parameters and levels.

Following process reengineering will be required in addition to maximize patient benefit:

- Notification at diagnosis linked to treatment initiation
- Workflow support to remind providers, patients, and programme for collection of DST specimens
- Tracking all DR TB suspects from sending sample to initiating treatment.
- Alerts to staff and patient as soon as patient is diagnosed with MDR TB
- Accountability for treatment initiation of diagnosed results

TB Notification:

Background: India's National TB Control programme provides quality assured diagnostic and treatment services to all the TB patients including necessary supportive mechanisms for ensuring treatment adherence and completion. But these services cannot be made available to large number of patients availing services from private sector, as they are not currently reported to the programme. The National Programme is unable to support TB patients and facilitate effective treatment as there is no information on TB and M/XDR TB diagnosis and treatment in private sector and unable to monitor and act for this looming epidemic. The country has a huge private sector and it is growing at enormous pace. Private sector predominates in health care and TB treatment. Extremely large quantities of anti-TB drugs are sold in the private sector. Poor prescribing practices among private providers with inappropriate and inadequate regimens and unsupervised treatment continues in private sector without supporting patient for ensuring treatment adherence and completion with unrestricted access to first and second line TB drugs without prescription. High cost of TB and M/XDR TB drugs for privately treated patients is leading to further poverty and treatment interruptions.

A large number of patients are not benefitted with these programme services and leads to non-adherence, incomplete, inadequate treatment leading to M/XDR TB, mitigating all the efforts of the programme to prevent emergence and spread of drug resistance. If the TB patients diagnosed and treated under private sector are reported to public health authorities, the mechanisms available under the programme can be extended to these patients to ensure treatment adherence and completion. The impending epidemic of M/XDR TB can only be prevented to a large extent by this intervention.

To curb this situation, Govt of India declared Tuberculosis a notifiable disease on 7th May 2012 with the following objectives.

Objectives:

1. To have establish Tuberculosis surveillance system in the country
2. To extend mechanisms of TB treatment adherence and contact tracing to patients treated in private sector
3. To ensure proper TB diagnosis and case management and further accelerate reduction of TB transmission
4. To mitigate the impeding Drug resistant TB epidemic in the country

Implementation tools & methods:

For the purpose of notification, the contact details of the nodal officer at district level and the reporting formats are available on the website www.tbcindia.gov.in. All the health establishments throughout the country in public as well as private and non-governmental sector are expected to notify TB cases.

For the purpose of notification the definition of TB cases is as below:

- Microbiologically-confirmed TB case – Patient diagnosed with at least one clinical specimen positive for acid fast bacilli, or Culture-positive for Mycobacterium tuberculosis, or RNTCP-approved Rapid Diagnostic molecular test positive for tuberculosis.

or

- Clinical TB case – Patient diagnosed clinically as tuberculosis, without microbiologic confirmation and initiated on anti-TB drugs.

List of RNTCP endorsed TB diagnostics are as below:

Smear Microscopy (for AFB):

- Sputum smear stained with Zeil-Nelson Staining or
- Fluorescence stains and examined under direct or indirect microscopy with or without LED.

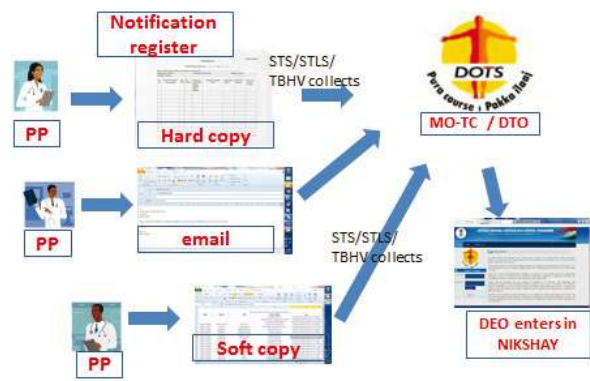
Culture:

- Solid(Lowenstein Jansen) media or
- Liquid media (Middle Brook) using manual, semi-automatic or automatic machines e.g. Bactec, MGIT etc.

Rapid diagnostic molecular test:

- Conventional PCR based Line Probe Assay for MTB complex or

TB Notification using Nikshay



TB Notification (using mobile app)



- Real-time PCR based Nucleic Acid Amplification Test (NAAT) for MTB complex e.g. GeneXpert

Sputum Smear Microscopy (for AFB): Sputum smear stained with Zeil-Nelson Staining or Fluorescence stains and examined under direct or indirect microscopy.

Sputum Culture: Sputum culture on solid (Lowenstein Jansen) media or liquid media (Middle Brook) using

manual, semi-automatic or automatic machines e.g. Bactec, MGIT etc.

Rapid diagnostic molecular test: Line Probe Assay for MTB or Nucleic Acid Amplification Test (CB-NAAT)

Options of Notification modalities:

Option of registration and login for private facilities for TB notification indirectly in Nikshay has made available since June 2014.

Challenges:

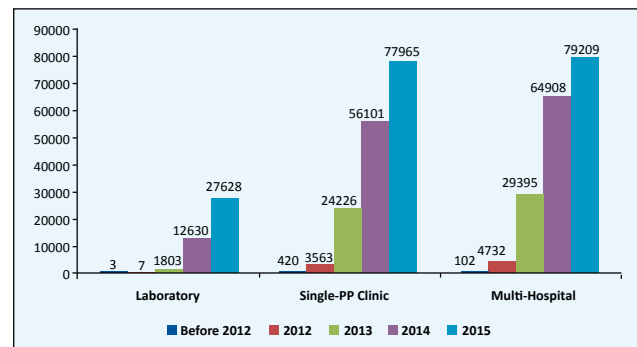
Sensitization of huge number of private health care providers especially with inadequate human resources is a big challenge. Also, following up notified cases as a public health responsibility in a manner acceptable to patients and the community is another challenge. Managing huge information at different levels and creating a national TB register and ensuring deduplication for converting the information in burden statement is also challenging.

However, with support of various partners like The

Union, World Vision, IMA & CBCI notification is progressing.

TB notification status:

With efforts for sensitization of programme officials & staff and then subsequently to private sector, the number of private health facilities registered in Nikshay for TB notification further increased in 2015 as compared to 2014. More than 1 lakh private health facilities are registered till now. With increasing number of health facilities registered notification of TB cases also increased many fold. Till December 2015, >3.8 lakh TB cases have been notified.



5

CHAPTER

Partnerships



www.tbcindia.gov.in
www.nikshay.gov.in

5

CHAPTER

Partnerships

Revised National TB Control Programme is working towards the goal of “Universal access to TB care and treatment for all” and making optimum efforts should be made to utilise the resources in the private sector. In this context an enabling environment has been created through regular interaction with partners involved in TB control and promoting innovative TB control initiatives at district and state level. RNTCP acknowledges the contribution of different partners which are supplementing RNTCP TB control services in rural and urban areas.

RNTCP through participatory consultation process has developed the National Guideline for Partnership 2014 and pilot training of trainers for PPM coordinators was carried out in Uttar Pradesh for TB control efforts involving private sector.

Indian Medical Association (IMA)

IMA PPM project started in April 2008 in five states & one union territory of India, namely Andhra Pradesh, Haryana, Maharashtra, Punjab, Uttar Pradesh & Chandigarh (UT). Subsequently 10 more states were added. Subsequently, ten more States viz. Bihar, Chhattisgarh, Gujarat, Jharkhand, Kerala, Orissa, Rajasthan, Tamil Nadu, Uttaranchal, and West Bengal were added to promote RNTCP and PPM-DOTS.



IMA GFATM RNTCP PPM Project Annual Review Meeting

The objective of this project has been to improve the access of patients availing services from the private sector to the diagnostic & treatment services of the RNTCP and thereby improving the quality care for the patients suffering from Tuberculosis, through the involvement of the IMA leaders & public sector health staff.

The salient achievements made under the project are:

- 101579 private practitioners have been sensitized on RNTCP and STCI
- 16396 private doctors have been trained in 15 states and 1 union territory.
- 111450 TB cases has been notified by the facilitation of IMA
- IMA has facilitated establishment of 1827 Private PHI

Catholic Bishops Conference of India-Coalition for AIDS & related diseases (CBCI CARD)

CBCI-CARD is a Civil Society Organisation working as a sub-recipient of the Global Fund under the Central TB Division, Government of India. The effort of the project is to involve the Catholic Health Institutions in the RNTCP program in various capacities depending on the program requirements and the institution's capability with a aim to improve access to the diagnostic and treatment services provided by the RNTCP within the Catholic Church Healthcare Facilities (CHFs) and thereby to improve the quality of care for patients suffering from tuberculosis in India.

The salient achievements made under the project are:

- 25366 TB patients were notified to district TB authorities
- 18682 Hospital & Health Centre staffs were sensitized in RNTCP
- 8634 medical & paramedical personnel underwent one-day RNTCP modular trainings
- 588 DOT centres formed across 19 states of India
- 670 school health activities were organized
- 106 DMCs were established

Foundation for Innovative New Diagnostics (FIND)

FIND is the technical and implementing partner with RNTCP for the nationwide laboratory network for DR-TB service. 42 Line Probe Assay, 35 Liquid Culture and 38 Xpert facilities are established till now and four Line Probe Assay and five Liquid Culture labs will be made functional shortly. Human resource support is being provided in addition through ~ 300 lab personnel under GFATM project. Under EXPAND TB, FIND as an implementing partner supports the labs

with supply of equipment and consumables procured by WHO GDF. Under GFATM, infrastructural upgrades of the labs and additional equipment for processing the specimens are also provided.

Training has been a major focus for FIND, and its key driver is the International Centre of Excellence for Laboratory Training (ICELT) established at the National TB Institute, Bangalore. With support from GLI, WHO, and with funding support from UNITAID through EXPAND TB project, this Centre has trained so far 297 lab personnel at the national level. In addition to the trainings conducted at ICELT, FIND has also provided hands-on onsite training to 2,282 lab staff.

FIND with funding support from USAID has undertaken diagnosis of Paediatric TB cases in four major cities of India, namely New Delhi, Chennai, Hyderabad and Kolkata. More than 25,430 paediatric suspects were tested by Xpert MTB/RIF and a total of 1,971 TB cases were detected out of which 178 were Rifampicin resistant. Overall, Xpert MTB/RIF positivity was 7.6% as compared to 2.1% on smear microscopy. The project is now being scaled-up to additional 5 cities of India.

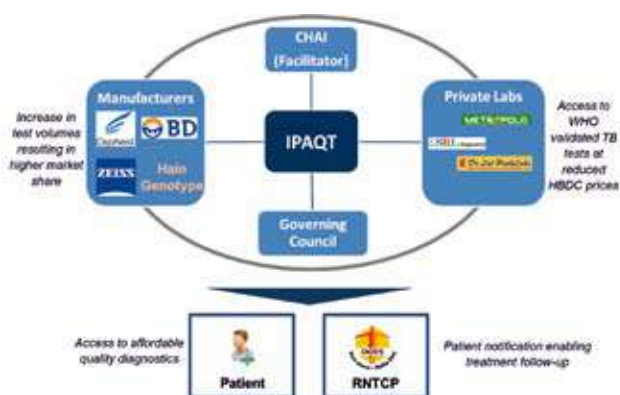
The Clinton Health Access Initiative (CHAI)

Guided by RNTCP's vision for TB control in India, CHAI collaborates and support the program in operational and analytical aspects of PMDT scale up. CHAI is committed to increasing patient access to optimal drugs and diagnostics through data-driven insights by working with the program on several tools and insights on areas such as stock management, analysis of the efficiency of the sample collection and result delivery process to support further increase in patient enrolments.

- CHAI has partnered with private sector labs and RNTCP to improve access to quality TB diagnosis in

the private sector via the “Initiative for Promoting Affordable and Quality TB Diagnostics” or IPAQT. IPAQT has a strong pan-India presence with a network of 112 labs that have 5,500+ collection centers and provide a geographic coverage of ~85% of Indian districts. Under this initiative, participating laboratories, have committed to offering quality WHO-endorsed TB tests at or below agreed upon ceiling price to the patients, discontinuing use of sub-optimal TB tests and notifying all positive cases to the government so that a linkage to quality treatment can be established. CHAI launched a pilot program in October 2014 across five cities called Demand Generation and Notification Effort (DENOTE) to establish a network of on-ground field officers responsible for increasing provider awareness on the need for quality TB diagnostic tests, their associated benefits, availability at affordable prices at IPAQT labs and notification of privately diagnosed patients in these cities to RNTCP.

- A total of 6380 Doctors sensitized through 39 CMEs across multiple cities (March 2013 – November 2015)
- 20371 TB cases notified between October 2014 to October 2015
- 1716 doctors sensitized through in-clinic visits by DENOTE field team between October 2014 to October 2015



World Vision India (WVI)

World Vision India (WVI) and its six Civil Society partners namely ADRA India, Care India, GLRA India, Lepra India, SHIS, TB Alert have been implementing Project Axshya with special focus to difficult-to-reach and low-performing areas of 8 states of India like Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Telangana & West Bengal with assistance of Global Fund. The key interventions of the project involve engaging local grass-root level CBOs and community care givers in TB control and care, linking them with RNTCP through advocacy, capacity building and mobilization activities and strengthening health systems. The key achievements of the project are:

- The project reached 41179 villages and generated TB awareness. 24390 RNTCP & health staff developed their communication & soft skill and 398 HIV Project Managers & knew about TB with the help of the project. The project retrieved 9538 defaulter cases
- The project trained 15584 rural unqualified healthcare providers (RHCPs), 2203 members of district level PLHIV networks on TB including CBOs (mostly women SHGs), small & medium size industries, school-children and conducted TB awareness cum screening camps mostly in difficult-to-reach areas. 2956 villages (out of 13475 villages) developed TB action plan with the help of the project
- The project had referred 240974 TB presumptive cases to the DMCs, out of which 193785 got tested, 20728 TB cases were detected and 19175 were put on DOT within 7 days of diagnosis

The International Union Against Tuberculosis and Lung Diseases (The Union)

Project ‘Axshya’ (meaning TB-Free) is being implemented by The Union South East Asia Office (USEA) since April 2010. The Union has

been working in partnership with 8 sub-recipient partners, over 1000 local NGOs and nearly 15000 community volunteers. The key achievements of the project are:

- The project has introduced an innovative intervention for early diagnosis and treatment initiation through Axshya SAMVAD (Sensitization and Advocacy in Marginalized and Vulnerable areas of District) .During Jan-Sep 2015, over 2.9 million households in vulnerable areas have been reached resulting in identification and testing of over 85,000 TB symptomatics and over 6,100 patients being diagnosed with TB and put on DOTS
- The project is also facilitating testing of TB symptomatics who are unable to reach diagnostic centres through sputum collection and transportation services. Over 170,300 TB symptomatics benefitted from the sputum collection and transportation services during this period.
- A toll free TB helpline (number- 18001022248)' has been initiated in the states of Punjab, Karnataka and Maharashtra. The helpline was launched on World TB Day, 23rd March 2014. Till date 6,261 calls have been answered from the helpline which include 5,323 calls in-bound calls and 938 out-bound calls.
- To address the high loss to follow up amongst the drug resistant TB (DR-TB) patients Axshya has initiated a pilot offering counselling services to facilitate treatment adherence of DR-TB patients (MDR and XDR-TB) across 30 districts in the country.
- The project has introduced the concept of Axshya Villages (TB Free Village) under which the Axshya team identifies villages in the vulnerable and marginalised communities and undertakes interventions to sensitise all the residents about

TB and engage them in TB control efforts. The project has so far identified nearly 8700 such villages.

Community Pharmacist Project

Under a MOU signed between Central TB Division and Indian Pharmaceutical Association, Pharmacy Council of India, SEARPharma, All India Organisation of Chemist and Druggist retail pharmacists are being



engaged in RNTCP to work for DOTS provision, referral of TB cases, counselling and awareness generation. Training is carried out by District/City TB Officer along with IPA and Chemist Association. In last one year, total 510 pharmacists have been trained in Maharashtra Madhya Pradesh, Goa, Uttarakhand and Tamilnadu.

Involvement of Medical Colleges in RNTCP (Task Force Mechanism)

Involvement of medical colleges in the RNTCP is a high priority. Continuing success of RNTCP requires involvement of all large providers of health care including medical colleges. Under RNTCP Medical Colleges play important roles in service delivery, advocacy, training and operational research.

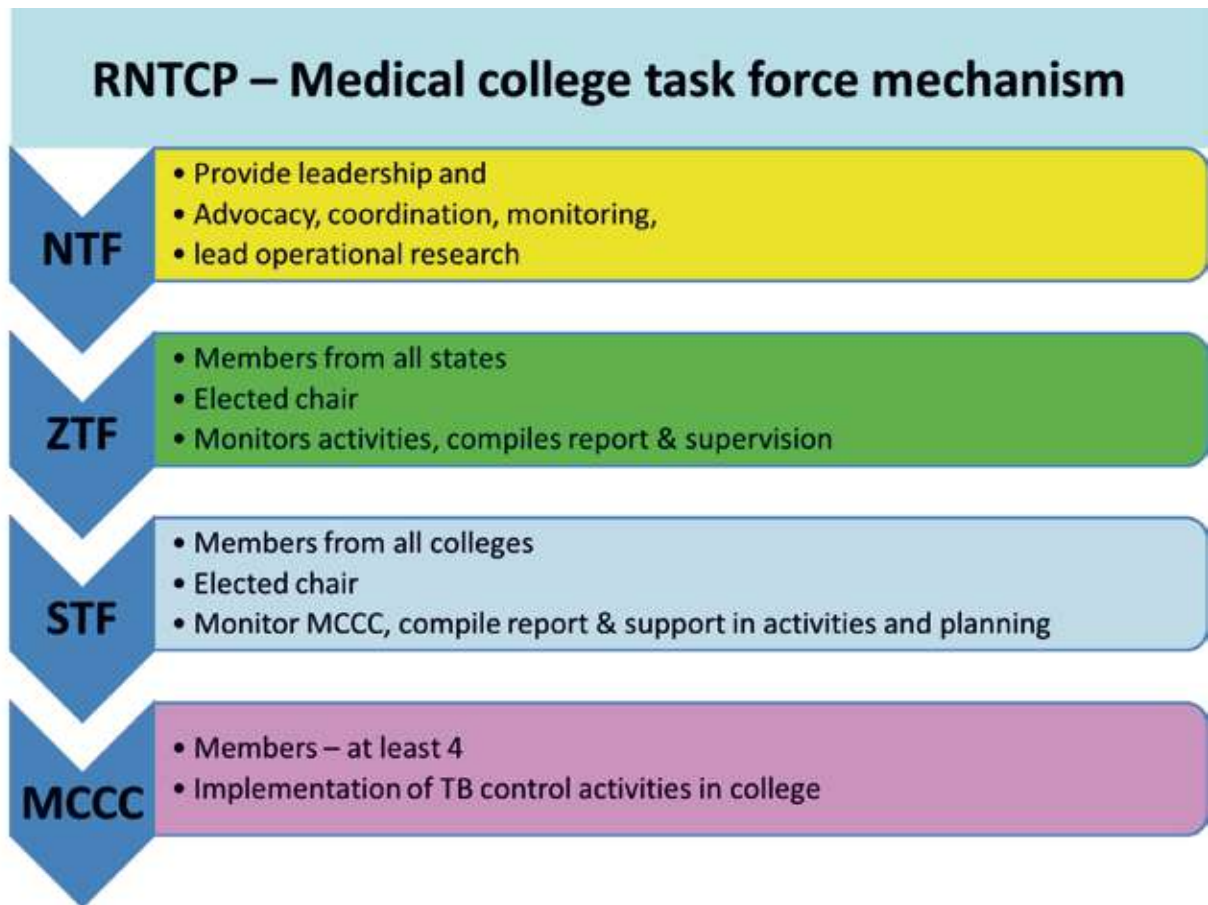
Evolution of Medical College involvement in RNTCP

A consensus conference in 1997, attended by leading medical professors throughout the country and subsequent national workshops at AIIMS and

National Tuberculosis Institute, Bangalore in 2001, lead to growing professional consensus among public health and medical opinion leaders, that the RNTCP approach is appropriate and feasible.

Subsequent to that increasing number of medical colleges are participating in the programme as

tuberculosis units, microscopy centers, treatment observation centres, etc. The initial period saw 7 nodal centres in different parts of the country which facilitated in the development of the State and Zonal task forces and involvement of the individual medical colleges through the State task forces. The



involvement includes the presence of medical college core committees at each medical college, State Task Forces with representation from medical colleges, Zonal Task forces and National Task Force.

Each Medical College is provided with a Medical Officer, Lab technician and a TB Health Visitor to facilitate the RNTCP activities through the respective District Health Societies. The logistics for the laboratory and all the reporting formats are provided by RNTCP.

In India, more than 360 out of about 390 medical colleges are involved (formation of core committee, DMC and DOT Center) under RNTCP. The annual Zonal

Task Force (ZTF) CMEs cum Workshops are held every year. For the year 2015 the ZTF Workshops were held between November 2015 – January 2016 for all the Six Zones in India.





NTF Shimla, March 2015

S. No.	ZTF	States in Zone	ZTF held at
1	West	Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Goa	Bhopal, Madhya Pradesh
2	South 2	Kerala, Tamil Nadu, Pudducherry	Trivandrum, Kerala
3	South 1	Andhra Pradesh, Karnataka, Telangana	Visakhapatnam, Andhra Pradesh
4	North	J&K, Punjab, Haryana, HP, Delhi, UP, Chandigarh, Uttarakhand	Lucknow, Uttar Pradesh
5	North East	North Eastern States	Agartala, Tripura
6	East	Bihar, West Bengal, Odhisa, Jharkhand, Chattisgarh	Kolkata, West Bengal

Impact of Medical Colleges

Medical Colleges are actively involved in RNTCP. Medical colleges contribute about 20% of the total registered cases under the RNTCP. The main contribution is in terms of the sputum negative and extrapulmonary TB where their contribution is above 30% of the overall cases diagnosed. More than 600 faculty members from Medical Colleges are trained as master trainers, these trained human resource available in the medical colleges are supporting program beyond the academics and participating in the National as well as local training as facilitators for over 300 CMEs & workshops annually as part of advocacy efforts and also participating in Internal Evaluations and appraisals of the RNTCP. Majority of the medical colleges are running ICTCs and ART centres and have established standard cross referrals between TB and HIV programs.

In addition to this medical colleges are also having DRTB Centres and ART Centres through which they actively contribute towards management of DRTB cases and identification and management of TB-HIV coinfecting cases.



	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
No. of Medical Colleges involved	282	291	315	320	347	363
Pulmonary TB cases diagnosed	141859	144303	136072	136130	156858	171627
EP cases diagnosed	81615	83824	82067	78,200	91367	110083
Total cases diagnosed	2,23,474	2,25,127	2,18,139	2,14,330	2,52,066	2,81,719

Partnering for the cause of enhancing quality of TB Care: Case Studies

A little support goes a long way:



19 year old Pratima, a resident of a small town in Bardhaman district of West Bengal was diagnosed with TB but follow up sputum tests confirmed that it is not a normal TB case but a more deadly one the drug resistant case. The usually gregarious and easy going girl was in complete shock and felt shattered. She was admitted at the DR TB site for initiation of treatment when she met Ranu, the social counsellor of CARE India under the project titled "Treatment Adherence and follow up of MDR TB patients". Pratima would actively listen to what Ranu says and did not hesitate to ask questions for any clarifications. She developed major side effects due to the medicines including severe vomiting, dizziness and skin rashes and was too weak to attend school. Ranu visited her home to speak to her and also to educate the family members for her proper care. Realizing the importance of adherence to the treatment schedule the family members assured all possible support. Ranu was in regular contact with Pratima, over phone, to follow up on her progress. Pratima also started calling up Ranu whenever she needed any support. Pratima was able to successfully complete the two year MDR - TB treatment and also

appeared for the Higher Secondary examinations at the same time. She is now a regular attendee at the Patient Provider Meetings and is a beacon of hope for many MDR - TB patients in the area. She is now actively involved in helping her father in managing his business of packing and selling potato chips and other crispy fried snacks. In fact her father confided with Ranu that without Pratima's help, he would find it difficult to run the business on his own.

Friend Indeed:

Santosh Kumar Yadav is relieved now as he has been correctly diagnosed now and is able to access the best quality of treatment for the disease he is suffering: Tuberculosis. Santosh lives in a resident of Andal block, Bardhaman, working in a tea stall



Santosh with his savior Bijoy

around the Royalty More area of Andal. His father is a brick kiln laborer. He has two sisters and one brother. He is the eldest among the siblings. To run the family smoothly and educate the other siblings he dropped his education when he was 14 years old and extended his hand in order to help his father toward family earnings. As, his father is a brick kiln laborer and unable to look after the family chores regularly, Santosh started shouldering almost all responsibilities of his family by this time with a hope to lighten the burden of this father. Santosh was 17 then, when excessive physical labor and mental agony and that too without proper nutritious food became the main reasons of his decaying health. By this time, perpetual bouts of cough and cold took

Santosh to illness. Time to time dispensing by the local medicine shops and prescriptions of antibiotics by local practitioners relieved him temporarily but the situation was gradually worsening with the bouts of cough and cold relapsing after a short interval of two to three days for almost a period ranging from two to five months. By this time he spent more than Rupees 1000 for his treatment. It was around this time when he came to a medical shop namely Bhawani medicine center in Andal to buy his medicines prescribed by a qualified doctor. Incidentally, few days back the owner of the medical shop. Mr. Bijoy Bhushan Prasad was sensitized on TB & DOTS. CARE India has been implementing a pilot initiative to involve the chemists by identifying TB suspects and refer to the RNTCP for early diagnosis of TB. Mr. Bijoy advised Santosh to go to the nearest Designated Microscopy center in order to undergo the Sputum test. He also contacted the CARE officials and the Senior Treatment Supervisor over telephone. He also noted down a short history of Santosh in his own writing pad. With support from the senior treatment supervisor and Care field officer Santosh was properly guided by Mr. Bijoy as he got his sputum test done free of cost from government hospital and after proper diagnosis was put on treatment very quickly.

Mr. Bijoy really appeared as a savior to Santosh Yadav. Santosh is thankful to him for putting him on the right path of treatment.

DOTS provides a new lease of life

Miss. Suchita Singh (Name Changed) was diagnosed with Smear Positive Pulmonary TB at Nazareth Hospital, Shillong under CBCI CARD PPM Project; was initiated on CAT I treatment on 24 August, 2011 and was later switched to CAT II on 23 January, 2012. After a few months, she was diagnosed with MDR and was put on treatments for it on 13 June, 2012. When she was diagnosed with TB, she was also found to be pregnant. Meanwhile her husband abandoned her because of the disease. All this left her mentally,



Mrs. Suchita Singh, MDR -13/RPCH/2012, after her treatments physically, financially and emotionally disturbed. During her treatment, she sometimes had to take 15 pills and an injection a day. Due to side effects she sometimes wanted to discontinue the medication. Yet the consistent counselling provided by the staff of Nazareth Hospital helped her in this ordeal and completed her full course of treatment.

On 9 July 2014 she was declared by the physician as completely cured. Despite her medication, she carried till the full term and delivered without complications. After a few months of delivery she could resume a normal routine and took up job as a receptionist in a firm near her home in Shillong which supported her family. After 5 long years of struggle, she completed all her treatments and had gained 5 kg body weight and live a healthy life.

Ray of Hope

Vishnu (Name Changed) is a 19-year-old from Mandela district, Madhya Pradesh. In 2014, he got boils under his arm pit and a swollen gland in his neck. He also experienced loss of appetite and night fever. He thought it to be skin allergy and applied some ointment and took some medicine, but there was no relief in the condition. He was very much worried, upset, depressed and stopped his studies. His house was situated in a very remote village hence it was



Vishnu visits the DOT centre.

difficult for him to go to city for treatment. After few days he came in contact with a Sister in charge of Mottinala Jungle Health care centre working in CBCI CARD PPM Project and she took him to a Government hospital, where he was diagnosed under extra pulmonary TB. Sister in charge became his DOTS provider and with her extra care and counselling Vishnu completed his DOTs course successfully and is now completely cured. He was truly glad to resume his studies.

Pharmacists supporting the cause



Pharmacist Mr Deek Barai ,Shreeji Medical,Dombivli ,Maharashtra

Young patient with recurrent fever and cough was self medicating with some anti-pyretics etc. Pharmacist Mr Deek Barai ,Shreeji Medical, Dombivli ,Maharashtra under Community Pharmacist involvement initiative of RNTCP often told

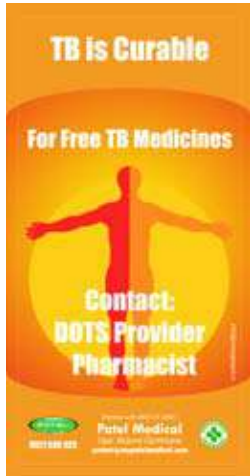
him to go for a check up. Patient was reluctant. Finally, Pharmacist insisted him to go for sputum test and gave referral slip. He followed up the patient and also informed TBHV regarding the same. After a week patient did his

sputum test and the result was PTB. He was put on DOTS and after first 3 doses, patient's box was kept at Pharmacy where pharmacists administered IP as well as CP. Patient was cured after 8 months of treatment.



A young girl, 2 years old was not well, cranky, irritable, and was not gaining weight had fever occasionally. Her parents took her to the doctor who offered expensive antibiotics. Though the treatment was taken, girl continued to be unwell. Pharmacist Mr Sagar Kulkarni, Yashashri Medical, Kalyan, Maharashtra, working a community pharmacist in RNTCP Community Pharmacist Involvement Initiative was observing this and then finally convinced parents to take her to nearby Corporation Hospital for a check-up. She was diagnosed with TB & her entire treatment was done by the pharmacist.

Newly diagnosed TB patient from private sector came for enquiry after seeing the standee outside the pharmacy. Pharmacist Mahadev Patel, Patel Medical, Mulund, Mumbai under RNTCP Community Pharmacist Involvement Initiative explained about DOTS. Although the patient was quite poor he went back to private physician and expressed wish to switch to DOTS. Physician agreed realizing that patient would not be able to afford the treatment anyway. Pharmacist also called the physician regarding the



patient. Patient went to DMC under the guidance of Pharmacist and got confirmed diagnosis of TB. Patient's box started at the Pharmacy and patient ultimately got cured. This patient could have been possible case of default and that was avoided by the pharmacist's active intervention.

Surpassing barriers to fight Tuberculosis



(Kanta in the process of collecting Sputum from Village Barmer/Rajasthan)

Mewaniyon ki Dhani is a remote village in Barmer district in Rajasthan. The villagers are poor and mainly tribal with poor access to healthcare facilities. The nearest designated microscopy centre (DMC) is more than 10 kilometres away with hardly any means of transportation. However these challenges do not deter Kanta an Axshya Mitra (community volunteer

with Project Axshya) to go house to house creating awareness about Tuberculosis (TB) and identify and refer those with two or more weeks of cough for sputum examination. For those who are unable to go she collects their sputum from their residence and transports it to the microscopy centre. In order to get there, Kanta has to leave very early in the morning to catch the public transport. Though her work demands barely 2-3 hours, she has to spend the entire day waiting for public transport to return back to her village. There are several villages in the vicinity of Mewaniyon ki Dhani, which Kanta covers under Axshya on foot. Things become very difficult during summer walking through the desert pathways to reach these villages, collect sputum and then go to the microscopy centre. Despite these difficulties, she persists and is now sought after for help by anyone in the community showing signs of TB. Kanta has so far collected and transported sputum samples of 161 people which has resulted in diagnosis of 27 TB patients.

Barmer is just one of the 300 districts where Axshya works and Kanta is one of the several thousand Axshya Mitras who are working to fight TB. In 2015 (January to December), Axshya Mitras collected and transported sputum samples from symptomatics who were residing in difficult-to-reach areas or otherwise unable to travel to the DMC to get tested for TB.

Home-based counselling to MDR-TB patient

Background: Anitha Bai, D\o Patha Naik aged 10 year female Child belongs to Jingurthi Thanda, Jingurthy Village, Tandur Mandal is a school going girl studying 5th class in the local Govt. School. She was detected with TB and treated with Cat I & later Cat II regimens. She was a defaulted patient during both Cat I and Cat II. On having a doubt on her status of treatment and positivity in the follow-up sputum, her sputum was sent for culture, found positive and declared as MDR TB in May 2014. Anitha was very weak during the

time of the diagnosis of MDR TB. But she didn't stop her studies as she is very interested in education.

Support of AXSHYA India Project: Staff of AXSHYA India Project (TB Alert, partner of World Vision India in Andhra Pradesh and Telengana in Project Axshya) received the information from RNTCP Staff to follow



her up regularly to ensure her treatment adherence including psychological support to her family members. Within a month of initiating of treatment, AXSHYA staff started visiting her at her home on

monthly basis for counselling, family education, emotional support and nutritional supplementation in the form of rice, jaggery, wheat flour, raagi flour, ground Nut etc. once in a month.

Uninterrupted psycho-social support through monthly home-visits improved her treatment compliance and helped to get rid of myths and misconceptions on TB from the mind of her family members, especially her mother who was initially highly apprehensive of her daughter's health. Slowly Anitha and her family members gained confidence and Anitha continued her attendance to school. The staff of Project Axshya also got all the family members of Anitha screened for TB including her old grandmother with whom Anitha used to stay. All of them were found to be negative. Staff of Project Axshya also facilitated INH prophylaxis of the younger sister and brother of Anitha. Today Anitha is on the verge of completion of her treatment, healthy, playful and regularly attending her school and doing well in her studies. Her mother is confident that her daughter will be completely cured of TB soon and lead normal life like other children of the village.

6

CHAPTER

Planning under RNTCP



www.tbcindia.gov.in
www.nikshay.gov.in

6

CHAPTER

Planning under RNTCP

State Programme Implementation Plan is a document to be prepared by States annually which helps them in identifying and quantifying their targets required for programme implementation for the proposed year. The documents are then finalized in the NPCC (National Programme Coordination Committed) meeting for Administrative approval, Resource envelope is created and accordingly conveyed to the state. On finalization of the budget in the NPCC Meeting, it becomes an Official document available in the Ministry's site for general viewing

RNTCP is one of the components under the National Health Mission which is a flagship scheme under Govt of India. Govt. of India provides financial support to RNTCP through its budgetary support. The MoHFW follows equity-based approach to allocate funds under RNTCP to various States. The overall allocation is made on the basis of population of the states.

Under RNTCP, a detailed planning and budgeting exercise is taken up every year to fix the annual targets for programme implementation and hence the required budget for them. To effectively implement and monitor the activities during the year, The State TB Cell is having an mandate to prepare a plan of action. This should indicate the physical targets and budgetary estimates in accordance with the approved pattern of assistance under the NRHM. These should cover all aspects of the programme activities for the period from April to March each year, and are sent by each State/ UT to the Ministry of Health & Family Welfare, Gol for approval well before the start of the year. The State TB Cell is expected to submit

its PIP through State NRHM to MoHFW, Gol. It is important that the action plan is realistic, practically implementable and correlates the physical outputs with the cost estimates.

1. Process for the preparation of PIPs

The Central TB Division under NHM, Ministry of Health & Family Welfare is the nodal agency running the Revised National Tuberculosis Control Program (RNTCP) in the country. It receives the budget targets of participating states, reviews/ analyzes them & then gives approvals & makes disbursements, so the entire process runs through a two way mechanism:

- "Budgetary Demands" running from Districts to State and to the CTD, MoHFW, Gol
- "Budgetary Approvals/ Allocations" running from MoHFW, Gol to States to Districts

The planning and budgeting process of RNTCP is decentralised and starts with the Planning of activities for the next financial year (April-March) at the district

which is submitted to state through District Health Societies under NRHM. States Health Societies under NRHM submit this to Ministry of Health and Family Welfare for approval. The CTD oversees the planning and budgeting of TB control activities for the entire country and determines a maximum possible budget for each State based on a review of the Annual Action Plan, previous trends in state expenditure and utilization of available funds. The State PIP is

approved by the Union Secretary of Health & Family Welfare as Chairman of the EPC, based on appraisal by the National Programme Coordination Committee (NPCC), which is chaired by the Mission Director and includes representatives of the state, Technical and Programme divisions of the MoHFW, National Technical Assistance agencies providing support to the respective states, other departments of the MoHFW and other Ministries as appropriate

2. Roles of Centre, States and District in the Planning Process

Dissemination of Information	Level	Assimilation of data
<ul style="list-style-type: none"> Communication of Guidelines and Timelines for PIP preparation 	Centre	<ul style="list-style-type: none"> Approves PIP and communicated ROP to state.
<ul style="list-style-type: none"> Communication of Resource allocation to districts Resource allocation to be determined based on the population of the districts, giving a weightage of 1.3 to high focus districts and 1.0 to other districts. 	State	<ul style="list-style-type: none"> Submission of State PIP to Centre. For finalising State PIP, an action plan meeting should be held between State and district officials to approve or disapprove their requirement after discussion. Each component of program at state approves/ disapproves its respective targets.
	District	<ul style="list-style-type: none"> Submit DAP to STC and DHS Prepare District Action plan (DAP) in consultation with TUs/Blocks. For finalizing DAP an action plan meeting should be held between the district and TU/Block officials to approve or disapprove their requirements after discussion.

3. RNTCP templates for PIP

Program division has detailed PIP template for both state and districts. The PIP templates are available

on the programme website (www.tbcindia.gov.in). However states are expected to provide the detailed justification of the each budget lined requested under PIP.

7
CHAPTER

Budgeting and Finance



www.tbcinidia.gov.in
www.nikshay.gov.in

7

CHAPTER

Budgeting and Finance

RNTCP is being implemented in line with the National Strategic plan effective 01st April 2012 with an increased allocation of Rs. 4,500 crores for the program under the 12th Five Year Plan. The implementing agency continues to be the Central TB Division (CTD), Ministry of Health & Family Welfare (MoH&FW), Government of India (GoI).

The disbursement and financial management of project funds at Central and state level is done through trained staff. A Finance Unit has been set up at Central TB Division. Similarly, Accountants are available at state and district level for the financial management of the project funds. The procedures for the financial management are being followed as per the manuals and guidelines available on the NHM website.

The financial management arrangements to account for and report on program funds, includes both General Component (GC) and External Aided Component (EAC). The arrangements are as follows:

- a. Institutional Arrangements: Central TB Division (CTD), being a part of the National Health Mission (NHM) holds the overall responsibility of the financial management of the program. Similarly, at the state and district level, the State TB Cell and the District TB Centre are responsible respectively.
- b. Budget: Program expenditures are budgeted under the demand for grants of the MoHFW

Disease flexi-pool funding arrangement. These are reflected in two separate budget lines- General Component (GC) and Externally Aided Component (EAC).

- c. Funds Flow and Releases: The fund flow remains within the existing financial management system of the MoHFW, which operates through the centralized Pay and Accounts Office. Release of funds to states is done in 2 to 3 installments.
- d. Sanctions & Approvals: Multiple level technical and financial approvals are required for making individual payments. All procurements of commodities are processed by the Empowered Procurement Wing (EPW) and approved by the Secretary and Union Minister in line with the Delegation of the Financial Powers. All funds releases for commodity advances for approved contracts are routed through the Integrated Finance Division (IFD) and processed by the Drawing and Disbursing Officer (DDO) and Pay and Accounts Officer (PAO). All the program expenditures follow the standard government systems of the PAO and are subject to control as per the General Financial Rules of the Government of India. Payments to State Societies are made through electronic funds transfer and through State Treasuries since the financial year 2014-2015

- e. Accounting: The accounting records for all payments against approved budget lines are maintained by the Principal Accounts Officer and compiled by the Controller General of Accounts (CGA). The compiled monthly accounts are reconciled with the CTD record of transactions.
- f. Financial Reporting: A financial report is submitted by CTD to MoHFW and the donors like The Global Fund and World Bank on periodic intervals based on the compiled monthly accounts and CTD's own record of expenditures,
- g. External Audit: The Office of the Directorate General of Audit (Central Expenditure) is the statutory auditor. The audits are being conducted

as per the standard terms of reference agreed with the Department of Economic Affairs (DEA), Ministry of Finance and the World Bank. The audit reports are being made available to all donors as per the agreement. At state level audits are done as per NHM manual and guidance for audit by empanelled chartered accountancy firms of the state. All the states are required to submit the annual audit report to CTD by 30th September.

Financial Performance of RNTCP in 12th Five Year Plan:

The funds approved and release to RNTCP under the 12th Five year plan are tabulated below:

Rs. in crores

Description	2012-2013	2013-2014	2014-2015	2015-2016	Total
Budget requested	700.00	800.00	1358.00	1300.00	4158.00
Budgetary estimates/approval	710.15	710.15	710.15	640.00	2770.45
Revised Estimates/Final Estimates	467.00	516.76	640.00	640.00	2263.76
Expenditure	466.15	516.55	639.94	511.39*	2134.03

*Till December 2015

Donor Supported Projects:

The goal of the donor supported funding to the program is in line with the National strategic plan to achieve "Universal access to quality diagnosis and treatment for all TB patients in the community". The donor supported funding contributing to the program under NSP 2012-2017 is from The Global Fund (TGF) and the World Bank.

The Global Fund: The Global Fund to Fight against AIDS, TB & Malaria spurs partnerships between government, civil society, the private sector and communities living with the diseases, to ensure that funding serves the men, women and children affected by these diseases in the most effective way.

Investing for Impact is an ambitious framework to transform the Global Fund into the most effective

vehicle for investing in impact on the three diseases. The strategy commits the organization to a program of transformation and also outlines how the organization intends to work with countries and partners in order to sustain and accelerate existing gains and contribute to ambitious international goals.

Central TB Division (CTD), MoHFW has been a Principal Recipient (PR) of the Global Fund grants since Round 1 2003, when initially a grant fund of US\$ 8.78 million was allocated to the program. This grant support has substantially increased over the years and the country has currently received an allocation of nearly US\$ 233.22 million for the TB program under the Funding Model (FM). The program has completed the implementation of Single Stream Funding Grant on 30th September 2015 with 100% utilization of funds.

The next implementation period under TGF Funding Model grant is from 01st October 2015 to 31st December 2017. The grant would support in scaling up of program activities across country including establishment of 15 Liquid culture laboratories, deployment of additional 200 CBNAAT machines, procurement of First line and Second line drugs, strengthening of supply chain management system, scale up of Public Financial Management System (PFMS), etc. The proposed sub-recipients under the FM are:

- States of Andhra Pradesh, Bihar, Chhattisgarh, Haryana, Jharkhand, Karnataka, Orissa, Telangana, Uttarakhand
- Catholic Bishops Conference of India (CBCI)
- Indian Council for Medical Research (ICMR)
- Indian Medical Association (IMA)
- Foundation for Innovative and New Diagnostics (FIND)
- Tata Institute of Social Sciences (TISS)
- Voluntary Health Association (TVHA)
- Health Organization (WHO)

World Bank Project: Central TB Division is implementing the “Accelerating Universal Access to Early and Effective Tuberculosis Care” Project with

an IDA Credit (5376-IN) of US\$ 100 million. The development objective of the project is to support the aims of India’s National Strategic Plan (NSP) for Tuberculosis Control to expand the provision and utilization of quality diagnosis and treatment services for people suffering from tuberculosis. The project became effective on June 26, 2014 and the Credit supports, implementation of the National Strategic plan for TB control. The project has three components:

Component 1. New strategies to reach more tuberculosis patients with earlier and more effective care in the public and private sectors

Component 2. Scale-up and improve diagnosis and treatment of drug-resistant tuberculosis.

Component 3. Expand public tuberculosis services integrated with the primary health care system.

The Bank has completed the two joint review missions of the project (October 14-20; 2014 & April 10-25; 2015) . The mission confirms that the development objective of the project continues to be relevant and despite implementation delays, the project is on track to achieving it.

Till 2015-16 project has been able to claim USD 13 million. The project will end on 31st March 2017.

8

CHAPTER

Policy updates and Initiatives 2015



Rollout of Daily Regimen in 104 districts



Intensified TB Case finding in High burden ART Centres across 5 States



www.tbcindia.gov.in
www.nikshay.gov.in

8

CHAPTER

RNTCP Policy updates and new initiatives during 2015

Single window services for TB-HIV co-infected patients:

RNTCP in collaboration with National AIDS Control Program (NACP) and technical support from World Health Organization country office for India is currently implementing a project ‘Intensified TB case finding and appropriate treatment’ at selected 30 high burden ART centres in five states of India from April 2015.

Intensified TB Case finding in High burden ART Centres across 5 States



The project focuses on comprehensive strategies to reduce the burden of TB among People living with HIV AIDS (PLHA) with single window service delivery for TB and HIV, rapid diagnosis with CBNAAT, AIC measures at ART center and Fixed Dose Combination

daily therapy. With implementation learning’s the same strategy is being scaled up nationwide in year 2016.

Introduction of Daily Regimen for treatment of Drug Sensitive TB under RNTCP:

Based on recommendation of the National Committee for diagnosis and treatment of Tuberculosis under RNTCP and, in accordance with the Standards of



TB care in India, Central TB Division has decided to introduce daily regimen for treatment of drug sensitive TB cases in 104 districts in five states. The

Rollout of Daily Regimen in 104 districts



procurement of anti-TB drugs in daily fixed dose combination (FDC) has been initiated. Treatment with FDCs of anti-TB drugs will be as per 4 weight bands for adult patients. The implementation of daily regimen will reduce pill burden along with expectation of improved treatment outcome. Based on experience from five states, the programme may expand use of daily regimen across the country.

Childhood Tuberculosis Treatment :

For the country to transition to the updated guidelines for Childhood TB treatment as per the STCI, which follow the current WHO dosing guidelines, the government has decided to introduce daily dosing regimen using child-friendly fixed dose combinations (FDCs). The procurement of anti-TB drugs in daily fixed dose combination (FDC) has been initiated. Treatment with FDCs of anti-TB drugs will be in six weight bands for pediatric patients. An option for family members to provide Directly Observed Treatment (DOT) to pediatric patients has been incorporated in the guidelines.

Scale-up of use of Cartridge based nucleic acid amplification test (CBNAAT) machines:

As on December 2015, one hundred and twenty one CBNAAT machines were being used to provide diagnostic services for Rifampicin resistant-TB and TB in select populations such as People Living with HIV-AIDS, Children as well as Extra Pulmonary TB cases.

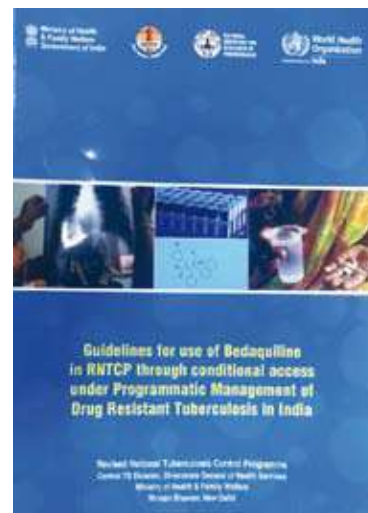


Three hundred more CBNAAT machines have been procured under RNTCP. The plan for distribution of the 300 GeneXpert machines has been prepared taking into consideration the availability of existing machines, geographical coverage of services, current use of CBNAAT policy and presence of Anti-Retroviral Therapy (ART centres) and medical colleges. All States and Union Territories in the country will be covered. An additional 200 CBNAAT machines will be procured in the near future. Deployment of these machines across the states for rapid diagnosis is expected to improve diagnosis of MDR-TB, TB in few select groups like People Living with HIV-AIDS and Children.

Baseline Second line Anti-TB Drug Susceptibility Testing (SLDT):

RNTCP recently rolled-out base line second line drug susceptibility testing, that allows detection of additional resistance to second line Anti-TB drugs (Fluoroquinolones and Aminoglycoside). With 25 laboratories certified for performing second line DST, the service has been made available across the country. The detection of additional resistance to second line Anti-TB drugs in MDR-TB patients allows to modify the treatment regimen early which is likely to improve treatment outcome of patients.

Introduction of newer anti-TB drug - Bedaquiline:



To improve outcome among DR-TB patients, RNTCP in coordination with Indian Council of Medical Research and Drug Controller General of India constituted an Expert Committee on Regulation of newer anti-TB drugs in India under chairmanship of Secretary, Department of Health Research, MOHFW, Govt. of India. RNTCP held a series of meetings and national workshop for development of Bedaquiline implementation guidelines under Conditional Access Programme (CAP) RNTCP. The new drug Bedaquiline is being introduced in six referral sites initially to establish its safety profile among Indian patients.

TB and Comorbidities (NPCDCS and Tobacco) :

RNTCP and National Program for Prevention and Control of Cancer, Diabetes, CVD & Stroke (NPCDCS) have jointly developed a framework for collaboration which aims to reduce morbidity and mortality by doing bi-directional screening, early detection and prompt management of Diabetes Mellitus (DM) and TB.

RNTCP and National Tobacco Control Programme are working in synergy for development and implementation of a framework for collaboration. The identified sites will provide facility for counseling of tobacco users and their referral for TB screening.

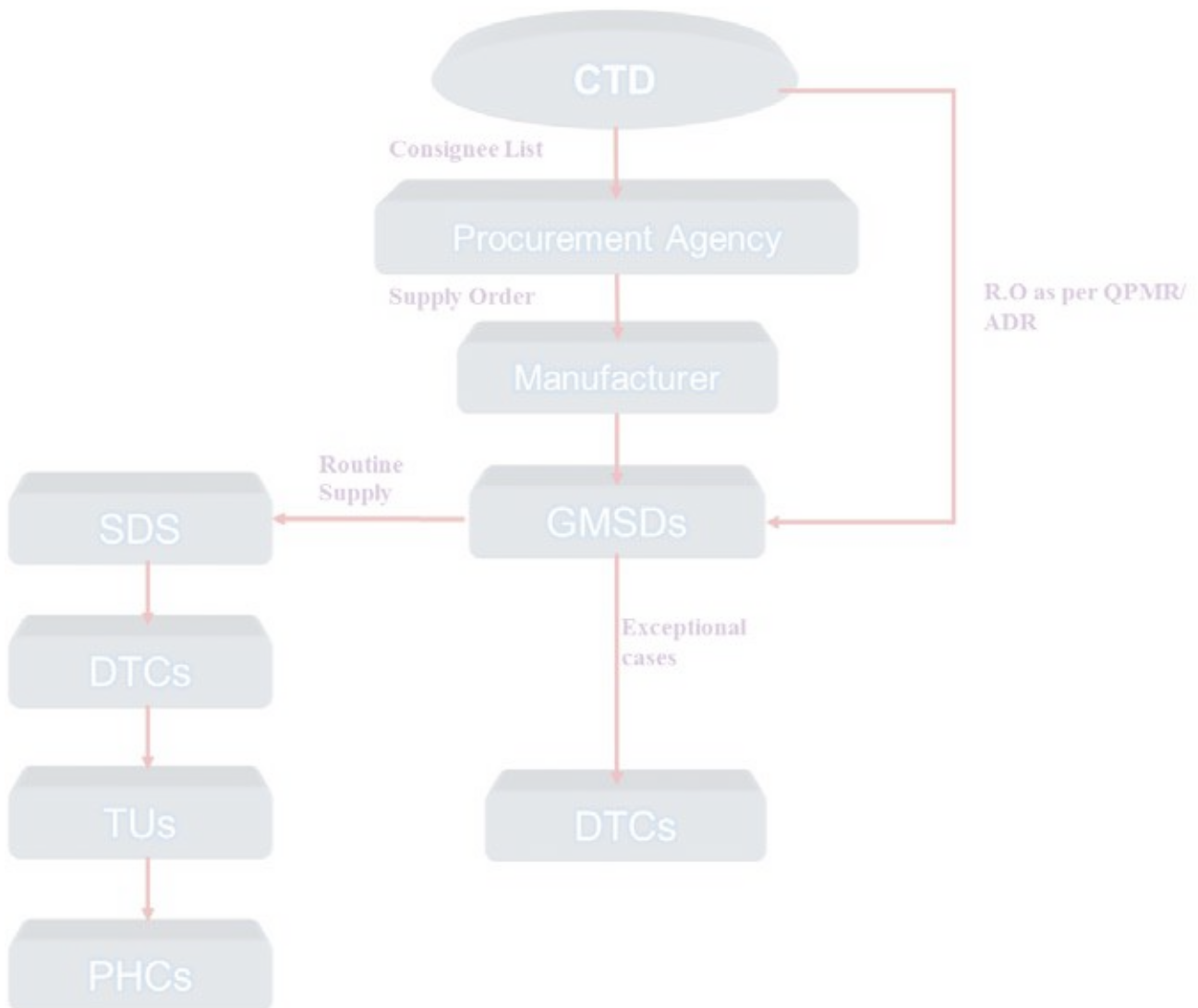
Introduction of Bedaquiline (BDQ-CAP)



9

CHAPTER

Procurement and Supply Chain Management



www.tbcindia.gov.in
www.nikshay.gov.in

9

CHAPTER

Procurement & Supply Chain Management

An uninterrupted supply of good quality Anti TB Drugs and commodities is an essential component of DOTS strategy under RNTCP. Accordingly, procurement of Anti-TB drugs, equipments and diagnostics is done centrally and annually through a well-defined procurement mechanism through Domestic Budget support, World Bank funding and Global Funding.

The procurement of 1st & 2nd line drugs (MDR & XDR) under DBS and World Bank mechanism is done through MoHFW authorized procurement agent i.e M/s RITES Ltd. Simultaneously procurement of 2nd line drugs (MDR & XDR) under Global Fund mechanism is done through the authorized procurement agent of GDF i.e. IDA. In order to further strengthen the procurement of Anti TB drugs, a Central Procurement Agency viz. the Central Medical Services Society (CMSS) has also been established in the Ministry. The authorized procurement agent/s i.e. M/s RITES Ltd , M/s IDA and M/s CMSS are responsible for ensuring all bidding procedures and supply of anti TB drugs upto the consignees end in a time bound manner, in consultation with the programme. The various activities pertaining to procurement, supply chain management of drugs & logistics is being administered by Addl. DDG (TB) at the central level and is being supported by WHO Consultants (Drugs & Logistics) and a Supply Chain Management and Logistics agency outsourced by the Ministry.

Summary of activities related to Procurement &

Supply Chain Management during the year 2015 are briefed below:

- 1) Anti TB Drugs
- 2) Introduction of Daily Regimen
- 3) Implementation of Bedaquiline under Conditional Access Programme (CAP)
- 4) Procurement of Diagnostic Services
- 5) Training on Procurement & Supply Chain Management
- 6) Quality Assurance of Anti TB Drugs

1) Anti TB Drugs: Monitoring of drug logistics and supply chain management activities like drug requirements, consumption and stock position of state and district levels are monitored at Central TB Division (CTD) through Quarterly Reports submitted by the districts. The 1st Line Anti-TB Drugs procured are stored at six Government Medical Store Depots (GMSDs) across the country and issued to states based on the District Quarterly Programme Management Reports and the monthly State Drug Stores (SDS) Reports. The States are required to maintain defined buffer stocks at each level i.e. PHIs, TUs, DTCs & the SDS.

a) 1st line & 2nd line drugs: Procurement of 1st & 2nd line drugs through World Bank, DBS and

GDF for the year 2015-16 have been started reaching consignees. Further, sufficient stock of 1st and 2nd line anti TB drugs has been assured at National level for the next two years. Further, Cap Rifabutin-150mg is also procured centrally for co-infected TB HIV patients put on 2nd line ART regimen and issued to states based on the NACO requirement.

b) Purified Protein Derivative (PPD): The Programme had procured PPD vials for the diagnosis of tuberculosis in Pediatric patients in the country in the year 2013. However, considering the low consumption and short-shelf-life of PPD vials, the programme has decentralized the procurement and has allowed states for the local procurement of PPD vials as per their requirement at state level, following RNTCP guidelines.

2) Introduction of Daily Regimen: Currently, single-drug formulations based on World Health Organization endorsed Directly Observed Treatment Short-Course (DOTS) strategy is being used under the programme. The Patients are required to take anti-TB drugs on alternate days of the week. However, based on emphasis of use of Fixed Dose Combinations (FDCs) in daily regimen treatment as laid down in “The Standards for TB Care in India-2014” and WHO guidelines, it has been decided to introduce daily regimen for treatment of drug sensitive TB under RNTCP. The daily regimen treatment will be implemented in a phase-wise manner to enable the utilization of already available stock of anti TB drugs & supplies under pipeline. Therefore, initially, daily regimen is being rolled out in 104 districts/5 states namely Sikkim, Maharashtra, Kerala, Himachal Pradesh & Bihar and drugs for the same are expected to be received by respective states in 2nd /3rd Qtr 2016. Accordingly, all the initial five states are

expected to use daily regimen by 3rd/4th Qtr 2016. Implementation of next phase of daily regimen will also be initiated in due course of time. Trainings with regard to implementation and supply chain management of daily regimen for the initial 5 states are being conducted.

3) Implementation of Bedaquiline (BDQ) under Conditional Access Programme (CAP):

Bedaquiline, a new class of drug effective against Microbacterium Tuberculosis has been given approval for use in PMDT programme of RNTCP recently by MoHFW under conditional Access Programme (CAP). BDQ has been approved by US Federal Drug Administration (FDA) and European Medicines Agency which are Stringent Regulatory Authorities. Further, BDQ has been included in the WHO Guideline and meets the requirement of being a quality assured drug eligible for procurement through GDF. Accordingly, programme has initiated the procurement of Tab Bedaquiline-100mg from M/s Janssen Pharmaceutical through GDF for six selected centres across the country through CAP under Programmatic management of drug resistant tuberculosis in India. The supplies against first tranche of Tab BDQ have been started reaching consignees and the 2nd tranche is expected by April/May-2016. Further, National Training of Trainers (TOT) on Implementation of Bedaquiline under CAP & to discuss various aspects for supply chain & management of BDQ has been organized at NTI-Bangalore in January-2016. Bedaquiline will continue to be available for “compassionate use” in the country till such time that the expanded access programme is rolled out under RNTCP.

4) Procurement of diagnostic services:

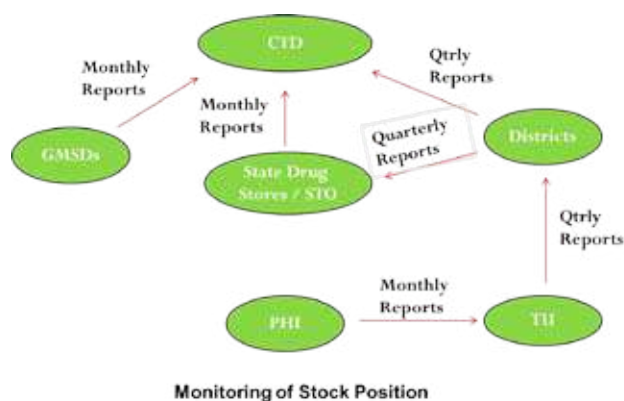
a) CB-NAAT: Cartridge based nucleic acid amplification testing (CB-NAAT) is a rapid molecular assay which detects Mycobacterium

Tuberculosis (MTB) and Rifampicin (Rif) resistance and the entire test is fully automated and provides result within two hours.

Currently, Diagnostic services for the management of drug resistance TB is currently being provided at 64 quality assured laboratories and 121 CB-NAAT machines. To strengthen the laboratory & diagnostic capacity for better management and treatment of drug sensitive TB, programme has initiated the procurement of 300 CB-NAAT machines along with additional cartridges. All machines along with cartridges are being delivered to the consignees and are likely to be installed by March 2016. To further expand diagnostic capacity and cover key population e.g. ART Centers, Medical College for Pediatric cases & EP TB cases, procurement of additional 200 CB-NAAT machines have also been approved and contract is awarded to the supplier in Dec-2015. The supply of these additional 200 CB-NAAT machines is expected by March/April-2016.

- b) LED Fluorescence Microscopes (LED) & Binocular Microscopes (BM):-** To replace the Binocular Microscopes and to provide better and faster diagnostic equipments for the management of drug sensitive TB, programme has procured 2500 LEDs during the year 2015 for distribution to high work load settings. Though LEDs are more expensive than the ordinary BMs, studies have confirmed that the use of LEDs provides much faster diagnosis and is more user-friendly resulting ultimately in a better yield. Further, 1500 BMs have been procured during the year for low work load settings. The received LEDs & BMs have been distributed to high & low work load settings accordingly.
- 5) Training on Procurement & Supply Chain Management:** The maturing of RNTCP programme has been accompanied by the

increased decentralization of the drugs logistics and inventory management function. To ensure that the States are able to manage their drug logistics as per RNTCP guidelines, regular trainings and re-trainings on Procurement and Supply Chain Management have been conducted by Central TB Division for the state level staff during the year. In this regard, national level trainings have been conducted for State TB officers, RNTCP consultants, State level pharmacists and store assistants, covering all the states.



- 6) Quality assurance of Anti TB drugs:** Procurement of quality drugs is the top most priority of RNTCP programme. Accordingly, procurement of Anti TB drugs is being done only from WHO Pre-Qualified, WHO GMP & ERP approved suppliers. Further, pre-dispatch inspection and testing of all batches of anti TB drugs being procured is mandatorily done. In addition, the programme has also developed a protocol in which drug samples from various stocking / delivery points under the programme are taken and tested at an Independent Quality Assurance Laboratory contracted by RNTCP. Under the protocol, each quarter, random samples of 1st and 2nd line Anti-TB Drugs are drawn from GMSDs, State Drug Stores & District Drug Stores and sent for testing to the independent QA Lab. Based on test & analysis reports, further necessary action is taken by the Programme, if required.

10

CHAPTER

Advocacy Communication & Social Mobilization

टीबी के लक्षण आएँ तुरंत डाक्टर के पास जाएँ

टीबी (क्षय रोग) के लक्षण:

- दो हफ्ते से अधिक खाँसी
- बुखार आना
- रात में पसीना आना
- भूख न लगना और वज़न घटना

आधुनिकतम जाँच और इलाज की सुविधा नज़दीकी स्वास्थ्य केन्द्र में मुफ्त उपलब्ध है

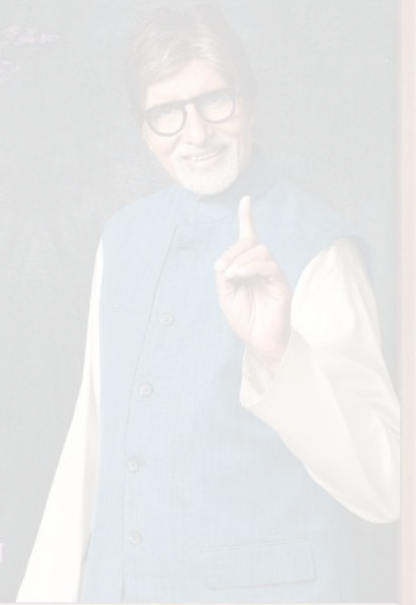
अधूरे उपचार से ड्रग-रेसिस्टेंट टीबी हो सकती है

सावधानी बरतें:

- टीबी के जीवाणु खाँसने और छींकने से फैलते हैं
- खाँसते समय मुँह ढक कर रखें



टीबी हारेगा, देश जीतेगा



www.tbcinidia.gov.in
www.nikshay.gov.in

10

CHAPTER

Advocacy Communication & Social Mobilization

An issue-based, target group specific and integrated Advocacy, Communication and Social Mobilisation (ACSM) strategy is helping bring TB to the centre of public discourse in India. In turn, this is helping generate demand for RNTCP services, facilitating early diagnosis, timely treatment initiation and treatment completion. Forging partnerships with multiple stakeholders including healthcare providers, corporates, NGOs, CBOs, community groups, local self-governments etc. is also helping improve provision of care for TB patients.

For greater administrative and political commitment, various initiatives are being undertaken by RNTCP across the country directly by the programme or through the support of partners. Key initiatives undertaken this year include:

- Launch of the Call of Action for TB by Hon'ble Minister of Health and Family Welfare Shri J. P. Nadda on 23 April 2015
- Inauguration of the STO-Consultant's Meet by Shri Nitin Gadkari in Nagpur in September 2015
- Advocacy meeting with Corporates to gather support for TB in December 2015

In order to create awareness about TB symptoms, media campaigns were undertaken at State and

District levels. These activities were further amplified by pan-India print and mass-media campaigns undertaken at the National-level in February-March 2015, April 2015, November-December 2015 and February-March 2015.

In order to increase referrals of chest symptomatics, notification, strengthen patient support systems etc., a large number of community engagement initiatives were undertaken across the country. Together, these focused on creating demand for RNTCP services, facilitating early diagnosis, treatment and ensuring treatment completion – their numbers are reflected in the table below:

Initiative	Total Nos. in India
Patient Provider Meetings	85378
Community Meetings	68115
School Based Activities	21599
Sensitization of PPs, NGOs, PRIs, others	10947
Outdoor Publicity	11909

National Snapshot:

A picture, it is said, is worth a thousand words. We share with you several images that tell the story of work being done under RNTCP from across India.

24 March 2015 announcements and launches



Hon'ble Health & Family Welfare Minister Shri J.P. Nadda launched

- TB India 2015 Report
- New TBC India website: <http://tbcindia.gov.in/>
- 3I Project with 99 DOTS



Campaign with IMA

- Social Media & SMS campaign/ Students rally
- Endorsements for a TB Free India by Padma Awardees



- 60-days pan-India campaign undertaken across approx. 75 TV channels & 273 radio stations
- Print ad campaign in 325+ newspapers in English, Hindi & regional languages on 24th March & 24th April 2015





Call to Action: Partnering for a TB free India

The Ministry of Health and Family Welfare (MoHFW), Government of India is championing

the Call to Action for a TB Free India, an initiative under the global Challenge TB project funded by USAID and led by The Union South East Asia (USEA) office in India. The Call to Action is an initiative that seeks affirmative action from a wide cross-section of stakeholders towards TB control efforts in India. The Call to Action initiative was launched in India by the Hon'ble Minister of Health and Family Welfare Shri J. P. Nadda on 23rd April 2015.

Missed-call campaign

A TB toll free TB help line number where callers could leave a missed call planned on pilot basis in four States - Punjab, Haryana, Delhi & Chandigarh - by the Hon'ble Health and Family Welfare Minister Shri J P Nadda on 15th January. To strengthen citizen's access to the public health system, the Union Minister for Health & Family Welfare Shri J P Nadda launched a dedicated Tuberculosis (TB) Helpline today. Under the Revised National Tuberculosis Control Programme (RNTCP), the Government of India provides high quality diagnosis and treatment services to all TB patients in the country. A dedicated toll free number

has been set up to provide information, counselling and treatment support services.



Callers have the option to either give a missed call on the toll free number (1800116666) and receive a call back or directly speak to a trained call centre executive to ask for information. Through this helpline a person can ask for information related to TB symptoms, treatment services available, address and contact details of the nearest treatment facility etc. Simultaneously, information regarding chest symptomatic patients is also shared with the District TB Officer of the area from where the call has originated to provide follow up and any further support. This facility is currently available in the States of Punjab, Haryana, Chandigarh and Delhi.

State Snapshots:

Maharashtra



Gujarat



Madhya Pradesh



Bihar



TB messages on Rail tickets, Electricity bills, Bhopal City Link Buses
 Weekly programme on Prasar Bharati, Vividh Bharati & Doordarshan-MP

Assam



2-months **Media Fellowships** offered to two journalists in partnership with Guwahati Press Club



PRI Meeting in Kokrajhar

Punjab



TB sensitisation workshop in prisons



Merge Ram, a DOT provider from Amritsar has provided treatment support to 250 patients including MDR and TB HIV co-infected persons in the last four years

Telangana



Water filters and water jerry cans with TB messages given to DOTS Providers, Schools and Colleges with support from partner World Vision

TB Counting Tool developed in collaboration with TBnet

- One month radio campaign from five major radio stations in the state
- Commissioner, Panchayat Raj, issued letters to 7385 Gram Panchayats to support RNTCP

Kerala



- Media workshop in 9 Districts
- Patient Support groups formed in Pathanamthitta District of Kerala

Organized advertisement competition in partnership with Muzoram Film Development Society

Jharkhand



Student TB Journalists from schools in Gumla district spend an hour per week to share messages about TB symptoms and treatment services available to each household in their village, encouraging people to refer chest symptomatics to the nearest health centres and finally write their experiences in a prescribed reporting format

TB awareness Jharkhi in Lokardaga / Street play in Dumka

Delhi



- Collaboration with Mohallah clinics under State Health Mission for decentralised TB diagnosis & treatment services (1000 clinics have been proposed)
- Roll out of TB Help Line No. and promoting it through stamps on prescriptions of health establishments, treatment cards, I-cards at DMC/DOT centres and IEC materials and endorsements in community meetings

TB Registration no. 112/15, Darjeeling Tuberculosis Unit - The Conquest of Human Spirit

It could have well been an illustration of human dignity being reduced to a mere numerical identity sans emotions that define a human soul. But that was not to be. A 13-year-old girl, a chest symptomatic, reported for sputum examination at the RNTCP lab of District Tuberculosis Center, Merry Villa in Darjeeling on 18th April 2015. Spasms of cough had ravaged her lungs and racked her frail body. She had her mother, a domestic help, and an elder brother, a boy of fifteen, by her side. They lived in a ramshackle hut that could be reached by climbing countless stairs from Darjeeling station, no easy feat considering the state of her health. Her sputum tested positive – codified “2+” in RNTCP parlance. She was promptly put on treatment.

Unfortunately, for the family another story was unfolding in the meantime. The elder brother too started coughing incessantly. His sputum too, tested positive. Given the environmental epidemiology of droplet infection like TB, this was expected. A series of violent earthquakes shook the hills of Darjeeling about the same time. But no Richter scale could have measured the tremors that shattered their mother’s heart. Without any further ado, the brother was initiated on treatment. The end of Intensive Phase (IP) sputum smear of the girl showed persisting evidence of tubercle bacilli. A setback! But the RNTCP team at

the Darjeeling Tuberculosis Unit refused to give up. Her sputum sample was sent for Culture and Drug Sensitivity Test to the North Bengal Medical College & Hospital to ascertain if hers was a case of Drug-Resistant TB. Meanwhile, she was put on extended IP. Her CDST report came on 24th June 2015. It was a huge relief – for the girl and her treatment supervisors. Her infection was sensitive to first-line anti-TB drugs! And the treatment continued. Come July, 2015 and the girl’s follow-up sputum at the end of the extended IP was again tested. Everyone was apprehensive about the result. But lo and behold! The result was a resounding “negative”. With great optimism, the Continuation Phase (CP) of treatment was initiated. After eighteen weeks of CP, the end-sputum-smear was “negative” once again. At last, she was free from the scourge of the ailment that has been tormenting the human civilization since time immemorial. The brother’s story was less tumultuous. Just after two months of IP, he tested “negative” and after another four months of routine CP he was declared “cured.” The mother wept for joy when she received the good news from the TB Health Volunteer.

Routine achievements...that for RNTCP reaffirm the faith in the power of service and humanity. These successes are the fuel in our continuing fight for the ultimate conquest of hope over despair, of human spirit over death and disease.

(Names of patients have been withheld in the interest of patient confidentiality)

11

CHAPTER

Research



www.tbcinidia.gov.in
www.nikshay.gov.in

11

CHAPTER

Research

The RNTCP is based on global scientific and operational guidelines and evidence, and that evidence has continued to evolve with time. As new evidence became available, RNTCP has made necessary changes in its policies and programme management practices. In addition, with the changing global scenario, RNTCP is incorporating newer and more comprehensive approaches to TB control. To generate the evidence needed to guide policy makers and programme managers, the programme implemented measures to encourage operational research (OR). Efforts of RNTCP to promote OR yielded success and most of the studies has are linked to the main priorities of TB control.

The programme requires more knowledge and evidence of the effectiveness of interventions to optimize policies, improve service quality, and increase operational efficiency. This has led to

the realization of the need for a more proactive approach to promoting OR for the benefit of the TB control efforts. Furthermore, the programme seeks to better leverage the enormous technical expertise and resources existing within India both within the Programme, and across the many medical colleges, institutions, and agencies. Operational research aims to improve the quality, effectiveness, efficiency and accessibility (coverage) of the control efforts.

With Programme support and involvement 68 research articles were published in various national and international journals in the year 2015.

Following is the summary of number of Operational Research proposals and status of approval by the mechanism of State OR Committees, Zonal OR Committees and National Standing OR Committee in year 3Q14-2Q15.

	East	North East	North	South 1	South 2	West	Total
Number of State OR Committee meetings held	5	10	12	4	7	9	47
Number of OR projects received by the State OR Committee	8	7	55	7	24	59	160
Number of OR proposals approved by the State OR Committee	5	4	22	3	10	16	60
Number of OR proposals reviewed by the State OR Committee and forwarded to the Zonal OR Committee for approval	0	4	9	3	2	2	20
Number of OR proposals approved by the Zonal OR Committee	0	4	0	1	2	0	7

	East	North East	North	South 1	South 2	West	Total
Number of thesis proposals received by the State OR Committee	14	6	27	28	9	44	128
Number of thesis Proposals approved	12	6	24	23	4	31	100
Number of thesis initiated with RNTCP as a topic in the Zone	12	6	22	23	4	31	98

Important developments

- Research Consortium for Tuberculosis: With a strong research base formed by a group of National Institutes exclusively focusing on TB (NIRT, JALMA, NITRD, NTI), the network of ICMR institutes, about 363 Medical Colleges, and the strong basic science institutes under Indian Council of Medical Research/Department of Health Research (ICMR), Departments of Science and Technology (DST), Department of Biotechnology (DBT), Council of Scientific and Industrial Research (CSIR) and Indian Institute of Science (IISc) India has a unique capacity to be a leader in basic, clinical, translational and operational research. India could advance TB control nationally and globally. In addition various technical partners like WHO, The Union support in capacity building and implementation of researches under RNTCP. Funding through various institutes could be harnessed to promote integrated research. Considering above, Central TB Division in collaboration with ICMR wishes to establish a Tuberculosis Research Consortium for streamlining all research related to TB within the country. This will include participation of, DBT, CSIR, DST, IISc and other academic/research institutions and the private sector as partners. The consortium will drive the development of a pioneer national TB Research Strategy in line with the WHO End-TB Strategy and create a scientific network and develop a country specific prioritized research agenda that will allow India to be a model country for TB research. This forum will have strong financial and technical commitment from all stakeholders, including representatives from the private sector.
- With an aim to develop capacity of the professionals associated with RNTCP to undertake programmatically relevant operational research to generate appropriate evidence to enhance TB control efforts in the country, Central TB Division in collaboration with National Tuberculosis Institute, Bangalore and WHO country office for India has conducted “TB Operational Research Training course” at National TB institute, Bangalore. The training programme contains 3 Modules of which first module was held at NTI on 4-8th May 2015.
- In the current year 4 Zonal OR Capacity building workshops were held
- Program has initiated process to develop web-based application for streamlining operational research to facilitate transparent and accountable system ensuring timely feedback and decisions of the respective OR committees to the applicant Principle Investigators.
- National Research Committee meets at least twice year and provides technical guidance to CTD on the RNTCP OR

12

CHAPTER

Monitoring and Evaluation



www.tbcindia.gov.in
www.nikshay.gov.in

12

CHAPTER

Monitoring and Evaluation

Supervision and monitoring are pivotal in ensuring quality services delivery for achieving the goals of Universal Access to quality care for all TB patients.

Monitoring is a continuous process of collecting and analysing information to compare how well a project, programme, or policy is being implemented against expected result. Evaluation is an assessment of a planned, ongoing, or completed intervention to determine its relevance, efficiency, effectiveness, impact, and sustainability. Both are needed to be able to better manage policy, program, and project implementation. Program Indicators are essential part of a monitoring and evaluation system as they are what you measure and/or monitor.

Monitoring and Evaluation provides government representatives, policy makers and program managers, civil society and development partners to

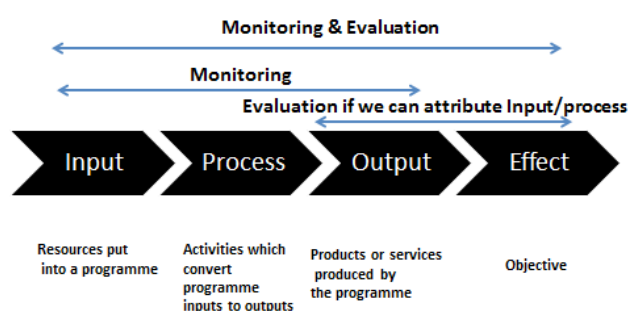
- Learn from past experiences
- Improve service delivery planning and allocation of resources
- Demonstrate results during and after the implementation

The Revised National Tuberculosis Control Program (RNTCP) has completed seventeen years of implementation. While RNTCP consolidated these achievements, it is also attempting to expand the horizon. The program is moving towards achieving ‘universal access’, reaching out to the unreached and ensuring that all TB patients receive the highest quality diagnostic and treatment facilities as early as possible. The programme is also facing the challenge of Drug Resistant – TB and that of HIV co-infection with TB. The programme has initiated steps to tackle these challenges.

It is recognized that management of TB control program is challenging both from technical as well as operational point of view. Although RNTCP has standardized set of program management guidelines, people tend to deviate over time especially, when supervision slackens. Another concern is the competing local priorities for which the programme managers had to find solutions with the ambit of the health system.

Intensive supervision and monitoring on a continuous basis prevents complacency setting in and the activities becoming “routine”.

The M&E Framework (Logic Model)



S. No.	Activities	Numbers
1	National RNTCP Review Meeting with State Tuberculosis Officers	2
2	Regional Review of RNTCP & Programmatic Management of Drug Resistant Tuberculosis (PMDT) (South, East, West Zone)	3

S. No.	Activities	Numbers
3	Central Internal Evaluations (Telengana, Tripura, Jammu and Kashmir, Kerala)	4
4	Zonal Task Force Meetings (Bhubaneswar, Chandigarh, Vishakhapatnam, Agartala, Kolkatta, Lucknow, Trivandrum, Hyderabad)	8
5	National Task Force (Himachal Pradesh)	1
6	Regional TB/DR TB-HIV Review Meetings (South, East, West Zone)	3
7	National Technical Working Group Review Meeting for TB-HIV	1
8	Review Meeting of National TB-HIV Coordination Committee	1
9	Co-ordination committee meeting of National Reference Laboratories (NRLs)	1
10	Joint Monitoring Mission	1
11	Review of Civil Society partners involved in TB control in India	4



Debriefing meeting to Hon'ble Minister for Health & Medical Education & ARI/ Trainings J&K, Shri Lal Singh Choudary Ji & Hon'ble Minister of State for Health & Social Welfare Dept. J&K Mohtar-ma Asiya Naqash at Civil Secretariat Srinagar on 19th June-2015 by the Central Internal Evaluation Team.

Joint Monitoring Mission - April 2015

The Joint Monitoring Mission (JMM) 2015 to review India's National TB Programme was conducted from the 10th to 23rd April 2015. The JMM, which is an independent review of the country's progress towards its goal of universal access to TB care is conducted every three years, and this year was the sixth such Mission held in India since the inception of India's Revised National Tuberculosis Control Programme (RNTCP). This year, the JMM brought together a team of nearly 100 national and international experts, affiliated Departments from the Ministry of Health, civil society, implementing partners, technical and developmental agencies to review the progress, challenges, gaps and strategies of India's tuberculosis (TB) control efforts. The JMM 2015 team comprising experts from Centre for Disease Control, World Lung Conference, Stop TB Partnership, WHO, The Union etc. reviewed India's experience with implementation of its ambitious TB control strategies as per the National Strategic Plan (NSP) 2012-17. The RNTCP team was ably led by the national programme leader Dr. Sunil Khaparde and his team of National, State and District level programme officers and implementers from the respective states. The JMM team members visited six different states across the length and breadth of the country, each with its own unique demography and implementation structure. Meetings with key administrators were held at both State and District levels post extensive field visits and review right up to the peripheral health level institutions.

www.tbcindia.gov.in
www.nikshay.gov.in

13

CHAPTER

Human Resource Management

Committed, qualified and trained health care providers equitably distributed at all levels are the foundation of an effective health system. The goal of RNTCP’s HRD strategy is to optimally utilize available health system staff to deliver quality TB services, and to strengthen the supervisory and managerial capacity of programme staff overseeing these services. RNTCP will align more effectively with health system under NHM to leverage field supervisory staff more effectively, and increase capacity building of the staff to equip them to handle multiple tasks of DOTS, Drug Resistant TB and TB-HIV. By aligning with the health system and strengthening programme management capacity to leverage and supervise the health system, the Universal Access will become a reality.

The depicted diagram is illustrative of the human resources available for TB control from the grassroots to the national level, both government and contractual.

Functions of the State TB Cell, State TB Demonstration Centre, and TB Unit team, national and intermediate reference laboratories, the Medical College Task Forces and core committees are well spelled out. The responsibilities of State TB Cell staff, district-level staff and PHI staff are clearly defined. Non-financial incentives like awards on World TB Day have created a motivated workforce. Technical expertise hired additionally under programme and existing within the

system, do continuously need updation of knowledge in view of policy updates/ refreshing existing knowledge etc. Training institutes (both National & State) play pivotal role in capacity building of all concerned. National Training institutes like National TB Institute (NTI), Bangalore; National Institute for TB & Respiratory Diseases (previously called Lala Ram Sarup Institute of TB & Lung Diseases), New Delhi and National Institute for Research in Tuberculosis (previously called Tuberculosis Research Center), Chennai are capacity building arms of Central TB Division, MoHFW-GOI. Many efficient state level institutes have also come up as regional level training hubs – e.g. State TB Training & Demonstration Centre (STDC) of Ahmedabad/ Hyderabad/ Kochi etc.



The STDC is a technical arm of State TB Cell. It is responsible for training along with other responsibilities as Lab. Support, Supervision & Monitoring, Quality Assurance, Operational Research, Information Education & Communication etc. Formation of group of master trainers within the State & capacity building for imparting quality training at district & peripheral level is also taken up at STDC level. Evaluation of training activities in the State & development of training material in local languages as per need would be taken care by the STDC.

There are many conventional methodologies accepted for TB trainings; including Modular training, on job training etc. However, e-modules, Audio-

Visual modules, Webinars etc. are widely accepted & appreciated methods as well. Customized training tools & modalities that suit the training needs as per need assessment would be used for the trainings at different levels. Training for private providers, associations & different stakeholders at National, State, District & peripheral level, trainers from State TB Training and Demonstration Centres, teachers and researchers of the Medical Colleges and other institutes from all over the country are also trained at National institutes.

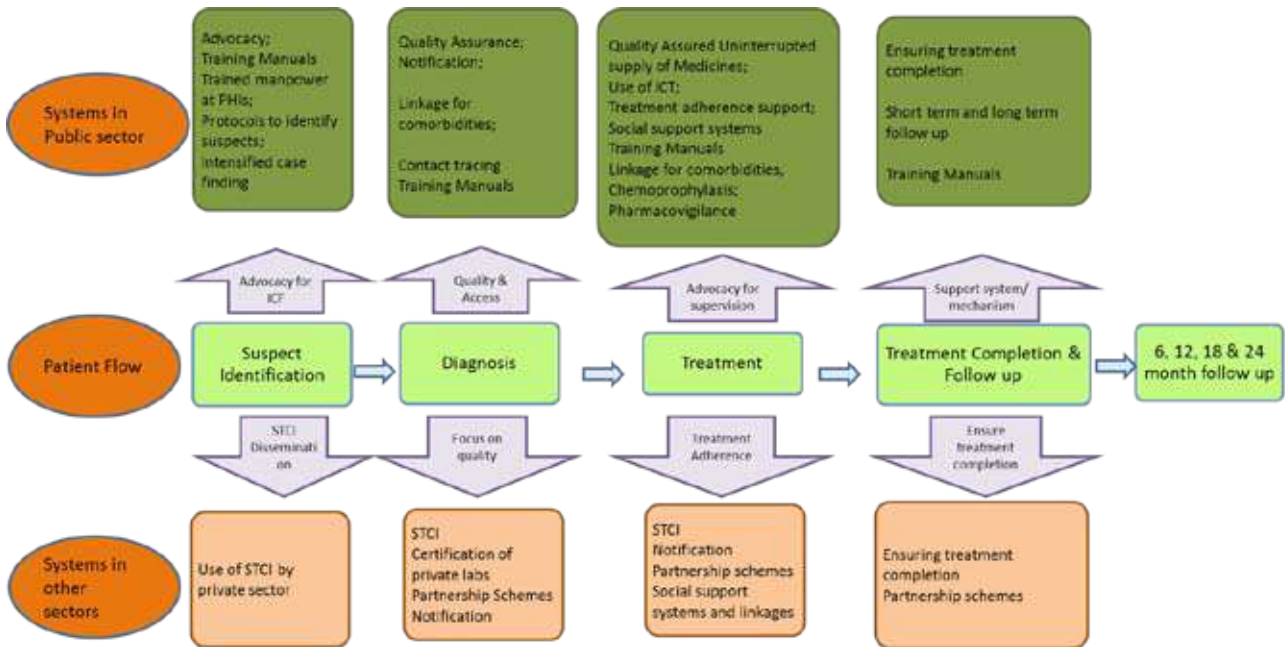
The flow diagram depicts the human resources available at every service point to a patient for getting optimum TB care services:

PRIMARY LEVEL OF CARE	SECONDARY LEVEL OF CARE	TERTIARY LEVEL OF CARE
<ul style="list-style-type: none"> • Medical Officer of Peripheral Health Institution • Private medical practitioners at village level • Senior TB Treatment Supervisor • Senior TB Lab Supervisor • Tuberculosis Health Visitor • ASHA • Community health Guides • Swasthya Shayayika • Members of Gram Panchayat • Laboratory Technicians • Rural Health Practitioners • Chemists • Members of Self help group • NonGovernmental Organizations 	<ul style="list-style-type: none"> • Medical Officer at Community Health Centers • Specialists available at Subdivision hospitals • Specialists available at district level. • Chest & TB specialists doing private practice • General Practitioners • DRTB site Senior MO • District Tuberculosis Officer • Medical Officer at DTC • Dist PPM Coordinator • Dist Programme Coordinator • Dist DRTB-HIV Coordinator • Counsellor • Statistical Assistant • District Accountant • Laboratory Technician 	<ul style="list-style-type: none"> • Faculties at Medical Colleges • Specialists at Corporate hospitals • Private Practitioners in the city • Senior MO ar DRTB Site • State Tuberculosis Officer • Microbiologist(IRL) • Microbiologist (EQA) • Epidemiologist • Treatment monitor • Medical officer of State TB Cell • DRTB Coordinator • PPM Coordinator • TBHIV Coordinator • State Accountant • Pharmacist at SDS • Data Analyst • Technical Officer -Procurement • Senior LT and other LTs of IRL • Data Entry Operators

Private sector is an equally important partner to achieve universal access of TB care in community. The Government of India had passed gazette of TB case notification in May 2012. All private sector

stake holders are to be sensitized by the programme on the Standard of TB care in India, which is the TB care continuum which should be followed by all stakeholders.

Delivery of TB Care services through the Public and Private stakeholders



The above figure depicts the public and private sector involvement with respect to systems, human resources (of public sector, private sector, NGOs & other health care providers) and enablers

14

CHAPTER

Infrastructure



www.tbcinidia.gov.in
www.nikshay.gov.in

14

CHAPTER

Infrastructure

The central theme of Country's 12th five year Plan (2012-2017) is the goal of "Universal Access to quality TB diagnosis and treatment for all TB patients in the community". This entails sustaining the achievements till date, finding unreached TB cases before they can transmit infection, and treating all of them more effectively, preventing the emergence of MDR-TB. These ambitious goals are achievable because the TB programme has established a robust management infrastructure, focused on effective implementation, decentralizing patient-friendly services to impoverished and vulnerable populations, and improving quality of care for all.

The programme is now focusing on re-engineering programme system for optimal alignment with NRHM at block level. The current basic programme management unit for RNTCP, the "Tuberculosis Unit" for 500,000 persons is now being realigned nationwide with the NHM health blocks and urban wards anticipating NUHM expansion. The programme has also effectively engaged the community in creating awareness and providing DOTS treatment through community volunteers

Considering the technical and operational feasibility, the RNTCP built up its infrastructure, wherein, the RNTCP has quality assured laboratory network for bacteriological examination of sputum in three tier system of Designated Microscopy Centre (DMC), Intermediate Reference laboratory (IRL), and National Reference laboratory (NRL). DMC is the most

peripheral laboratory under the RNTCP catering to a population of around 100,000 (50,000 in tribal and hilly areas). There are 13,886 Designated Microscopy Centres (DMCs) across the country.

Currently, there are six National Reference Laboratories – NTI Bangalore, NIRT Chennai, NITRD Delhi, JALMA Agra, RMRC Bhubaneswar and BMHRC Bhopal. The NRLs work closely with IRLs, monitor and supervise the IRL activities and also undertake periodic training for the IRL staff in EQA, culture & Drug Susceptibility Testing activities. The first National Drug Resistance Survey is being conducted by NTI Bangalore with the support of CTD and WHO India.

The programme has strengthened the Intermediate Reference Laboratories (IRLs) at the state level to supervise and monitor the DMC and efficiently achieve the external quality assurance function (EQA) by providing human resource support. Laboratories with a capacity to diagnose drug resistant bacilli using different technologies including solid culture, liquid culture and line probe assay (LPA) and CBNAAT have been established which carry out Culture & Drug Susceptibility Testing. The Program provides free testing facilities for patients and suspects of Multi Drug Resistant (MDR), TB-HIV co-infected, paediatric and Extra-Pulmonary TB. Quality assured diagnosis is being provided by laboratories through Line Probe Assay, liquid culture, Solid culture & Cartridge Based Nucleic Acid Amplification Tests (CB-NAAT) labs across the country for rapid diagnosis

of Drug Resistance Tuberculosis. Under the current strategy, Program is rapidly expanding the laboratory and newer technology platform capacity to achieve universal access to quality assured diagnosis.

All TB patients including patients with co-morbidities such as TB-HIV, TB- Diabetes, registered under the programme are provided free quality assured treatment services through the network of providers, ranging from the community volunteers to tertiary care dedicated institutions specialized in TB treatment and care. Currently, there are more than 4 lakh DOT centers, 136 specialized Drug Resistant TB Centers providing services across the country. For further decentralizing and making treatment services patient friendly for DRTB patients, 50 Linked DR TB Centers have been established in states.

Procurement, Supply & Logistics Unit has been established in Central TB Division (CTD) for procurement and logistics functions at the Central level. Government Medical Stores Depots (GMSDs)

are the primary stocking points, for receipt of first line anti-TB drugs from the manufacturers and distribution to State Drug Stores across the country. In case of 2nd line drugs, the suppliers are required to deliver drugs directly to the consignees which are the State Drug Stores of the implementing State.

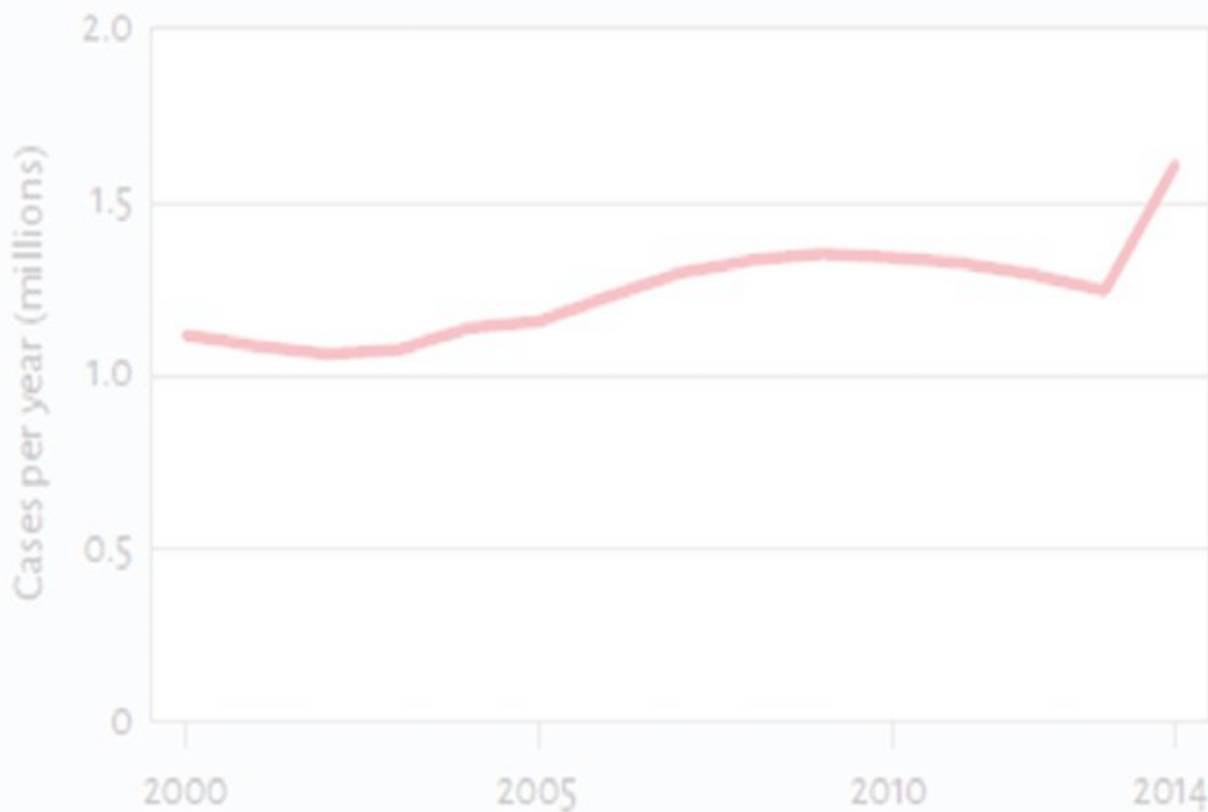
Currently, there are 6 GMSDs at Karnal, Mumbai, Kolkata, Chennai, Guwahati and Hyderabad, 39 SDSs and 729 DDSs for stacking and distribution of drug stocks. Receipts from GMSDs/ SDSs (in other states) are coordinated by Central TB Division (CTD) and are usually in response to quarterly reports/ additional stock requests made by State TB Officers (STO) and/ or District TB Officers (DTO).

The Deputy Director General (DDG), Additional Deputy Director General (ADDGs), representative from National Institutes, NRL, RNTCP Consultants and representative from partners constitute the Central Monitoring Unit for supervision, monitoring and surveillance of TB control activities in the country.

RNTCP case finding and treatment outcome

Substantial increases in TB notifications in India 2013–2014 – the role of mandatory notification and e-health interventions

Case notifications in India, 2000–2014



www.tbcindia.gov.in
www.nikshay.gov.in

15

CHAPTER

RNTCP case finding and treatment outcome

INDEX

Table No.	Title	Page Number
1.	Performance of RNTCP Case Notification(2015)	102
2.	RNTCP Case Notification from private sector State/UT wise (2015)	104
3.	Treatment Outcome of New cases for 2014	105
4.	“Outcome of Smear Positive Retreatment cases for India 2014 (excluding “Others”)”	106
5.	State-wise outcome of Smear Positive Retreatment cases 2014 (excluding “Others”)	107
6.	Treatment outcome among all HIV infected New TB cases (2014)	108
7.	Treatment outcome among all HIV infected Re-treatment TB cases (2014)	109
8.	Programme Infrastructure , Collaborations and Staffing status in 2015	110
9.	Programmatic Management of Drug Resistant TB (PMDT)	112
10.	RNTCP Case Notification from private sector District wise (2015)	115

Table 1 : Performance of RNTCP Case Notification(2015)

State	Population (in lakh) covered by RNTCP ¹	No. of subjects examined	Suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed ²	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual smear positive case notification rate by RNTCP (DMCs)	Annual smear positive case notification rate from CFR: sm + cases (NSP + Rel + TAD) / Pop)	Total patients registered for treatment ³	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate
Andaman & Nicobar	4	1993	-40%	129	15	22%	34	60	584	152	49	37	42	23	12
Andhra Pradesh	508	362790	6%	41698	9	12%	82	72	61758	122	57	24	17	25	17
Arunachal Pradesh	15	11407	1%	1240	9	12%	83	75	2748	184	56	32	51	44	21
Assam	329	164427	2%	21441	8	12%	65	58	38014	116	48	27	19	22	11
Bihar	1131	449017	-6%	44238	10	0%	39	34	64928	57	28	13	4	11	6
Chandigarh	11	21695	38%	2735	8	-3%	247	130	3143	284	101	28	108	47	31
Chhattisgarh	275	181812	16%	16088	11	9%	58	53	29950	109	47	35	14	13	7
Dadar & Nagar Haveli	4	7131	9%	472	15	-7%	118	69	487	122	51	11	32	27	19
Daman & Diu	3	3395	6%	257	13	-7%	91	45	284	100	29	29	17	25	19
Delhi	176	184400	1%	24665	7	-3%	140	115	55260	314	80	50	113	70	37
Goa	15	16905	-3%	977	17	9%	65	48	1599	107	37	14	36	19	13
Gujarat	645	569914	2%	62193	9	9%	96	82	82585	128	61	13	18	35	23
Haryana	272	212730	2%	26246	8	2%	96	79	40913	150	55	27	32	37	27
Himachal Pradesh	71	85738	-1%	7957	11	5%	111	101	14333	201	73	32	55	40	29
Jammu & Kashmir	136	83091	16%	5699	15	-4%	42	36	9873	73	27	11	21	13	10
Jharkhand	359	179112	-3%	20544	9	8%	57	54	34792	97	47	28	7	16	8
Karnataka	644	555992	4%	41693	13	10%	65	52	59932	93	40	16	18	19	13
Kerala	339	418895	18%	14147	30	11%	42	36	22785	67	31	11	17	8	6
Lakshadweep	1	824	5%	23	36	-22%	35	35	40	61	35	14	9	3	2
Madhya Pradesh	778	601648	7%	60325	10	5%	78	67	103108	133	55	39	18	21	13
Maharashtra	1177	1009996	4%	74463	14	9%	63	54	130874	111	42	21	23	25	13
Manipur	29	10365	-4%	1011	10	28%	35	31	1881	65	25	13	16	11	7
Meghalaya	33	26818	10%	2365	11	16%	72	64	4674	143	51	19	45	28	14
Mizoram	12	9658	-13%	746	13	8%	64	58	2088	179	44	40	66	29	15
Nagaland	20	13807	41%	1804	8	5%	89	81	3316	164	62	30	39	33	22
Orissa	439	224190	5%	28183	8	-1%	64	56	45814	104	47	21	21	15	10
Pondicherry	14	30226	98%	2856	11	30%	211	55	1288	95	44	9	26	16	14
Punjab	290	181740	-15%	22309	8	-3%	77	69	38625	133	51	23	32	26	19
Rajasthan	736	505612	3%	59804	8	-1%	81	64	90296	123	46	31	20	25	19
Sikkim	6	5950	-40%	581	10	-7%	92	88	1400	222	69	47	64	41	21
Tamil Nadu	765	764990	7%	54547	14	7%	71	58	80543	105	45	22	20	18	14
Telangana	363	206549		27794	7		77	64	39498	109	49	19	17	24	17
Tripura	38	19303	-32%	1764	11	-3%	46	112	7394	195	75	27	32	60	39
Uttar Pradesh	2151	1339643	1%	163031	8	9%	76	65	246589	115	54	27	15	19	12
Uttarakhand	108	78263	-16%	10299	8	9%	96	68	14317	133	49	28	27	29	21
West Bengal	952	592280	3%	58408	10	7%	61	55	87468	92	45	13	18	15	11
TOTAL	12848	9132306	2%	902732	10	7%	70	60	1423181	111	47	23	19	21	14

State	Population (in lakh) covered by RNTCP ¹	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis	No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment	No (%) of all cured Smear Positive cases having end of treatment follow-up sputum done within 7 days of last dose	No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT (RT report)	Proportion of HIV infected TB patients put on ART (RT report)				
Andaman & Nicobar	4	122	98%	118	95%	120	96%	98	33%	77%	1%	0%	0%	96%
Andhra Pradesh	508	34386	92%	36700	99%	26999	86%	54172	89%	98%	10%	12%	99%	96%
Arunachal Pradesh	15	1121	98%	1131	99%	968	93%	1058	43%	75%	0%	0%	99%	96%
Assam	329	17091	88%	18640	96%	12528	80%	15833	42%	40%	1%	0%	78%	89%
Bihar	1131	34754	89%	38502	99%	24325	82%	53062	85%	47%	3%	1%	66%	82%
Chandigarh	11	1376	94%	1411	96%	1107	93%	1167	37%	93%	1%	1%	62%	79%
Chhattisgarh	275	13902	92%	14465	96%	9198	83%	19649	68%	86%	2%	1%	79%	90%
Dadar & Nagar Haveli	4	269	95%	277	98%	160	90%	45	10%	86%	1%	1%	75%	75%
Daman & Diu	3	128	94%	136	100%	85	93%	132	67%	100%	2%	2%	0%	100%
Delhi	176	19022	91%	20791	100%	16078	98%	3210	7%	84%	2%	1%	75%	93%
Goa	15	660	88%	731	98%	638	100%	148	9%	99%	5%	7%	99%	95%
Gujarat	645	51008	94%	53537	99%	40071	93%	56232	68%	97%	3%	4%	99%	97%
Haryana	272	19773	89%	20519	93%	14492	87%	18515	48%	80%	1%	2%	39%	44%
Himachal Pradesh	71	7103	97%	7129	97%	5953	93%	3835	32%	74%	1%	1%	71%	76%
Jammu & Kashmir	136	4876	97%	4920	97%	3835	88%	985	13%	67%	0%	0%	36%	44%
Jharkhand	359	17334	89%	19249	99%	13323	79%	29154	85%	70%	1%	1%	48%	83%
Karnataka	644	29981	88%	32914	96%	22018	84%	33635	56%	95%	11%	12%	97%	90%
Kerala	339	11581	90%	11757	91%	8854	83%	15610	68%	91%	2%	2%	86%	96%
Lakshadweep	1	24	100%	24	100%	13	100%	14	100%	0%	0%	0%	0%	0%
Madhya Pradesh	778	47903	91%	51272	98%	32941	80%	71188	72%	72%	1%	1%	82%	90%
Maharashtra	1177	59018	92%	63719	99%	44379	87%	64396	50%	92%	7%	8%	96%	92%
Manipur	29	875	95%	872	94%	738	89%	1266	74%	79%	7%	6%	74%	65%
Meghalaya	33	1929	90%	1934	90%	1235	73%	2262	50%	42%	2%	1%	96%	93%
Mizoram	12	687	99%	685	99%	502	91%	549	29%	29%	11%	9%	89%	46%
Nagaland	20	1528	96%	1581	99%	1223	88%	1453	53%	80%	7%	5%	74%	69%
Orissa	439	21213	86%	24441	99%	14900	78%	37602	82%	73%	2%	1%	89%	87%
Pondicherry	14	660	85%	675	87%	658	94%	0	0%	98%	3%	3%	100%	100%
Punjab	290	18145	91%	19117	95%	12094	76%	16650	45%	86%	2%	1%	89%	95%
Rajasthan	736	39488	82%	46286	97%	33820	81%	24492	28%	86%	1%	1%	95%	96%
Sikkim	6	512	96%	511	100%	442	97%	473	39%	95%	1%	0%	60%	100%
Tamil Nadu	765	39066	87%	43709	97%	29141	85%	19767	25%	96%	6%	7%	97%	95%
Telangana	363	22059	93%	23206	98%	17962	89%	33732	89%	97%	5%	7%	99%	96%
Tripura	38	1416	87%	1611	99%	1090	75%	1318	52%	72%	2%	0%	95%	95%
Uttar Pradesh	2151	129186	90%	143055	99%	105005	87%	183051	75%	65%	1%	0%	63%	81%
Uttarakhand	108	6530	85%	7196	93%	4511	81%	9055	67%	64%	1%	0%	77%	83%
West Bengal	952	44609	84%	51096	96%	36944	85%	19156	23%	73%	2%	1%	93%	87%
TOTAL	12848	699335	89%	763917	98%	538350	85%	792964	58%	79%	3%	3%	93%	92%

1 Projected population based on census population of 2011 is used for calculation of case notification rate 1 lakh = 1,00,000 population

2 Smear positive patients diagnosed include new smear positive cases and smear positive retreatment cases, data from DMCs

3 Total patients registered for treatment includes new sputum smear positive cases, new smear negative cases, new EP cases, new others, relapse, failure, TAD and retreatment others

Table: 2 RNTCP Case Notification from private sector State/UT wise (2015)

State	Population (in lakh) covered by RNTCP ¹	Number of health facilities registered in 2015	Number of health facilities registered (Laboratories - Private)	Number of health facilities registered (Single clinic - Private)	Number of health facilities registered (Multi-clinic - Private)	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	No of TB patients notification by private sector ²	No of TB cases notified by private sector per 1,00,000 population
Andaman & Nicobar	4	3	0	0	3	0	0	21	21	5.47
Andhra Pradesh	508	6065	3655	26	2384	2713	66	4385	7164	14.11
Arunachal Pradesh	15	25	0	6	19	0	0	31	31	2.07
Assam	329	688	80	441	167	378	888	698	1964	5.97
Bihar	1131	4223	336	3450	437	16058	72	673	16803	14.86
Chandigarh	11	119	3	108	8	138	39	177	177	15.98
Chhattisgarh	275	1624	226	881	517	832	1836	2721	5389	19.57
Dadar & Nagar Haveli	4	74	9	44	21	0	0	66	66	16.53
Daman & Diu	3	14	10	0	4	0	28	102	130	45.95
Delhi	176	2241	260	1406	575	1627	688	1734	4049	23.01
Goa	15	601	29	524	48	14	231	49	294	19.67
Gujarat	645	8500	423	5695	2382	948	14118	12177	27243	42.21
Haryana	272	941	90	265	586	762	630	2665	4057	14.91
Himachal Pradesh	71	526	79	318	129	12	115	505	632	8.85
Jammu & Kashmir	136	825	369	273	183	9	163	1	173	1.28
Jharkhand	359	900	99	463	338	7	612	574	1193	3.33
Karnataka	644	10009	710	7224	2075	495	1474	2783	4752	7.38
Kerala	339	8010	1435	3362	3213	146	1336	5262	6744	19.92
Lakshadweep	1	0	0	0	0	0	0	0	0	0.00
Madhya Pradesh	778	3084	256	1973	855	669	3443	4097	8209	10.55
Maharashtra	1177	27490	292	1136	102	19136	15345	17619	52100	44.26
Manipur	29	28	14	1	13	102	0	387	489	16.86
Meghalaya	33	75	4	39	32	0	388	506	894	27.32
Mizoram	12	110	12	81	17	0	0	51	51	4.37
Nagaland	20	22	9	0	13	0	84	104	188	9.31
Orissa	439	441	26	266	149	0	496	320	816	1.86
Pondicherry	14	13	0	13	0	2	0	0	2	0.15
Punjab	290	1783	290	705	788	139	314	533	986	3.40
Rajasthan	736	1237	65	505	667	337	4044	7355	11736	15.94
Sikkim	6	19	4	13	2	0	0	0	0	0.00
Tamil Nadu	765	8313	260	5843	2210	347	1558	4281	6186	8.08
Telangana	363	1099	40	329	730	65	514	857	1436	3.96
Tripura	38	129	109	7	13	0	0	10	10	0.26
Uttar Pradesh	2151	7309	542	4622	2144	1300	9817	7748	18865	8.77
Uttarakhand	108	106	32	36	38	0	556	717	1273	11.83
West Bengal	952	5281	949	2934	1398	27	475	177	679	0.71
TOTAL	12848	101927	10717	42989	22260	46263	59330	79209	184802	14.38

1 Projected population based on census population of 2011 is used for calculation of case notification rate 1 lakh = 1,00,000 population

2 Notification information for pvt sector as per information in Nikshay Cohort for 2015 for pvt sector notification is based on Date of diagnosis reported

Table: 3 Treatment Outcome of New cases for 2014

State	New Smear Positive ¹							New Smear Negative ²							New Extra Pulmonary ²							
	Registered	Cured	Completed	Died	Failure	Defaulted	Transferred to Cat IV	Registered	Cured	Completed	Died	Failure	Defaulted	Transferred to Cat IV	Registered	Cured	Completed	Died	Failure	Defaulted	Transferred to Cat IV	
Andaman & Nicobar	234	85%	1%	3%	2%	3%	3%	193	85%	91%	9%	0%	2%	1%	201	93%	93%	2%	0%	2%	2%	0%
Andhra Pradesh	29788	88%	3%	4%	2%	3%	0%	13288	91%	91%	5%	0%	4%	0%	8439	95%	95%	3%	0%	2%	0%	0%
Arunachal Pradesh	938	87%	1%	2%	2%	2%	1%	474	92%	92%	3%	0%	3%	0%	613	97%	97%	1%	0%	1%	0%	0%
Assam	16847	79%	6%	5%	2%	7%	1%	8982	85%	85%	4%	0%	10%	1%	5832	91%	91%	3%	0%	5%	1%	0%
Bihar	32991	76%	13%	3%	1%	6%	0%	16284	91%	91%	2%	0%	6%	1%	4504	91%	91%	2%	0%	3%	4%	0%
Chandigarh	1029	89%	0%	2%	3%	3%	2%	306	96%	96%	1%	0%	1%	1%	1025	98%	98%	0%	0%	1%	1%	0%
Chhattisgarh	11875	83%	6%	5%	1%	5%	0%	9561	90%	90%	4%	0%	6%	0%	3728	95%	95%	2%	0%	2%	0%	0%
Dadar & Nagar Haveli	162	85%	0%	2%	2%	5%	3%	56	80%	80%	4%	4%	5%	5%	135	94%	94%	4%	0%	1%	1%	0%
Daman & Diu	77	83%	0%	1%	3%	8%	5%	110	76%	76%	4%	0%	15%	5%	36	58%	58%	6%	0%	22%	14%	0%
Delhi	13704	86%	0%	3%	2%	5%	1%	8842	93%	93%	2%	1%	3%	1%	19365	97%	97%	1%	0%	2%	1%	0%
Goa	597	86%	1%	3%	4%	4%	1%	241	90%	90%	5%	0%	2%	1%	521	97%	97%	2%	0%	1%	1%	0%
Gujarat	37716	88%	1%	5%	2%	4%	1%	7848	89%	89%	5%	0%	4%	1%	11089	94%	94%	3%	0%	2%	1%	0%
Haryana	14265	84%	2%	5%	2%	6%	1%	7361	87%	87%	3%	0%	8%	1%	7748	95%	95%	1%	0%	4%	0%	0%
Himachal Pradesh	5346	87%	3%	4%	2%	4%	1%	2233	92%	92%	3%	1%	4%	0%	3558	96%	96%	2%	0%	2%	0%	0%
Jammu & Kashmir	4233	82%	6%	3%	1%	4%	4%	1426	87%	87%	3%	0%	7%	4%	2691	92%	92%	2%	0%	4%	2%	0%
Jharkhand	17913	84%	6%	4%	1%	5%	0%	10111	88%	88%	4%	0%	7%	0%	2360	91%	91%	4%	0%	4%	1%	0%
Karnataka	26058	82%	1%	7%	2%	7%	1%	10951	86%	86%	7%	0%	6%	1%	11707	90%	90%	5%	0%	4%	1%	0%
Kerala	10710	84%	2%	5%	4%	4%	1%	3481	92%	92%	4%	0%	3%	0%	5955	92%	92%	4%	0%	3%	1%	0%
Lakshadweep	15	87%	0%	13%	0%	0%	0%	6	100%	100%	0%	0%	0%	0%	3	100%	100%	0%	0%	0%	0%	0%
Madhya Pradesh	41582	86%	4%	4%	1%	5%	0%	28995	91%	91%	3%	0%	6%	0%	13892	96%	96%	2%	0%	3%	0%	0%
Maharashtra	51536	82%	2%	5%	2%	5%	2%	25467	85%	85%	5%	0%	6%	3%	26742	91%	91%	4%	0%	3%	2%	0%
Manipur	801	84%	1%	4%	2%	7%	1%	477	88%	88%	3%	0%	9%	0%	503	93%	93%	3%	0%	4%	0%	0%
Meghalaya	1616	80%	2%	4%	4%	7%	1%	683	87%	87%	5%	0%	7%	1%	1391	90%	90%	2%	0%	7%	1%	0%
Mizoram	511	84%	3%	3%	5%	4%	0%	358	87%	87%	7%	1%	5%	1%	759	93%	93%	3%	0%	4%	0%	0%
Nagaland	1037	90%	1%	3%	3%	3%	0%	529	91%	91%	3%	0%	5%	0%	623	94%	94%	2%	1%	3%	0%	0%
Orissa	20388	83%	5%	5%	1%	6%	1%	9290	88%	88%	6%	0%	6%	1%	9325	92%	92%	4%	0%	3%	1%	0%
Pondicherry	635	88%	0%	4%	2%	4%	0%	155	94%	94%	5%	0%	1%	0%	378	97%	97%	2%	0%	0%	0%	0%
Punjab	15066	83%	4%	5%	2%	5%	1%	6616	88%	88%	6%	0%	4%	1%	8363	94%	94%	3%	0%	2%	1%	0%
Rajasthan	36728	87%	3%	3%	1%	5%	0%	24886	91%	91%	3%	0%	5%	0%	14688	95%	95%	2%	0%	3%	0%	0%
Sikkim	515	79%	0%	2%	5%	1%	1%	274	93%	93%	2%	2%	0%	0%	393	95%	95%	4%	0%	1%	0%	1%
Tamil Nadu	36465	80%	2%	5%	1%	7%	4%	17871	86%	86%	4%	0%	3%	6%	15648	94%	94%	3%	0%	2%	1%	0%
Telangana	20034	86%	4%	4%	2%	3%	0%	7865	91%	91%	5%	0%	3%	0%	6371	96%	96%	3%	0%	1%	1%	0%
Tripura	1344	87%	2%	5%	2%	4%	0%	419	89%	89%	6%	0%	5%	0%	366	93%	93%	3%	0%	4%	0%	0%
Uttar Pradesh	124904	82%	6%	4%	1%	6%	1%	55176	89%	89%	3%	0%	7%	1%	30892	94%	94%	2%	0%	3%	1%	0%
Uttarakhand	5418	77%	8%	4%	2%	7%	1%	3078	88%	88%	3%	0%	7%	1%	2580	95%	95%	1%	0%	4%	0%	0%
West Bengal	44632	85%	1%	4%	2%	6%	1%	12734	86%	86%	6%	0%	6%	1%	16972	92%	92%	3%	0%	4%	1%	0%
Grand Total	627710	83%	4%	4%	2%	5%	1%	296627	89%	89%	4%	0%	6%	1%	239396	94%	94%	3%	0%	3%	1%	0%

1 Treatment success for New Smear Positive is cured and treatment completed.

2 Treatment success for New Smear Negative and New Extra Pulmonary are treatment completed.

Table: 4 “Outcome of Smear Positive Retreatment cases for India 2014 (excluding “Others”)

Type of retreatment case	No. registered	Cured	Success	Died	Failure	Defaulted	Transferred out	Switched to Cat IV
Relapse	103799	68%	74%	7%	0%	10%	1%	0%
Failure	12638	52%	58%	10%	1%	13%	1%	1%
Treatment after de- fault	61729	57%	66%	9%	0%	16%	4%	0%
Total	178166	63%	70%	8%	4%	12%	2%	4%

Table: 5 State-wise outcome of Smear Positive Retreatment cases 2014 (excluding "Others")

Andaman & Nicobar	No. registered	Cured	Success	Died	Failure	Defaulted	Transferred out	Switched to Cat IV	No. registered	Cured	Success	Died	Failure	Defaulted	Transferred out	Switched to Cat IV	No. registered	Cured	Success	Died	Failure	Defaulted	Transferred out	Switched to Cat IV	Transferred out	De-faulted	Failure	Died	Success	Switched to Cat IV	Transferred out	Switched to Cat IV
Andaman & Nicobar	71	63%	65%	7%	3%	0%	0%	25%	9	11%	11%	0%	22%	0%	0%	67%	15	33%	47%	7%	33%	0%	0%	67%	0%	33%	7%	47%	7%	7%		
Andhra Pradesh	4840	76%	79%	8%	3%	6%	0%	3%	720	57%	61%	12%	10%	10%	0%	6%	2858	67%	72%	9%	3%	11%	0%	6%	3%	72%	9%	3%	11%			
Arunachal Pradesh	210	74%	77%	4%	0%	4%	0%	15%	24	42%	46%	0%	13%	13%	0%	29%	89	64%	65%	3%	2%	0%	0%	29%	64%	65%	3%	2%	0%			
Assam	2063	58%	70%	8%	3%	14%	1%	5%	393	45%	54%	11%	8%	17%	1%	8%	1234	47%	58%	8%	3%	22%	1%	8%	58%	76%	6%	2%	12%			
Bihar	2881	63%	78%	5%	2%	10%	0%	4%	336	44%	61%	7%	5%	16%	1%	10%	4174	58%	76%	6%	2%	12%	1%	10%	58%	76%	6%	2%	1%			
Chhatis-garh	226	86%	86%	3%	4%	4%	1%	2%	39	69%	69%	13%	3%	5%	3%	8%	67	72%	73%	4%	4%	12%	4%	8%	73%	4%	4%	4%	1%			
Chhattis-garh	890	64%	74%	9%	3%	10%	1%	2%	180	51%	62%	12%	9%	11%	1%	5%	646	49%	67%	12%	1%	16%	2%	5%	67%	12%	1%	16%	2%			
Dadar & Nagar Haveli	37	62%	62%	5%	3%	14%	5%	11%	7	86%	86%	0%	14%	0%	0%	0%	17	65%	65%	12%	0%	12%	0%	0%	12%	65%	12%	0%	12%	0%		
Daman & Diu	14	64%	64%	0%	0%	14%	14%	7%	1	100%	100%	0%	0%	0%	0%	0%	25	68%	76%	4%	4%	8%	0%	0%	4%	76%	4%	4%	8%	0%		
Delhi	3985	77%	77%	5%	3%	7%	1%	7%	429	59%	60%	9%	8%	10%	2%	10%	1974	66%	66%	7%	4%	13%	2%	10%	66%	7%	4%	13%	2%	8%		
Goa	106	71%	72%	2%	8%	11%	1%	6%	37	54%	54%	8%	11%	19%	0%	8%	54	57%	57%	6%	9%	26%	0%	8%	57%	6%	9%	26%	0%	2%		
Gujarat	8645	73%	75%	9%	4%	9%	1%	1%	834	55%	57%	14%	10%	13%	1%	4%	4788	68%	70%	9%	4%	14%	1%	4%	68%	70%	9%	4%	14%	1%		
Haryana	4719	68%	73%	8%	4%	12%	1%	3%	630	58%	63%	9%	8%	13%	0%	7%	1904	61%	69%	8%	4%	16%	1%	7%	69%	8%	4%	16%	1%	2%		
Himachal Pradesh	1945	75%	82%	7%	3%	4%	0%	3%	111	51%	54%	10%	8%	14%	2%	12%	194	58%	71%	8%	3%	16%	1%	12%	58%	71%	8%	3%	16%	1%	2%	
Jammu & Kashmir	1158	62%	73%	5%	4%	8%	9%	1%	90	52%	56%	8%	16%	8%	10%	3%	268	45%	60%	4%	4%	19%	13%	3%	45%	60%	4%	4%	19%	13%	0%	
Jharkhand	1733	66%	77%	6%	3%	10%	1%	3%	164	45%	55%	10%	8%	16%	2%	9%	975	63%	74%	6%	2%	15%	1%	9%	63%	74%	6%	2%	15%	1%	2%	
Karnataka	4314	62%	66%	10%	5%	14%	1%	5%	839	46%	50%	14%	9%	16%	1%	10%	3381	48%	52%	13%	4%	24%	3%	10%	48%	52%	13%	4%	24%	3%	3%	
Kerala	1134	73%	78%	6%	6%	6%	1%	4%	561	70%	74%	6%	9%	7%	1%	4%	525	52%	61%	9%	4%	21%	2%	4%	52%	61%	9%	4%	21%	2%	2%	
Lakshadweep	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Madhya Pradesh	5091	64%	76%	7%	3%	10%	1%	4%	669	49%	61%	10%	6%	14%	1%	7%	3624	53%	68%	10%	2%	16%	1%	7%	53%	68%	10%	2%	16%	1%	4%	
Maharashtra	10503	60%	64%	9%	4%	12%	2%	9%	1100	41%	46%	14%	11%	16%	2%	11%	4021	40%	46%	13%	4%	20%	12%	11%	40%	46%	13%	4%	20%	12%	7%	
Manipur	134	66%	71%	7%	5%	10%	1%	7%	29	59%	59%	7%	17%	3%	0%	14%	73	62%	73%	5%	0%	15%	0%	14%	62%	73%	5%	0%	15%	0%	7%	
Meghalaya	327	59%	64%	7%	7%	11%	2%	9%	114	37%	37%	4%	17%	5%	4%	34%	115	35%	39%	17%	3%	29%	7%	34%	35%	39%	17%	3%	29%	7%	5%	
Mizoram	150	76%	84%	4%	2%	4%	0%	6%	12	50%	50%	8%	17%	8%	0%	17%	9	56%	67%	0%	11%	11%	0%	17%	56%	67%	0%	11%	11%	0%	11%	
Nagaland	209	74%	85%	6%	2%	4%	0%	2%	46	65%	70%	4%	13%	9%	0%	4%	100	80%	82%	2%	5%	10%	0%	4%	80%	82%	2%	5%	10%	0%	1%	
Orissa	2070	63%	75%	8%	2%	12%	1%	2%	254	53%	63%	7%	8%	14%	0%	7%	1678	52%	64%	10%	2%	19%	3%	7%	52%	64%	10%	2%	19%	3%	2%	
Pon-dicherry	130	75%	75%	12%	6%	5%	0%	1%	32	59%	59%	9%	19%	6%	0%	6%	42	60%	60%	2%	17%	14%	0%	6%	60%	60%	2%	17%	14%	0%	7%	
Punjab	4414	72%	79%	8%	2%	7%	1%	2%	310	60%	65%	10%	9%	8%	2%	6%	1092	63%	70%	9%	3%	13%	3%	6%	63%	70%	9%	3%	13%	3%	3%	
Rajasthan	8502	73%	79%	6%	2%	9%	0%	3%	589	62%	69%	9%	6%	10%	0%	6%	4640	69%	77%	7%	2%	11%	0%	6%	69%	77%	7%	2%	11%	0%	3%	
Sikkim	124	69%	70%	3%	2%	1%	0%	23%	31	65%	65%	0%	0%	3%	0%	32%	18	61%	61%	0%	0%	0%	0%	32%	61%	61%	0%	0%	0%	39%		
Tamil Nadu	5243	62%	67%	7%	3%	13%	6%	4%	748	47%	54%	11%	9%	17%	2%	2%	5042	47%	55%	9%	2%	19%	13%	2%	47%	55%	9%	2%	19%	13%	2%	
Telangana	2747	73%	80%	7%	4%	7%	1%	2%	567	57%	67%	9%	10%	8%	1%	5%	3455	68%	77%	8%	3%	9%	0%	5%	68%	77%	8%	3%	9%	0%	2%	
Tirupura	219	78%	79%	10%	1%	7%	1%	2%	20	40%	40%	5%	20%	10%	0%	25%	34	47%	47%	18%	3%	26%	3%	25%	47%	47%	18%	3%	26%	3%	3%	
Uttar Pradesh	17005	66%	76%	6%	3%	12%	1%	2%	1412	50%	60%	8%	9%	14%	1%	8%	10909	58%	70%	7%	2%	14%	4%	8%	58%	70%	7%	2%	14%	4%	3%	
Uttara-khand	1499	66%	76%	5%	2%	12%	1%	3%	150	44%	58%	11%	8%	16%	1%	6%	659	48%	60%	9%	3%	15%	11%	6%	48%	60%	9%	3%	15%	11%	2%	
West Bengal	6461	70%	73%	7%	4%	10%	1%	5%	1131	53%	55%	8%	9%	16%	1%	12%	3030	54%	58%	10%	3%	22%	3%	12%	54%	58%	10%	3%	22%	3%	5%	
Grand Total	103799	68%	74%	7%	3%	10%	1%	4%	12638	52%	58%	10%	9%	13%	1%	8%	61729	57%	66%	9%	3%	16%	4%	8%	57%	66%	9%	3%	16%	4%	3%	

Treatment Success includes 'Cure' and 'Treatment completed'

Table: 6 Treatment outcome among all HIV infected New TB cases (2014)

State	Total New Cases	Treatment Success	Died	Failure	TAD	Transfer Out	Switch to CAT 4
Andaman & Nicobar	0						
Andhra Pradesh	5637	86%	10%	1%	4%	0%	0%
Arunachal Pradesh	0						
Assam	84	81%	10%	0%	8%	0%	1%
Bihar	677	84%	9%	0%	5%	1%	0%
Chandigarh	25	88%	8%	0%	0%	4%	0%
Chhattisgarh	417	49%	10%	0%	4%	2%	35%
Dadar & Nagar Haveli	0						
Daman & Diu	5	100%	0%	0%	0%	0%	0%
Delhi	462	83%	6%	2%	6%	2%	0%
Goa	83	84%	11%	0%	0%	4%	1%
Gujarat	2070	80%	13%	1%	4%	1%	1%
Haryana	224	75%	14%	2%	6%	0%	3%
Himachal Pradesh	51	82%	8%	4%	6%	0%	0%
Jammu & Kashmir	19	42%	5%	0%	21%	5%	26%
Jharkhand	149	70%	13%	1%	14%	1%	1%
Karnataka	5203	76%	16%	1%	6%	1%	0%
Kerala	273	77%	12%	3%	6%	2%	0%
Lakshadweep	0						
Madhya Pradesh	481	78%	13%	1%	6%	1%	1%
Maharashtra	6848	76%	13%	1%	5%	4%	2%
Manipur	84	83%	8%	5%	2%	1%	0%
Meghalaya	22	77%	14%	5%	5%	0%	0%
Mizoram	139	78%	10%	1%	10%	0%	1%
Nagaland	104	88%	8%	0%	3%	0%	1%
Orissa	478	74%	18%	1%	4%	2%	1%
Pondicherry	32	78%	22%	0%	0%	0%	0%
Punjab	427	80%	11%	2%	6%	1%	0%
Rajasthan	413	79%	14%	0%	4%	0%	3%
Sikkim	2	0%	0%	0%	0%	50%	50%
Tamil Nadu	3274	74%	12%	1%	7%	6%	1%
Telangana	1966	82%	13%	1%	3%	1%	1%
Tripura	18	83%	17%	0%	0%	0%	0%
Uttar Pradesh	451	73%	13%	1%	7%	4%	1%
Uttarakhand	44	70%	7%	0%	14%	0%	9%
West Bengal	826	77%	15%	0%	6%	1%	0%
Grand Total	30988	78%	13%	1%	5%	2%	1%

Table: 7 Treatment outcome among all HIV infected Re-treatment TB cases (2014)

States	Total Retreatment Cases	Treatment Success	Died	Failure	TAD	Transfer Out	Switch to CAT 4
Andaman & Nicobar	0						
Andhra Pradesh	1699	77%	14%	2%	5%	1%	1%
Arunachal Pradesh	0						
Assam	27	77%	11%	1%	11%	0%	0%
Bihar	269	82%	10%	1%	3%	0%	4%
Chandigarh	4	75%	0%	25%	0%	0%	0%
Chhattisgarh	101	47%	15%	0%	8%	2%	29%
Dadar & Nagar Haveli	4	75%	25%	0%	0%	0%	0%
Daman & Diu	1	0%	100%	0%	0%	0%	0%
Delhi	346	79%	8%	1%	8%	2%	2%
Goa	34	59%	12%	3%	21%	3%	3%
Gujarat	927	74%	14%	2%	8%	1%	0%
Haryana	140	71%	12%	6%	8%	1%	1%
Himachal Pradesh	28	71%	18%	0%	4%	4%	4%
Jammu & Kashmir	8	75%	0%	0%	25%	0%	0%
Jharkhand	76	79%	12%	0%	10%	0%	0%
Karnataka	1717	68%	18%	2%	10%	2%	0%
Kerala	104	72%	14%	3%	10%	1%	0%
Lakshadweep	0						
Madhya Pradesh	149	64%	19%	3%	7%	3%	3%
Maharashtra	3464	69%	15%	2%	8%	3%	4%
Manipur	28	76%	6%	7%	11%	0%	0%
Meghalaya	6	83%	0%	0%	0%	17%	0%
Mizoram	52	77%	8%	0%	12%	0%	4%
Nagaland	75	83%	8%	0%	9%	0%	0%
Orissa	138	60%	24%	4%	8%	0%	4%
Pondicherry	9	78%	22%	0%	0%	0%	0%
Punjab	172	78%	12%	0%	7%	2%	1%
Rajasthan	274	73%	16%	1%	8%	1%	1%
Sikkim	2	100%	0%	0%	0%	0%	0%
Tamil Nadu	2015	69%	12%	1%	6%	11%	1%
Telangana	628	74%	15%	3%	5%	2%	1%
Tripura	4	50%	50%	0%	0%	0%	0%
Uttar Pradesh	340	70%	14%	0%	6%	3%	6%
Uttarakhand	22	91%	9%	0%	0%	0%	0%
West Bengal	406	75%	13%	2%	8%	1%	1%
Total	13269	71%	14%	2%	7%	3%	2%

Implementing states	Total no. of report-ing units (Districts / DTC)	Implementing district details		Collaboration with Other sectors		Number of key staff in position										
		No. of DIMCs	NGO	PP	DTO	STS	STLS	LT	DEO	Sr DRTB & TBHIV Supervisor	Sr MO DRTB Center	DRTB Center Statistical Assistant	Dist Programme Coordinator	Dist PPM Coordinator	Accountant	TBHW
Andaman & Nicobar	3	3	16	0	3	7	4	3	2	3	1	1	0	2	2	3
Andhra Pradesh	13	225	609	34	13	177	124	234	10	11	3	3	9	0	9	149
Arunachal Pradesh	14	20	37	19	14	19	17	9	14	14	1	2	0	0	14	0
Assam	27	150	366	38	23	149	78	87	30	27	4	3	27	27	27	33
Bihar	38	183	721	126	35	136	144	734	35	31	5	5	0	0	0	53
Chandigarh	1	3	17	4	76	3	5	12	1	1	1	1	0	0	0	14
Chhattisgarh	27	130	379	37	257	91	55	114	25	25	1	4	18	19	14	32
Dadra & Nagar Haveli	1	1	9	0	9	2	1	8	1	1	0	0	0	0	0	1
Daman & Diu	2	2	4	0	2	1	1	2	1	0	0	0	0	0	0	0
Delhi	25	41	193	47	25	41	38	199	23	24	3	4	0	0	0	240
Goa	2	6	21	2	2	6	3	5	2	2	1	1	0	0	0	4
Gujarat	36	306	984	130	36	301	143	961	36	38	5	5	30	31	34	236
Haryana	21	119	262	12	19	71	51	76	18	19	0	1	0	0	0	73
Himachal Pradesh	12	72	199	4	12	67	46	67	12	12	1	0	0	0	12	1
Jammu & Kashmir	14	58	172	15	14	51	42	22	11	10	3	2	2	0	7	30
Jharkhand	24	114	329	21	22	63	65	127	22	20	0	2	5	0	5	43
Karnataka	31	193	681	55	31	164	122	680	31	31	5	6	25	26	15	238
Kerala	14	73	498	63	14	73	73	689	14	14	2	2	0	14	14	66
Lakshadweep	1	1	9	0	1	1	1	19	1	0	0	0	0	0	0	0
Madhya Pradesh	50	223	812	16	50	156	145	199	36	34	3	1	18	0	17	143
Maharashtra	79	439	1448	378	78	404	308	359	78	76	14	13	0	26	47	520
Manipur	9	13	53	21	9	12	16	21	9	9	1	1	0	0	0	9
Meghalaya	7	18	65	11	7	18	13	63	7	7	1	2	0	0	0	10
Mizoram	8	12	34	298	8	12	9	7	8	8	1	1	0	0	8	4
Nagaland	11	13	42	0	8	13	13	12	11	11	2	2	0	0	0	2
Orissa	31	279	536	27	30	126	78	482	18	29	2	3	14	12	18	53
Pondicherry	1	7	28	4	1	6	5	12	0	1	1	0	0	0	0	17
Punjab	22	133	285	36	21	52	36	102	16	18	1	2	0	0	0	66
Rajasthan	34	287	856	34	34	224	73	19	31	21	7	7	21	20	20	17
Sikkim	5	5	23	0	5	5	5	6	3	5	0	1	4	4	5	2
Tamil Nadu	33	582	834	62	32	320	135	304	29	32	6	8	26	30	28	383
Telangana	11	150	389	15	30	11	104	62	11	11	2	2	0	0	0	84
Tripura	8	14	56	6	8	10	6	11	4	4	1	1	0	0	0	5
Uttar Pradesh	75	637	1935	159	8	74	598	881	72	80	14	17	63	67	58	427
Uttarakhand	13	65	149	10	13	61	31	69	0	13	0	2	11	0	9	26
West Bengal	28	311	835	129	27	250	191	390	28	32	7	8	0	0	12	193
Grand Total	731	4888	13886	1813	707	3794	2516	7097	650	674	99	114	273	286	375	3177

Table- 9: Programmatic Management of Drug Resistant TB (PMDT) Implementation, Diagnosis, 6 months Interim, 12 months Culture Conversion and Treatment Outcome of MDR-TB Case (Reported by DR-TB Centers-2015)

State	Number of DR TB Centres functional in the state	Diagnosis				Indicators on 6 months interim report						
		Number of MDR TB Suspects subjected to C-DST	Number of MDR TB Cases detected	Number of MDR TB Cases detected that were registered and initiated on treatment in 2015#	Number of XDR TB Cases detected that were registered and initiated on treatment in 2015	Number of MDR TB Case registered and initiated on Cat IV in the 4 cohorts 6-9 months prior (2q14 to 1q15) (a)	Out of a, No. (%) who are alive, on treatment and culture negative		Out of a, No. (%) who died		Out of a, No. (%) who defaulted	
Andaman & Nicobar	1	571	52	46	1	46	36	78%	4	9%	5	11%
Andhra Pradesh	10	13712	737	632	30	591	419	71%	76	13%	81	14%
Arunachal Pradesh	2	1031	176	171	6	200	162	81%	6	3%	26	13%
Assam	3	5582	403	424	24	382	306	80%	38	10%	27	7%
Bihar	5	8943	1093	1287	67	1104	901	82%	99	9%	66	6%
Chandigarh	1	744	44	36	3	40	32	80%	2	5%	3	8%
Chhattisgarh	3	4190	215	183	1	160	124	78%	17	11%	15	9%
Delhi	4	13386	1279	1566	166	1536	1152	75%	122	8%	170	11%
Goa	1	485	40	43	3	42	25	60%	10	24%	2	5%
Gujarat*	5	31683	2048	1860	288	1880	1393	74%	174	9%	221	12%
Haryana	2	8586	713	659	22	601	451	75%	64	11%	69	11%
Himachal Pradesh	2	3391	175	192	12	222	196	88%	13	6%	8	4%
Jammu & Kashmir	3	1321	108	97	4	92	69	75%	10	11%	6	7%
Jharkhand	4	3823	216	206	8	224	193	86%	16	7%	11	5%
Karnataka	6	21827	1211	938	19	751	531	71%	104	14%	85	11%
Kerala*	2	3653	161	180	10	198	160	81%	13	7%	16	8%
Madhya Pradesh	7	17946	1671	1278	37	1161	918	79%	108	9%	105	9%
Maharashtra	16	45829	5302	5878	899	5102	3319	65%	586	11%	537	11%
Manipur	1	277	41	35	0	36	29	81%	4	11%	2	6%
Meghalaya	2	546	142	189	8	191	156	82%	20	10%	11	6%
Mizoram	1	442	43	47	1	45	33	73%	6	13%	5	11%
Nagaland	2	605	82	63	0	63	49	78%	3	5%	1	2%
Orissa	3	5234	204	262	5	277	242	87%	24	9%	12	4%
Puducherry	1	623	15	13	0	30	21	70%	4	13%	5	17%
Punjab	3	8146	514	446	26	466	341	73%	59	13%	54	12%
Rajasthan	7	20975	1930	1728	117	1670	1229	74%	209	13%	192	11%
Sikkim	1	578	207	203	27	239	148	62%	11	5%	10	4%
Tamil Nadu	6	48318	1738	1031	69	1184	902	76%	108	9%	144	12%
Telangana	7	17776	836	728	29	698	554	79%	70	10%	56	8%
Tripura	1	477	14	16	0	15	8	53%	1	7%	4	27%
Uttar Pradesh	14	28883	5481	4663	165	3238	2463	76%	429	13%	243	8%
Uttarakhand	2	2986	415	303	24	274	220	80%	24	9%	14	5%
West Bengal	8	16909	1570	1563	59	1638	1269	77%	116	7%	155	9%
Grand Total	136	339478	28876	26966	2130	24396	18072	74%	2550	10%	2361	10%

State	Indicators on 12 months Culture Conversion Report									
	Out of b, No. (%) who are alive, on treatment and culture negative		Out of b, No. (%) who are alive, on treatment and culture positive		Out of b, No. (%) who are alive, on treatment and culture not known		Out of b, No. (%) who died		Out of b, No. (%) who defaulted	
Andaman & Nicobar	13	48%	3	11%	5	19%	5	19%	1	4%
Andhra Pradesh	382	53%	34	5%	36	5%	110	15%	112	15%
Arunachal Pradesh	127	60%	3	1%	21	10%	7	3%	43	20%
Assam	200	55%	25	7%	12	3%	55	15%	52	14%
Bihar	362	42%	43	5%	184	21%	113	13%	88	10%
Chandigarh	29	63%	1	2%	0	0%	5	11%	5	11%
Chhattisgarh	72	51%	7	5%	10	7%	27	19%	17	12%
Delhi	807	54%	52	3%	118	8%	162	11%	216	14%
Goa	22	51%	1	2%	3	7%	8	19%	5	12%
Gujarat*	872	45%	126	7%	146	8%	295	15%	302	16%
Haryana	294	58%	24	5%	48	10%	87	17%	73	15%
Himachal Pradesh	104	44%	6	3%	86	36%	21	9%	10	4%
Jammu & Kashmir	55	52%	6	6%	4	4%	13	12%	14	13%
Jharkhand	101	47%	8	4%	63	30%	19	9%	16	8%
Karnataka	316	45%	30	4%	65	9%	129	18%	126	18%
Kerala*	117	50%	5	2%	42	18%	27	12%	25	11%
Madhya Pradesh	427	41%	74	7%	186	18%	179	17%	157	15%
Maharashtra	1850	37%	273	5%	530	11%	765	15%	785	16%
Manipur	29	85%	0	0%	0	0%	2	6%	0	0%
Meghalaya	106	61%	8	5%	17	10%	26	15%	14	8%
Mizoram	27	68%	0	0%	2	5%	6	15%	4	10%
Nagaland	39	52%	2	3%	32	43%	6	8%	6	8%
Orissa	93	42%	16	7%	71	32%	25	11%	15	7%
Puducherry	12	41%	0	0%	0	0%	11	38%	6	21%
Punjab	208	46%	28	6%	40	9%	83	18%	67	15%
Rajasthan	851	50%	73	4%	185	11%	281	16%	298	17%
Sikkim	123	52%	5	2%	5	2%	21	9%	9	4%
Tamil Nadu	586	50%	45	4%	130	11%	170	14%	226	19%
Telangana	440	52%	38	5%	87	10%	140	17%	98	12%
Tripura	8	62%	1	8%	0	0%	2	15%	1	8%
Uttar Pradesh	1215	49%	232	9%	194	8%	469	19%	255	10%
Uttarakhand	153	58%	14	5%	28	11%	32	12%	22	8%
West Bengal	1084	59%	104	6%	126	7%	193	11%	256	14%
Grand Total	11124	47%	1287	5%	2476	11%	3494	15%	3324	14%

State	Indicators on Treatment Outcome of MDR TB Cases									
	Number of MDR TB cases registered in the 4 cohorts, 31-33 months prior (3q12 to 2q13) (c)	Out of c, No. reported as Cured	Out of c, No. re-reported as Treatment Completed	Out of c, Success Rate	Out of c, No. (%) who died		Out of c, No. (%) who defaulted		Out of c, No. (%) who failed treatment	
Andaman & Nicobar	17	8	1	53%	6	35%	0	0%	0	0%
Andhra Pradesh	1012	398	109	50%	254	25%	175	17%	23	2%
Arunachal Pradesh	140	74	13	62%	8	6%	39	28%	2	1%
Assam	335	145	20	49%	69	21%	59	18%	6	2%
Bihar	359	140	37	49%	84	23%	55	15%	17	5%
Chandigarh	77	12	33	58%	11	14%	5	6%	0	0%
Chhattisgarh	81	26	10	44%	18	22%	18	22%	0	0%
Delhi	1565	587	178	49%	270	17%	396	25%	26	2%
Goa	42	22	1	55%	6	14%	7	17%	3	7%
Gujarat*	1833	575	168	41%	386	21%	435	24%	112	6%
Haryana	340	158	31	56%	93	27%	51	15%	1	0%
Himachal Pradesh	178	43	34	43%	38	21%	14	8%	2	1%
Jammu & Kashmir	119	58	13	60%	20	17%	12	10%	1	1%
Jharkhand	220	68	58	57%	49	22%	34	15%	3	1%
Karnataka	479	175	45	46%	120	25%	83	17%	12	3%
Kerala*	237	106	44	63%	39	16%	28	12%	0	0%
Madhya Pradesh	588	245	33	47%	129	22%	115	20%	34	6%
Maharashtra	4429	1167	478	37%	1008	23%	902	20%	125	3%
Manipur	44	8	25	75%	4	9%	3	7%	0	0%
Meghalaya	142	45	40	60%	26	18%	17	12%	6	4%
Mizoram	38	26	3	76%	5	13%	3	8%	0	0%
Nagaland	67	25	18	64%	10	15%	13	19%	0	0%
Orissa	171	67	17	49%	20	12%	41	24%	3	2%
Puducherry	22	10	0	45%	4	18%	5	23%	1	5%
Punjab	434	131	62	44%	88	20%	98	23%	13	3%
Rajasthan	2205	843	168	46%	498	23%	515	23%	53	2%
Sikkim	183	74	5	43%	16	9%	12	7%	0	0%
Tamil Nadu	1283	403	138	42%	311	24%	341	27%	22	2%
Telangana	596	271	8	47%	135	23%	134	22%	13	2%
Tripura	15	6	3	60%	3	20%	2	13%	0	0%
Uttar Pradesh	814	270	137	50%	202	25%	118	14%	23	3%
Uttarakhand	176	82	30	64%	22	13%	25	14%	5	3%
West Bengal	1057	482	111	56%	176	17%	193	18%	64	6%
Grand Total	19298	6750	2071	46%	4128	21%	3948	20%	570	3%

** Data from Daman-Diu & Dadra Nagar Haveli is included in Gujarat; Data from Lakshadweep is included in Kerala.

These numbers are NOT from the same cohort of patients from which MDR diagnosed are reported, but rather from treatment initiation registers only. The current PMDT information system does not allow for cohort-based reporting of MDR TB suspects, hence this should not yet be taken as a proportion of MDR TB diagnosed and used as an indicator for efficiency of initiation on treatment. Future versions of the PMDT reporting system will be based on cohorts of patients tested in laboratories, and will be used for monitoring of timeliness and efficiency of diagnosis and initiation on treatment.

Table - 10
RNTCP Case Notification from private sector District wise (2015)

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Andaman & Nicobar Islands	Port Blair	0	0	21	21
Andaman & Nicobar Islands	Mayabunder	0	0	0	0
Andaman & Nicobar Islands	Nicobar	0	0	0	0
Andhra Pradesh	Anantapur	19	279	956	1254
Andhra Pradesh	Chittoor	0	103	9	112
Andhra Pradesh	Cuddapah	0	272	93	365
Andhra Pradesh	East Godavari	0	529	179	708
Andhra Pradesh	Guntur	0	293	224	517
Andhra Pradesh	Krishna	0	171	431	602
Andhra Pradesh	Kurnool	0	355	797	1152
Andhra Pradesh	Nellore	1	6	71	78
Andhra Pradesh	Srikakulam	0	75	22	97
Andhra Pradesh	Prakasam	18	98	619	735
Andhra Pradesh	Visakhapatnam	28	304	700	1032
Andhra Pradesh	Vizianagaram	0	210	67	277
Andhra Pradesh	West Godavari	0	1	213	214
Arunachal Pradesh	Changlang	0	0	0	0
Arunachal Pradesh	Dibang Valley	0	0	0	0
Arunachal Pradesh	East Kameng	0	0	0	0
Arunachal Pradesh	East Siang	0	0	0	0
Arunachal Pradesh	Kurung Kumey	0	0	0	0
Arunachal Pradesh	Lohit	0	0	0	0
Arunachal Pradesh	Lower Subansiri	0	0	0	0
Arunachal Pradesh	Papum Pare	0	0	31	31
Arunachal Pradesh	Tawang	0	0	0	0
Arunachal Pradesh	Tirap	0	0	0	0
Arunachal Pradesh	Upper Siang	0	0	0	0
Arunachal Pradesh	Upper Subansiri	0	0	0	0
Arunachal Pradesh	West Kameng	0	0	0	0
Arunachal Pradesh	West Siang	0	0	0	0
Assam	Baksa	0	0	0	0
Assam	Barpeta	0	250	0	250
Assam	Bongaigaon	36	45	81	162
Assam	Cachar	0	6	35	41
Assam	Chirang	0	1	0	1
Assam	Darrang	0	0	0	0
Assam	Dhemaji	0	0	0	0
Assam	Dhubri	0	9	0	9

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Assam	Dibrugarh	258	1	151	410
Assam	Goalpara	0	67	70	137
Assam	Golaghat	0	42	1	43
Assam	Hailakandi	0	0	0	0
Assam	Jorhat	0	0	83	83
Assam	Kamrup	0	0	0	0
Assam	Kamrup Metro	0	0	47	47
Assam	Karbi Anglong	0	0	0	0
Assam	Karimganj	0	22	0	22
Assam	Kokrajhar	0	21	0	21
Assam	Lakhimpur	0	79	6	85
Assam	Marigaon	0	0	0	0
Assam	Nagaon	0	17	40	57
Assam	Nalbari	0	100	54	154
Assam	North Cachar Hills	0	0	0	0
Assam	Sibsagar	0	0	0	0
Assam	Sonitpur	5	100	46	151
Assam	Tinsukia	79	128	84	291
Assam	Udalguri	0	0	0	0
Bihar	Araria	0	401	33	434
Bihar	Arwal	0	55	0	55
Bihar	Aurangabad-BI	0	412	0	412
Bihar	Banka	0	0	0	0
Bihar	Begusarai	0	223	32	255
Bihar	Bhagalpur	1	283	2	286
Bihar	Bhojpur	1	238	0	239
Bihar	Buxar	0	32	0	32
Bihar	Darbhanga	0	821	6	827
Bihar	Gaya	0	886	42	928
Bihar	Gopalganj	0	590	0	590
Bihar	Jamui	0	105	0	105
Bihar	Jehanabad	0	0	0	0
Bihar	Kaimur	0	52	41	93
Bihar	Katihar	0	125	0	125
Bihar	Khagaria	0	0	0	0
Bihar	Kishanganj	0	268	0	268
Bihar	Lakhisarai	0	202	0	202
Bihar	Madhepura	0	34	0	34

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Bihar	Madhubani	0	132	0	132
Bihar	Munger	0	419	39	458
Bihar	Muzaffarpur	0	20	1	21
Bihar	Nalanda	0	166	18	184
Bihar	Nawada	0	0	0	0
Bihar	Paschim Champaran	0	0	0	0
Bihar	Patna	47	9101	227	9375
Bihar	Purba Champaran	0	28	63	91
Bihar	Purnia	23	222	0	245
Bihar	Rohtas	0	51	157	208
Bihar	Saharsa	0	11	0	11
Bihar	Samastipur	0	46	0	46
Bihar	Saran	0	341	4	345
Bihar	Sheikhpura	0	199	0	199
Bihar	Sheohar	0	0	0	0
Bihar	Sitamarhi	0	246	8	254
Bihar	Siwan	0	261	0	261
Bihar	Supaul	0	0	0	0
Bihar	Vaishali	0	88	0	88
Chandigarh	Chandigarh	138	39	0	177
Chhattisgarh	Balarampur	0	3	0	3
Chhattisgarh	Balod	0	97	3	100
Chhattisgarh	Bijapur	0	0	0	0
Chhattisgarh	Baloda Bazar	0	55	252	307
Chhattisgarh	Bastar	31	17	72	120
Chhattisgarh	Bemetara	0	188	133	321
Chhattisgarh	Bilaspur-CG	488	556	777	1821
Chhattisgarh	Dantewada	0	0	0	0
Chhattisgarh	Dhamtari	109	256	191	556
Chhattisgarh	Durg	0	253	230	483
Chhattisgarh	Gariyaband	0	10	32	42
Chhattisgarh	Janjgir	0	41	402	443
Chhattisgarh	Jashpur	0	0	0	0
Chhattisgarh	Kabirdham (Kawardha)	0	13	8	21
Chhattisgarh	Korba	0	30	67	97
Chhattisgarh	Koriya	0	48	56	104
Chhattisgarh	Kondagaon	0	0	0	0

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Chhattisgarh	Mahasamund	0	0	0	0
Chhattisgarh	Mungeli	0	0	56	56
Chhattisgarh	Narayanpur	0	0	0	0
Chhattisgarh	Raigarh-CG	134	94	22	250
Chhattisgarh	Raipur	53	104	156	313
Chhattisgarh	Rajnandgaon	17	66	133	216
Chhattisgarh	Sukma	0	0	0	0
Chhattisgarh	Surajpur	0	0	0	0
Chhattisgarh	Sarguja	0	5	36	41
Chhattisgarh	Uttar Bastar Kanker	0	0	95	95
Dadra & Nagar Haveli	Dadra & Nagar Haveli	0	0	66	66
Daman & Diu	Daman	0	28	102	130
Daman & Diu	Diu	0	0	0	0
Delhi	Bijwasan	0	0	0	0
Delhi	BSA Chest Clinic	0	22	11	33
Delhi	BJRM Chest Clinic	0	0	0	0
Delhi	CD Chest Clinic	1053	1	2	1056
Delhi	DDU Chest Clinic	0	0	0	0
Delhi	GTB Chest Clinic	0	0	48	48
Delhi	Gulabi Bagh	1	3	0	4
Delhi	Jhandewalan	0	0	0	0
Delhi	Hedgewar Chest Clinic	0	0	42	42
Delhi	Karawal Nagar	0	0	109	109
Delhi	Kingsway Camp	0	0	0	0
Delhi	LN Chest Clinic	0	0	1	1
Delhi	MNCH Chest Clinic	0	0	456	456
Delhi	LRS	0	0	0	0
Delhi	Moti Nagar	0	657	8	665
Delhi	Narela	0	0	14	14
Delhi	NDMC	287	0	0	287
Delhi	Nehru Nagar	178	0	124	302
Delhi	Patparganj	0	0	1	1
Delhi	RK Mission	106	0	914	1020
Delhi	RTRM Chest Clinic	2	0	0	2
Delhi	SGM Chest Clinic	0	5	0	5
Delhi	SPM Marg	0	0	0	0
Delhi	Shahdra	0	0	0	0
Delhi	SPMH Chest Clinic	0	0	4	4

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Goa	North Goa	7	160	27	194
Goa	South Goa	7	71	22	100
Gujarat	Ahmadabad	6	39	289	334
Gujarat	Ahmadabad MC	202	402	692	1296
Gujarat	Amreli	0	328	183	511
Gujarat	Anand	6	510	236	752
Gujarat	Arvalli	0	845	0	845
Gujarat	Banaskantha	0	452	519	971
Gujarat	Bharuch	8	114	243	365
Gujarat	Bhavnagar	3	800	359	1162
Gujarat	Botad	0	70	55	125
Gujarat	Chhota Udepur	0	47	178	225
Gujarat	Dahod	1	518	781	1300
Gujarat	Devbhumi dwarka	0	37	48	85
Gujarat	Gandhinagar	16	476	475	967
Gujarat	Gir Somnath	0	206	226	432
Gujarat	Jamnagar	0	221	166	387
Gujarat	Junagadh	0	596	21	617
Gujarat	Kachchh	0	465	43	508
Gujarat	Kheda	2	230	516	748
Gujarat	Mahesana	1	583	2275	2859
Gujarat	Mahisagar	0	413	144	557
Gujarat	Morbi	59	362	313	734
Gujarat	Narmada	0	3	594	597
Gujarat	Navsari	1	142	149	292
Gujarat	Panch Mahals	0	580	324	904
Gujarat	Patan	0	440	9	449
Gujarat	Porbandar	12	141	34	187
Gujarat	Rajkot	205	1745	140	2090
Gujarat	Sabarkantha	0	1094	112	1206
Gujarat	Surat	48	109	413	570
Gujarat	Surat Municipal Corp	99	1171	1905	3175
Gujarat	Surendranagar	12	490	279	781
Gujarat	The Dangs	0	0	0	0
Gujarat	Vadodara	0	45	1	46
Gujarat	Vadodara Corp	265	223	71	559
Gujarat	Valsad	2	218	359	579
Gujarat	Vyara (Surat)	0	3	25	28

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Haryana	Ambala	0	3	135	138
Haryana	Bhiwani	0	0	521	521
Haryana	Faridabad	0	3	55	58
Haryana	Fatehabad	1	0	47	48
Haryana	Gurgaon	743	13	419	1175
Haryana	Hisar	0	75	56	131
Haryana	Jhajjar	15	11	28	54
Haryana	Jind	0	1	293	294
Haryana	Kaithal	0	0	0	0
Haryana	Karnal	2	8	236	246
Haryana	Kurukshetra	0	33	0	33
Haryana	Mahendragarh	0	3	243	246
Haryana	Mewat	0	0	0	0
Haryana	Palwal	0	56	39	95
Haryana	Panchkula	1	14	66	81
Haryana	Panipat	0	0	121	121
Haryana	Rewari	0	253	91	344
Haryana	Rohtak	0	31	36	67
Haryana	Sirsa	0	65	71	136
Haryana	Sonapat	0	15	164	179
Haryana	Yamunanagar	0	46	44	90
Himachal Pradesh	Bilaspur (HP)	0	0	0	0
Himachal Pradesh	Chamba	0	5	2	7
Himachal Pradesh	Hamirpur-HP	0	13	4	17
Himachal Pradesh	Kangra	0	44	136	180
Himachal Pradesh	Kinnaur	0	0	0	0
Himachal Pradesh	Kullu	0	4	92	96
Himachal Pradesh	Lahul & Spiti	0	0	0	0
Himachal Pradesh	Mandi	12	3	166	181
Himachal Pradesh	Shimla	0	18	105	123
Himachal Pradesh	Sirmaur	0	9	0	9
Himachal Pradesh	Una	0	0	0	0
Himachal Pradesh	Solan	0	19	0	19
Jammu & Kashmir	Anantnag	0	28	0	28
Jammu & Kashmir	Badgam	0	0	0	0
Jammu & Kashmir	Baramula	0	16	0	16
Jammu & Kashmir	Doda	0	0	0	0

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Jammu & Kashmir	Jammu	0	40	0	40
Jammu & Kashmir	Kargil	0	0	0	0
Jammu & Kashmir	Kathua	0	0	0	0
Jammu & Kashmir	Kupwara	0	51	1	52
Jammu & Kashmir	Leh (Ladakh)	0	0	0	0
Jammu & Kashmir	Poonch	0	0	0	0
Jammu & Kashmir	Udhampur	0	0	0	0
Jammu & Kashmir	Rajouri	0	0	0	0
Jammu & Kashmir	Srinagar	0	0	0	0
Jammu & Kashmir	Pulwama	9	28	0	37
Jharkhand	Bokaro	0	5	0	5
Jharkhand	Chatra	0	25	0	25
Jharkhand	Deoghar	0	0	0	0
Jharkhand	Dhanbad	0	0	0	0
Jharkhand	Dumka	0	209	11	220
Jharkhand	Garhwa	0	0	0	0
Jharkhand	Giridih	0	3	0	3
Jharkhand	Godda	0	0	0	0
Jharkhand	Gumla	0	0	0	0
Jharkhand	Hazaribagh	7	82	33	122
Jharkhand	Jamtara	0	11	0	11
Jharkhand	Khunti	0	1	0	1
Jharkhand	Kodarma	0	0	0	0
Jharkhand	Lathehar	0	0	0	0
Jharkhand	Lohardaga	0	0	0	0
Jharkhand	Pakaur	0	0	0	0
Jharkhand	Palamu	0	24	0	24
Jharkhand	Pashchimi Singhbhum	0	0	0	0
Jharkhand	Purbi Singhbhum	0	0	0	0
Jharkhand	Ramgarh	0	0	0	0
Jharkhand	Ranchi	0	104	530	634
Jharkhand	Sahibganj	0	50	0	50
Jharkhand	Saraikele-Kharsawan	0	97	0	97
Jharkhand	Simdega	0	1	0	1
Karnataka	Bagalkot	0	14	3	17
Karnataka	Bangalore City	6	9	646	661
Karnataka	Bangalore Rural	0	4	11	15
Karnataka	Bangalore Urban	0	1	80	81

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Karnataka	Belgaum	0	304	158	462
Karnataka	Bellary	0	7	178	185
Karnataka	Bidar	5	32	25	62
Karnataka	Bijapur	0	26	172	198
Karnataka	Chamarajanagar	0	13	15	28
Karnataka	Chikkaballapur	0	2	12	14
Karnataka	Chikmagalur	5	2	0	7
Karnataka	Chitradurga	13	12	50	75
Karnataka	Dakshina Kannada	0	9	103	112
Karnataka	Davanagere	0	2	153	155
Karnataka	Dharwad	0	21	5	26
Karnataka	Gadag	37	295	112	444
Karnataka	Gulbarga	0	53	56	109
Karnataka	Hassan	0	0	2	2
Karnataka	Haveri	0	0	0	0
Karnataka	Kodagu	0	0	0	0
Karnataka	Kolar	0	6	6	12
Karnataka	Koppal	0	0	0	0
Karnataka	Mandya	115	0	81	196
Karnataka	Mysore	0	0	114	114
Karnataka	Raichur	94	347	74	515
Karnataka	Ramanagara	0	6	0	6
Karnataka	Shimoga	61	51	119	231
Karnataka	Tumkur	0	81	28	109
Karnataka	Udupi	159	0	462	621
Karnataka	Uttara Kannada	0	1	14	15
Karnataka	Yadgiri	0	176	104	280
Kerala	Alappuzha	2	35	754	791
Kerala	Ernakulam	0	9	856	865
Kerala	Idukki	0	9	83	92
Kerala	Kannur	0	142	351	493
Kerala	Kasaragod	16	36	54	106
Kerala	Kollam	13	46	561	620
Kerala	Kottayam	12	122	343	477
Kerala	Kozhikode	0	39	138	177
Kerala	Malappuram	10	60	261	331
Kerala	Palakkad	0	0	125	125

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Kerala	Pathanamthitta	0	1	352	353
Kerala	Thiruvananthapuram	5	522	708	1235
Kerala	Thrissur	88	256	578	922
Kerala	Wayanad	0	59	98	157
Lakshwadeep	Lakshwadeep	0	0	0	0
Madhya Pradesh	Alirajpur	0	0	0	0
Madhya Pradesh	Anuppur	0	0	0	0
Madhya Pradesh	Ashoknagar	0	0	0	0
Madhya Pradesh	Balaghat	0	0	0	0
Madhya Pradesh	Barwani	0	2	0	2
Madhya Pradesh	Betul	0	0	0	0
Madhya Pradesh	Bhind	0	69	0	69
Madhya Pradesh	Bhopal	0	1	1	2
Madhya Pradesh	Burhanpur	3	97	64	164
Madhya Pradesh	Chhatarpur	0	0	0	0
Madhya Pradesh	Chhindwara	0	0	0	0
Madhya Pradesh	Damoh	0	0	0	0
Madhya Pradesh	Datia	0	0	0	0
Madhya Pradesh	Dewas	278	100	175	553
Madhya Pradesh	Dhar	0	57	975	1032
Madhya Pradesh	Dindori	0	0	0	0
Madhya Pradesh	Guna	0	68	0	68
Madhya Pradesh	Gwalior	1	9	0	10
Madhya Pradesh	Harda	4	187	129	320
Madhya Pradesh	Hoshangabad	0	60	140	200
Madhya Pradesh	Indore	108	681	671	1460
Madhya Pradesh	Jabalpur	116	165	94	375
Madhya Pradesh	Jhabua	0	0	0	0
Madhya Pradesh	Katni	0	0	0	0
Madhya Pradesh	Khandwa	2	160	114	276
Madhya Pradesh	Khargone	76	178	71	325
Madhya Pradesh	Mandla	0	0	0	0
Madhya Pradesh	Mandsaur	16	282	110	408
Madhya Pradesh	Morena	0	11	967	978
Madhya Pradesh	Narsinghpur	0	77	2	79
Madhya Pradesh	Neemuch	41	762	130	933
Madhya Pradesh	Panna	0	0	0	0

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Madhya Pradesh	Raisen	0	0	0	0
Madhya Pradesh	Rajgarh	0	1	43	44
Madhya Pradesh	Ratlam	0	242	46	288
Madhya Pradesh	Rewa	0	0	0	0
Madhya Pradesh	Sagar	0	15	78	93
Madhya Pradesh	Satna	0	88	1	89
Madhya Pradesh	Sehore	0	54	0	54
Madhya Pradesh	Seoni	0	0	0	0
Madhya Pradesh	Shahdol	0	0	0	0
Madhya Pradesh	Shajapur	0	0	0	0
Madhya Pradesh	Sheopur	0	0	0	0
Madhya Pradesh	Shivpuri	24	9	0	33
Madhya Pradesh	Sidhi	0	0	0	0
Madhya Pradesh	Singrauli	0	0	0	0
Madhya Pradesh	Tikamgarh	0	0	0	0
Madhya Pradesh	Ujjain	0	68	284	352
Madhya Pradesh	Umariya	0	0	0	0
Madhya Pradesh	Vidisha	0	0	0	0
Maharashtra	Ahmadnagar	0	155	60	215
Maharashtra	Ahmednagar MC	0	17	441	458
Maharashtra	Akola	2	56	33	91
Maharashtra	Akola MC	22	57	347	426
Maharashtra	Amravati	0	60	92	152
Maharashtra	Amravati MC	0	8	173	181
Maharashtra	Andheri East	10	149	502	661
Maharashtra	Andheri West	261	32	826	1119
Maharashtra	Aurangabad MC	100	250	501	851
Maharashtra	Aurangabad-MH	2	8	0	10
Maharashtra	Bail Bazar Road	2005	73	393	2471
Maharashtra	Bandra East	106	144	198	448
Maharashtra	Bandra West	0	44	278	322
Maharashtra	Bhandara	0	58	91	149
Maharashtra	Bhiwandi Nizampur	0	5	70	75
Maharashtra	Bid	0	138	413	551
Maharashtra	Borivali	31	96	109	236
Maharashtra	Buldana	8	541	150	699
Maharashtra	Byculla	114	3	37	154

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Maharashtra	Centenary	0	161	8	169
Maharashtra	Chandrapur	0	85	221	306
Maharashtra	Chembur	0	126	437	563
Maharashtra	Colaba	0	0	453	453
Maharashtra	Dadar	12557	452	246	13255
Maharashtra	Dahisar	715	25	87	827
Maharashtra	Dhule	0	113	17	130
Maharashtra	Dhule MC	0	109	90	199
Maharashtra	Gadchiroli	0	11	14	25
Maharashtra	Ghatkopar	9	460	1242	1711
Maharashtra	Gondiya	0	772	408	1180
Maharashtra	Goregaon	1463	341	69	1873
Maharashtra	Govandi	0	686	277	963
Maharashtra	Grant Road	0	483	48	531
Maharashtra	Hingoli	19	62	2	83
Maharashtra	Jalgaon	0	224	445	669
Maharashtra	Jalgaon MC	22	174	43	239
Maharashtra	Jalna	5	228	206	439
Maharashtra	Kalyan Dombivli MC	0	5	165	170
Maharashtra	Kandivali	32	4	30	66
Maharashtra	Kolhapur	5	245	161	411
Maharashtra	Kolhapur MC	225	489	237	951
Maharashtra	Kurla	9	407	337	753
Maharashtra	Latur	0	121	153	274
Maharashtra	Malad	262	871	270	1403
Maharashtra	Malegoan Corporation	0	72	494	566
Maharashtra	Mira Bhayander	8	33	77	118
Maharashtra	Mulund	34	403	41	478
Maharashtra	Nagpur	0	57	2	59
Maharashtra	Nagpur MC	91	270	278	639
Maharashtra	Nanded	0	120	74	194
Maharashtra	Nanded Waghela MC	0	1398	288	1686
Maharashtra	Nandurbar	87	614	146	847
Maharashtra	Nashik	3	106	54	163
Maharashtra	Nashik Corp	0	14	171	185
Maharashtra	Navi Mumbai	229	37	268	534
Maharashtra	Osmanabad	8	29	233	270

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Maharashtra	Parbhani	0	208	1	209
Maharashtra	Parel	0	86	0	86
Maharashtra	Pimpri Chinchwad	105	256	323	684
Maharashtra	Prabhadevi	3	105	0	108
Maharashtra	Pune	281	43	489	813
Maharashtra	Pune Rural	63	532	618	1213
Maharashtra	Raigarh-MH	0	59	64	123
Maharashtra	Ratnagiri	1	29	152	182
Maharashtra	Sangli	36	429	109	574
Maharashtra	Sangli MC	17	58	24	99
Maharashtra	Satara	12	792	1707	2511
Maharashtra	Sindhudurg	0	6	57	63
Maharashtra	Sion	0	68	354	422
Maharashtra	Solapur	0	542	14	556
Maharashtra	Solapur MC	0	142	0	142
Maharashtra	Thane	0	74	251	325
Maharashtra	Thane MC	3	0	46	49
Maharashtra	Ulhasnagar MC	0	30	94	124
Maharashtra	Vasai Virar City MC	0	0	0	0
Maharashtra	Vikhroli	170	17	414	601
Maharashtra	Wardha	0	49	69	118
Maharashtra	Washim	1	23	260	284
Maharashtra	Yavatmal	0	96	67	163
Manipur	Bishnupur	0	0	0	0
Manipur	Chandel	0	0	0	0
Manipur	Churachandpur	0	0	353	353
Manipur	Imphal East	0	0	16	16
Manipur	Imphal West	102	0	10	112
Manipur	Senapati	0	0	0	0
Manipur	Tamenglong	0	0	0	0
Manipur	Thoubal	0	0	0	0
Manipur	Ukhrul	0	0	8	8
Meghalaya	East Garo Hills	0	0	0	0
Meghalaya	East Khasi Hills	0	189	506	695
Meghalaya	Jaintia Hills	0	147	0	147
Meghalaya	Ri Bhoi	0	0	0	0
Meghalaya	South Garo Hills	0	1	0	1

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Meghalaya	West Garo Hills	0	0	0	0
Meghalaya	West Khasi Hills	0	51	0	51
Mizoram	Aizawl	0	0	51	51
Mizoram	Champhai	0	0	0	0
Mizoram	Kolasib	0	0	0	0
Mizoram	Lawngtlai	0	0	0	0
Mizoram	Lunglei	0	0	0	0
Mizoram	Mamit	0	0	0	0
Mizoram	Saiha	0	0	0	0
Mizoram	Serchhip	0	0	0	0
Nagaland	Dimapur	0	0	0	0
Nagaland	Kiphire	0	0	0	0
Nagaland	Kohima	0	0	0	0
Nagaland	Longleng	0	0	0	0
Nagaland	Mokokchung	0	0	0	0
Nagaland	Mon	0	0	0	0
Nagaland	Peren	0	0	0	0
Nagaland	Phek	0	0	0	0
Nagaland	Tuensang	0	0	0	0
Nagaland	Wokha	0	0	0	0
Nagaland	Zunheboto	0	0	0	0
Odisha	Anugul	0	9	3	12
Odisha	Balangir	0	30	27	57
Odisha	Baleshwar	0	118	110	228
Odisha	Bargarh	0	74	0	74
Odisha	Bhadrak	0	0	0	0
Odisha	Bhubaneswar MC	0	0	34	34
Odisha	Boudh	0	0	0	0
Odisha	Cuttack	0	0	0	0
Odisha	Debagarh	0	0	0	0
Odisha	Dhenkanal	0	2	0	2
Odisha	Gajapati	0	0	8	8
Odisha	Ganjam	0	54	1	55
Odisha	Jagatsinghapur	0	13	3	16
Odisha	Jajapur	0	41	0	41
Odisha	Jharsuguda	0	1	2	3
Odisha	Kalahandi	0	5	70	75

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Orissa	Kandhamal	0	0	0	0
Orissa	Kendrapara	0	0	0	0
Orissa	Kendujhar	0	0	0	0
Orissa	Khordha	0	0	0	0
Orissa	Koraput	0	28	0	28
Odisha	Malkangiri	0	0	0	0
Odisha	Mayurbhanj	0	0	19	19
Odisha	Nabarangapur	0	0	26	26
Orissa	Nayagarh	0	0	0	0
Orissa	Nuapada	0	0	0	0
Orissa	Puri	0	0	0	0
Orissa	Rayagada	0	0	0	0
Odisha	Sambalpur	0	35	16	51
Odisha	Sonapur	0	2	0	2
Odisha	Sundargarh	0	84	1	85
Puducherry	Puducherry	0	2	0	2
Punjab	Amritsar	30	62	78	170
Punjab	Barnala	23	0	6	29
Punjab	Bathinda	67	8	144	219
Punjab	Faridkot	2	4	4	10
Punjab	Fatehgarh Sahib	0	0	8	8
Punjab	Fazilka	0	0	0	0
Punjab	Firozpur	0	0	17	17
Punjab	Gurdaspur	0	150	6	156
Punjab	Hoshiarpur	0	1	0	1
Punjab	Jalandhar	0	1	0	1
Punjab	Kapurthala	0	0	0	0
Punjab	Ludhiana	1	7	8	16
Punjab	Mansa-PN	0	27	21	48
Punjab	Moga	0	10	20	30
Punjab	Mohali	0	8	38	46
Punjab	Muktsar	0	0	12	12
Punjab	Nawanshahr	15	1	46	62
Punjab	Pathankot	0	0	44	44
Punjab	Patiala	0	24	27	51
Punjab	Rupnagar	1	4	54	59
Punjab	Sangrur	0	7	0	7

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Punjab	Tarn Taran	0	0	0	0
Rajasthan	Ajmer	1	120	341	462
Rajasthan	Alwar	0	21	1035	1056
Rajasthan	Banswara	0	69	64	133
Rajasthan	Baran	0	41	86	127
Rajasthan	Barmer	0	16	57	73
Rajasthan	Bharatpur	21	0	190	211
Rajasthan	Bhilwara	147	302	559	1008
Rajasthan	Bikaner	57	134	5	196
Rajasthan	Bundi	0	636	8	644
Rajasthan	Chittaurgarh	0	252	48	300
Rajasthan	Churu	0	0	6	6
Rajasthan	Dausa	0	3	109	112
Rajasthan	Dhaulpur	0	187	0	187
Rajasthan	Dungarpur	0	285	0	285
Rajasthan	Ganganagar	42	11	339	392
Rajasthan	Hanumangarh	0	2	35	37
Rajasthan	Jaipur	0	346	531	877
Rajasthan	Jaipur DTC II	19	300	401	720
Rajasthan	Jaisalmer	0	0	0	0
Rajasthan	Jalore	0	0	77	77
Rajasthan	Jhalawar	0	0	90	90
Rajasthan	Jhunjhunun	0	436	31	467
Rajasthan	Jodhpur	2	14	704	720
Rajasthan	Karauli	0	102	0	102
Rajasthan	Kota	0	47	52	99
Rajasthan	Nagaur	0	0	900	900
Rajasthan	Pali	0	0	144	144
Rajasthan	Pratapgarh-RJ	0	0	0	0
Rajasthan	Rajsamand	0	93	156	249
Rajasthan	Sawai Madhopur	0	0	0	0
Rajasthan	Sikar	0	482	632	1114
Rajasthan	Sirohi	0	0	92	92
Rajasthan	Tonk	0	108	198	306
Rajasthan	Udaipur	48	37	465	550
Sikkim	East Sikkim	0	0	0	0
Sikkim	North Sikkim	0	0	0	0

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Sikkim	Singtam	0	0	0	0
Sikkim	South Sikkim	0	0	0	0
Sikkim	West Sikkim	0	0	0	0
Tamil Nadu	Central Chennai	58	9	336	403
Tamil Nadu	Coimbatore	107	27	428	562
Tamil Nadu	Cuddalore	0	0	89	89
Tamil Nadu	Dharmapuri	0	28	59	87
Tamil Nadu	Dindigul	0	0	249	249
Tamil Nadu	Erode	0	4	65	69
Tamil Nadu	Kancheepuram	0	1	150	151
Tamil Nadu	Kanniyakumari	24	13	55	92
Tamil Nadu	Karur	0	57	2	59
Tamil Nadu	Krishnagiri	0	0	3	3
Tamil Nadu	Madurai	151	333	809	1293
Tamil Nadu	Nagapattinam	0	0	0	0
Tamil Nadu	Namakkal	7	72	4	83
Tamil Nadu	Chennai	0	104	20	124
Tamil Nadu	Perambalur	0	0	0	0
Tamil Nadu	Pudukottai	0	0	0	0
Tamil Nadu	Ramanathapuram	0	67	13	80
Tamil Nadu	Salem	0	12	84	96
Tamil Nadu	Sivaganga	0	2	33	35
Tamil Nadu	South Chennai	0	0	99	99
Tamil Nadu	Thanjavur	0	5	0	5
Tamil Nadu	The Nilgiris	0	4	3	7
Tamil Nadu	Theni	0	1	1	2
Tamil Nadu	Thiruvallur	0	1	1	2
Tamil Nadu	Thiruvarur	0	24	0	24
Tamil Nadu	Tiruchirappalli	0	135	129	264
Tamil Nadu	Tirunelveli	0	64	28	92
Tamil Nadu	Tiruppur	0	57	180	237
Tamil Nadu	Tiruvannamalai	0	49	7	56
Tamil Nadu	Thoothukudi	0	23	74	97
Tamil Nadu	Vellore	0	291	1340	1631
Tamil Nadu	Viluppuram	0	4	10	14
Tamil Nadu	Virudhunagar	0	171	10	181
Telangana	Adilabad	0	1	5	6

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Telangana	Bhadrachalam	0	57	24	81
Telangana	Hyderabad	0	22	110	132
Telangana	Karimnagar	0	0	223	223
Telangana	Khammam	0	403	161	564
Telangana	Mahbubnagar	0	10	3	13
Telangana	Medak	0	22	29	51
Telangana	Nalgonda	0	0	48	48
Telangana	Nizamabad	0	10	163	173
Telangana	Rangareddi	65	0	78	143
Telangana	Warangal	0	5	17	22
Tripura	Dhalai	0	0	0	0
Tripura	Gomati	0	0	0	0
Tripura	Khowai	0	0	0	0
Tripura	North Tripura	0	0	0	0
Tripura	Sepahijala	0	0	0	0
Tripura	South Tripura	0	0	0	0
Tripura	Unakoti	0	0	0	0
Tripura	West Tripura	0	0	10	10
Uttar Pradesh	Agra	0	7	0	7
Uttar Pradesh	Aligarh	113	95	78	286
Uttar Pradesh	Allahabad	0	0	6	6
Uttar Pradesh	Ambedkar Nagar	0	0	0	0
Uttar Pradesh	Amethi	0	0	0	0
Uttar Pradesh	Auraiya	12	42	44	98
Uttar Pradesh	Azamgarh	0	0	0	0
Uttar Pradesh	Baghpat	0	12	0	12
Uttar Pradesh	Bahraich	0	0	0	0
Uttar Pradesh	Ballia	0	72	0	72
Uttar Pradesh	Balrampur	0	59	5	64
Uttar Pradesh	Banda	0	62	0	62
Uttar Pradesh	Barabanki	0	0	0	0
Uttar Pradesh	Bareilly	240	816	1581	2637
Uttar Pradesh	Basti	0	330	10	340
Uttar Pradesh	Bijnor	92	714	693	1499
Uttar Pradesh	Budaun	0	0	12	12
Uttar Pradesh	Bulandshahar	191	483	205	879
Uttar Pradesh	Chandauli	0	38	9	47

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Uttar Pradesh	Chitrakoot	0	4	2	6
Uttar Pradesh	Deoria	0	0	0	0
Uttar Pradesh	Etah	6	79	223	308
Uttar Pradesh	Etawah	0	256	72	328
Uttar Pradesh	Faizabad	0	0	0	0
Uttar Pradesh	Farrukhabad	0	66	85	151
Uttar Pradesh	Fatehpur	0	0	56	56
Uttar Pradesh	Firozabad	0	40	20	60
Uttar Pradesh	Gautam Budh Nagar	0	0	36	36
Uttar Pradesh	Ghaziabad	13	59	193	265
Uttar Pradesh	Ghaziipur	0	0	0	0
Uttar Pradesh	Gonda	0	4	55	59
Uttar Pradesh	Gorakhpur	0	910	0	910
Uttar Pradesh	Hamirpur-UP	0	107	10	117
Uttar Pradesh	Hapur	0	14	135	149
Uttar Pradesh	Hardoi	21	0	86	107
Uttar Pradesh	Hathras	0	0	235	235
Uttar Pradesh	Jalaun	0	680	0	680
Uttar Pradesh	Jaunpur	0	12	0	12
Uttar Pradesh	Jhansi	0	4	1048	1052
Uttar Pradesh	Jyotiba Phule Nagar	0	28	0	28
Uttar Pradesh	Kannauj	0	10	8	18
Uttar Pradesh	Kanpur Dehat	0	7	6	13
Uttar Pradesh	Kanpur Nagar	141	522	19	682
Uttar Pradesh	Kanshiram Nagar	0	0	0	0
Uttar Pradesh	Kaushambi	0	14	9	23
Uttar Pradesh	Kheri	0	3	3	6
Uttar Pradesh	Kushinagar	0	198	0	198
Uttar Pradesh	Lalitpur	0	190	451	641
Uttar Pradesh	Lucknow	0	102	116	218
Uttar Pradesh	Maharajganj	0	3	0	3
Uttar Pradesh	Mahoba	0	0	0	0
Uttar Pradesh	Mainpuri	0	0	0	0
Uttar Pradesh	Mathura	0	1	842	843
Uttar Pradesh	Mau	0	0	0	0
Uttar Pradesh	Meerut	0	565	0	565
Uttar Pradesh	Mirzapur	0	0	0	0
Uttar Pradesh	Moradabad	171	857	494	1522

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
Uttar Pradesh	Muzaffarnagar	0	102	109	211
Uttar Pradesh	Pilibhit	179	489	178	846
Uttar Pradesh	Pratapgarh	0	1	0	1
Uttar Pradesh	Rae Bareli	0	5	27	32
Uttar Pradesh	Rampur	14	435	45	494
Uttar Pradesh	Saharanpur	44	418	139	601
Uttar Pradesh	Sambhal	0	322	10	332
Uttar Pradesh	Sant Kabir Nagar	0	0	25	25
Uttar Pradesh	Sant Ravidas Nagar	0	151	10	161
Uttar Pradesh	Shahjahanpur	0	0	0	0
Uttar Pradesh	Shamli	4	1	33	38
Uttar Pradesh	Shravasti	0	0	0	0
Uttar Pradesh	Siddharthnagar	0	0	0	0
Uttar Pradesh	Sitapur	0	351	242	593
Uttar Pradesh	Sonbhadra	0	0	0	0
Uttar Pradesh	Sultanpur	0	0	0	0
Uttar Pradesh	Unnao	59	78	68	205
Uttar Pradesh	Varanasi	0	0	15	15
Uttarakhand	Almora	0	0	0	0
Uttarakhand	Bageshwar	0	0	0	0
Uttarakhand	Chamoli	0	0	0	0
Uttarakhand	Champawat	0	0	0	0
Uttarakhand	Dehradun	0	143	332	475
Uttarakhand	Garhwal	0	0	1	1
Uttarakhand	Hardwar	0	0	34	34
Uttarakhand	Nainital	0	356	162	518
Uttarakhand	Pithoragarh	0	12	146	158
Uttarakhand	Rudraprayag	0	0	28	28
Uttarakhand	Tehri Garhwal	0	0	0	0
Uttarakhand	Udhamsingh Nagar	0	45	14	59
Uttarakhand	Uttarkashi	0	0	0	0
West Bengal	Alipore	0	0	0	0
West Bengal	Bagbazar	0	0	0	0
West bengal	Bankura	1	16	29	46
West bengal	Barddhaman	0	12	1	13
West bengal	Behala	0	4	0	4
West bengal	Birbhum	0	0	34	34

State/UT	District	Number of patients notified by (Laboratories - Private)	Number of patients notified by (Single clinic - Private)	Number of patients notified by (Multi-clinic - Private)	Total No of TB patients notification by private sector ²
West bengal	Dakshin Dinajpur	0	0	30	30
West bengal	Darjiling	0	0	4	4
West bengal	Haora	0	282	15	297
West bengal	Hazi	0	2	0	2
West bengal	Hugli	0	2	8	10
West bengal	Jalpaiguri	7	14	12	33
West bengal	Koch Bihar	6	38	3	47
West Bengal	Maldah	0	0	0	0
West bengal	Maniktala	0	1	0	1
West bengal	Manshatala	0	7	0	7
West Bengal	Medinipur East	0	0	0	0
West bengal	Medinipur West	0	0	19	19
West Bengal	MTMTB Boral	0	0	0	0
West Bengal	Murshidabad	0	0	0	0
West bengal	Nadia	0	48	0	48
West bengal	North 24 Parganas	13	17	22	52
West Bengal	Puruliya	0	0	0	0
West Bengal	South 24 Parganas	0	0	0	0
West Bengal	Strand Bank	0	0	0	0
West bengal	Tangra	0	18	0	18
West Bengal	Tollygunge	0	0	0	0
West bengal	Uttar Dinajpur	0	14	0	14
Grand Total		27628	77881	79103	184802

16

CHAPTER

Initiatives & Success Stories from Grassroot



www.tbcinidia.gov.in
www.nikshay.gov.in

16

CHAPTER

Initiatives & Success Stories from Grassroot

Success Stories

Nagaland:

A Medicine Shop-owner in Kohima, Nagaland exemplifies community involvement in TB control.



Kohima, the picturesque capital of the state of Nagaland is nested in the high reaches of the mountains of North Eastern India. Among many difficulties it has the difficulties of accessibility, remoteness and unfriendly terrains. But a person like Mr. Santu Thapa has extended his hand to reach the unreached and make the life easier for many patients suffering from Tuberculosis for them to take medicines and get cured from the disease.

The motivated man owns a pharmacy named as “Community Pharmacy” in the town of Kohima and he took the responsibility of providing DOTS to the Tuberculosis patients since last few years and established a DOTS centre in his medicine shop.

Since then he has successfully completed treatment of 35 TB patients and is still continuing with the service to other patients. In such a difficult topography his service has made a difference to the lives of the TB patients and helped them to get cured. The attached

photograph shows Mr.Thapa with the patient named Surju Rai

West Bengal

JHONG BAHADUR BHUJEL

Jong Bahadur Bhujel was a TB patient. Now he was 54 years old. He lives in Raidak Tea Garden. At first he was suffering chest symptomatic problem since very long time. Then he started private treatment. Three month later, he did not improve of his problem. After that he came Alipurduar Sub-Division Hospital in the year 2007, month of July. He was diagnosed sputum negative pulmonary TB. He started ATD (Govt.) in Raidak T.E. Hospital in 23rd July 2007. He has taken ATD regularly. After eight month later, he was treatment completed declared by the MO. Now he is doing our IEC. Programme regularly. He is motivating the other people to take the TB medicine properly.

Meghalaya

MDR-TB Patient, Kharon Sangma, PMDT No. 02/2015 from Chandrapathar, Rajabala under Bhaitbari PHC



was admitted in TB Hospital Tura then he absconded without informing the authorities, he stopped taking medicines nearly for one month and could not trace him. Staff tried to contact him through phone but he never picked up the phone by seeing the staff's phone number. STS from Phulbari TU visited his house but could not find him.

MOTC, Tura TU and DOT Plus Supervisor visited him. On that day it seem he was sitting near the road side but seeing the RNTCP Vehicle, he ran away from the site. When we reached his house, we found that he was sleeping on his bed pretending to be seriously ill. When we enquire him, he refused not to continue his medicine. After a long motivation along with his family members and villagers, at last he agreed to continue.

It's a short story and a real fact that we came across one MDR-TB patient of 2015. Elkam Marak Male/22, PMDT No. 38/2015 of Bangalmura under Resu TU, North Garo Hills was bit annoyed due to prolonged I.P. even after six month.

He compared himself with his co-MDR-TB patient, Barbose Marak who was Extra Pulmonary, PMDT No. 09/205 of Selsella under Phulbari TU since Extra Pulmonary patient doesn't need to do monthly sputum follow-up as pulmonary patient. Therefore DOT-Plus Committee members have decided to start C.P. for Barbose Marak, Extra Pulmonary after completion of six month.

On seeing this, Elkam Marak became unhappy as he has to continue with injection. Though he has completed six month yet DOT Plus Committee members could not start him C.P. due to his sputum result. His sputum result was as follows. 3rd month negative, 4th month contamination, so committee members have to wait for another one month for the 5th month sample report.

And at that time, this very patient became irregular and stopped taking medicine for at least one week.

And as soon as we got the news, we ask DOT-Plus Supervisor of East Garo Hills to visit him and to motivate him and now he is back to mainstream after getting result of 5th month sample which was negative and DOT-Plus Committee members shifted him to continuation phase.

It's a fact and it might happen to any other DOT-Plus Sites too.

Haryana :



TB Unit Siwan, Kaithal District, Haryana

1. Haryana state has scaled up the diabetic mellitus screening for all TB patients registered under RNTCP. Training of all Deputy CS (TB) been held at SIHFW Panchkula by State TB cell on 26th November 2015.
2. For capacity building of the RNTCP staff, state has divided Haryana into training and review zones for PMDT, TBHIV and ACSM components. State will utilize these zones for intensive training of field staff for all new initiatives. Zonal Training for 6 districts at Gurgaon has already been planned in month of March.

3. ZMQ an ICT initiative for improvement in treatment adherence of TB patient, scaled up from 20 TB patients to all TB patients in the district of Mewat.
4. Mission TB free Haryana campaign launched by Hon'ble Chief Minister, Haryana in Medanta Medcity Hospital, Gurgaon. In this campaign Mobile X-Ray facility has been provided by Medanta Medcity Hospital which will cover five districts of Haryana for improvement in TB case detection. With encouraging results the campaign will be expanded to whole of Haryana.

Jammu :

1. Display of banners, pamphlets, displaying knowledge about the disease, its diagnosis, treatment regimens offered, counseling and confidence building in patients during treatment continuation during the Mega Health Mela at Basohli, Kathua District Jammu Division, May



2015. All suspected cases were referred to SDH Basohli for sputum examination. Various activities like skits on TB and other diseases, cultural activities by school children were also performed.

Jharkhand :

Intensified Case Finding (ICF) Camps in High Risk Settings of Jharkhand India

Being predominantly a tribal and resource constraint state, Jharkhand has been facing challenges in coping with Goals of Universal Access to TB care. Case Finding Activities in like Suspect Referral and Screening had been a major challenge for TB Control Programme in Jharkhand due to peculiar geo-political settings. However during 2015, State has witnessed Annual Suspect Examination Rate (SER) of ~500 per lakh population through network of ~300 Diagnostic Microscopy Centers.

Intensified Case Finding Activities in selected High Risk Settings was one among the Focused Action Points planned for Year 2015-16. Districts namely West Singhbhum, Seraikella – Kharswan, Gumla, Ranchi, Hazaribagh etc. took lead in setting examples of ICF impact in Case Finding scenario by achieving annual Sputum Examination Rate (SER) of > 500/lakh population and relative rise in SER in comparison to last year.

Socially as well as Clinically Vulnerable populations such as Contacts, Tribals, Miners, Prison Inmates, PLHA etc. were targeted for Screening in Outreach camps. Opportunities like Janata Darbar, VHND, Health Mela, Outreach Camps of NHM, Polio Vaccination Rounds etc. were also encased for Sputum Collection and referrals. Early Morning Sputum Sample Collections from presumptive cases were assisted by ASHAs, Axshya Project NGOs and Community Volunteers. Diagnosed cases were traced and counselled for Treatment Initiation.

Though, the state has witnessed a decrease in Suspect Examination and Case Notification during 2015; however, these districts had been able to achieve positive trends in terms of Case Finding Efforts.



ICF in Janata Darbar Gumla, Jharkhand



Seraikella - Kharswan



ICF Camp at Goikera, West Singhbhum



Janata Darbar Hazaribagh

“Each1 Take Care of 1”-An initiative to support the TB patients in Jharkhand:

Keeping in view of the necessity of nutrition need of the TB Patients the District TB Forum (DTF), Hazaribagh has started collecting personal donation from their circle across India and abroad. The forum has initiated a nutritional support campaign with a slogan of “Each one take care of One” with a social networking site https://www.facebook.com/groups/710280202420554/842561145859125/?notif_t=group_comment_follow with more than 3000 members having liked the page. The DTF has a clear understanding that Community, social and nutritional support is paramount to coping with the disease of tuberculosis wherein the long duration of the

disease, its treatment and multidrug therapy takes toll on the patient. Social media is a powerful tool for advocacy wherein people get closer interact to share their emotions, information, ideas, views, pictures and videos.



With this approach an appeal was made to adopt at least one TB patient and provide nutritional support to the patient. The group is now well known as “Each1TakeCare1-District TB Forum”



Since the formation of this group in Dec 2014 and by the end of 2015, more than 100 patients have been provided the nutritional support from Bishnugarh, Barahi, Barkatha, Charahi, Narki, Lawalong, Pratappur and Kunda.

Further by the end of 2015, this group has collected more than INR 50000 along with ~300 kg of pulses and distributed to patients. The DTF also distributed protein powder to patients in bare need along with support of towel to some patients for use in summer.

Assam :

TB Service at your doorstep: Intervention at Community Level

Lungsung, a forest village situated in Kokrajhar district of Assam bordering Bhutan has been deprived of regular health services because of its extreme remoteness and security issues. The inhabitants of the village are displaced people of ethnic clash victims of 1996 who were later rehabilitated by district administration.



Under the leadership of Dr. Kaushik Das, (District TB officer), the RNTCP team reached the village

on 22/4/15 and met Mr. Tanti Soren, Head Master of Lungsung LP school and Supal Hembrom, social activist of that area and organized a community awareness meeting in the LP school. Following a successful awareness campaign among the people of that area, Mr. Supal Hembrom was engaged as a sputum collector cum DOT provider and since then he has been performing his duties. Till November 2015 he had collected 31 nos. of sputum samples, out of which 9 were found to be sputum positive cases and all are getting DOTS through him. The district has planned to conduct similar activities in other difficult to reach areas.

Media Fellowship on RNTCP:

During last few years, to accelerate ACSM campaign on RNTCP a growing need was felt for active involvement of media for effective and mass awareness generation.



State TB Cell officials interacting with Guwahati Press Club official before launching of the Media Fellowship Programme on RNTCP

Considering this State TB Cell of Assam decided to launch a ‘Media Fellowship Programme on RNTCP’ in the State. In collaboration with Guwahati Press Club, proposals were invited from journalist of the state. Among 16 proposals, two journalists were selected on April, 2015 by Press Club of Guwahati.

Later, they were sensitized on RNTCP through one to one interaction and also exposing them to various activities of RNTCP through field visits.

The selected journalists were given ₹20,000 as fellowship for two months period and were assigned to publish articles in leading Assamese newspapers of Assam. Both the journalists published 4 articles each in leading newspapers like Dainik Asom, Asomiya Khabar and focused not only on spreading awareness regarding free diagnostic and treatment facilities available under RNTCP but also highlighting on the age-old stigma associated with the disease. Many public queries were received by State TB Cell officials following publishing of these articles. This effort was lauded in various forums and generated further demand for continuing this activity.

Arunachal Pradesh



During 2015 the State actively engaged in various advocacy and communication activities across the State with focus on school based activities, community sensitization and patient provider meetings as well as radio talks.

Karnataka :

Story of 170 year old Government Wenlock District Hospital Mangalore turning into full-fledged DR TB



centre despite all odds. Wenlock Government District Hospital is a tertiary care hospital catering health care needs of the 8-10 adjacent districts, located in the heart of Mangalore City in Karnataka.

State has set an example for feasibility of establishing well-functioning Drug resistant TB centre (DR TB centre) at district level government hospitals. In the current context of urgent need for decentralization of DR TB services in each district, this example is worth sharing.

A leprosy ward located in the hospital campus was unused for many years and was almost in a ruining phase, but had to be leveraged for the want of space. The building was in a pathetic condition, District surgeon of the hospital Dr Rajeshwari Devi H R took up extraordinary bold efforts to mobilize resources from Arogya Raksha Samithi fund to renovate the existing building over and above the budget provided by the programme. The building was renovated and a well-equipped 10 bedded ward was established as per the National Air borne infection control guidelines. All her efforts were strongly supported by Dr M Ramakrishna Rao, District Health Officer and Dr Anil S, STO Karnataka.

However establishing DR TB centre invited criticism by the general public for the fear of spread of MDR TB as the location was strategic. This issue was then handled sensitively by creating positive awareness and reassurance of adequate air borne infection control measures through various influential stake holders of the community.

After series of sensitizations and meetings, DR TB committee was formed and the faculties were trained at national level. Today the centre has a full-fledged infrastructure with fully motivated team of faculties providing high level care and support for DR TB patients including nutritional support. So far 101 DRTB patients were successfully initiated on treatment since January 2015 till date and 87 cases are on regular treatment. A garden with herbal plants is all set to provide a healthy arena for DRTB patients in the vicinity.

The hospital now aims to establish a critical care unit with Ventilators for critically ill Drug Resistant TB patients. This state of art DR TB centre with CCU is sure to set an example to other district level hospitals in the country to move towards Universal Access to DR TB services.

Mizoram :

Realizing the importance of NSP Case Detection, it was felt that passive



case finding was not going to cut the ambitious plans of RNTCP in the state. Following an important state level meeting held in the capital, it was decided that sputum cups would be placed at different Urban Health Centres which would be

collected by a designated collector for transfer and subsequently examination of the collected specimens. This method has proven to be of quite significance and will be continued until further evidence surfaces on its effectiveness.

Diversity of different cultures is an integral part of the state. This means that language and cultural barriers needs to be crossed regarding public awareness of TB among the different people living here. Keeping this in mind, important leaflets on TB has been translated to Bru and Chakma languages for Bru and Chakma people respectively. It is hoped that this will create a much needed awareness in these areas where lifestyles and hygienic practices are relatively low.

Though Mizoram is a small state, poverty of many of the patients and geographical barriers often present barriers in diagnosis and treatment of TB, including MDR-TB. Sputum samples of Line list suspects for MDR-TB who cannot afford to leave their daily works are collected at their doorsteps in some districts of the state. Long walks on makeshift roads and sometimes boat trips are undertaken to ensure that patients get the treatment and attention they deserve.

Maharashtra



Maharashtra RNTCP state level review through Video conferencing in 2015.

Innovative cost effective Review strategy of RNTCP Maharashtra; Dr Kamble STO Maharashtra and Dr Pawar Deputy STO MH taking review through Video Conferencing

State level trophy was awarded to best



performing worker in RNTCP in state level function in Maharashtra on occasion of World TB Day 2015.

Gujarat

A state has organised one day motivational programme (Beyond Mind power) with the help of professional management guru during December 2015 for State and District RNTCP officials.



Sensitization workshop for all Multipurpose Health Worker (MPHW) to do house to house activity

for active case finding throughout state during October'15



Three days State level sensitization for workshop was organised for all STS, STLS, DPS, DPPMC, DPC and TBHVs during December 15.

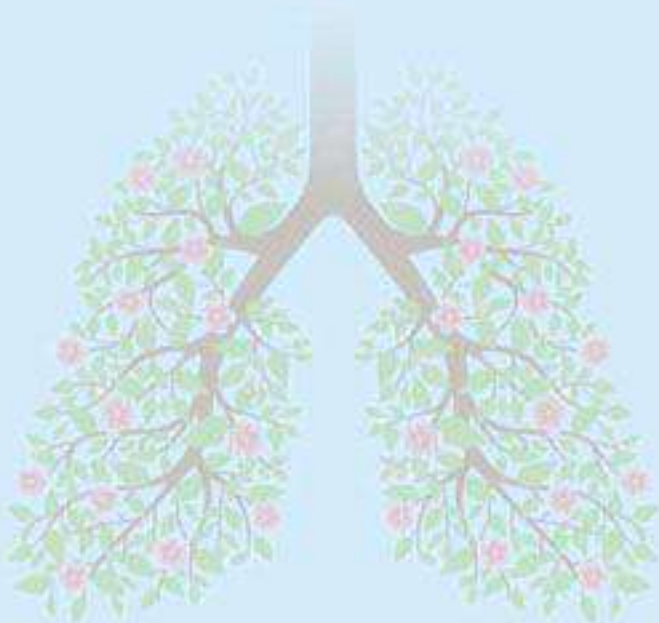




सत्यमेव जयते
Government of India

TB INDIA 2016

REVISED NATIONAL TB CONTROL PROGRAMME ANNUAL STATUS REPORT



UNITE TO END TB

Central TB Division

Directorate General of Health Services

Ministry of Health and Family Welfare, Nirman Bhawan, New Delhi - 110108

www.tbcindia.gov.in



This Publication can be obtained from

Central TB Division

Directorate General of Health Services

Ministry of Health and Family Welfare

Nirman Bhavan, New Delhi - 110108

<http://www.tbcindia.gov.in>

March 2016

©Central TB Division, Directorate General of Health of Health Services

Printed by: Current Print Productions (P) Ltd.