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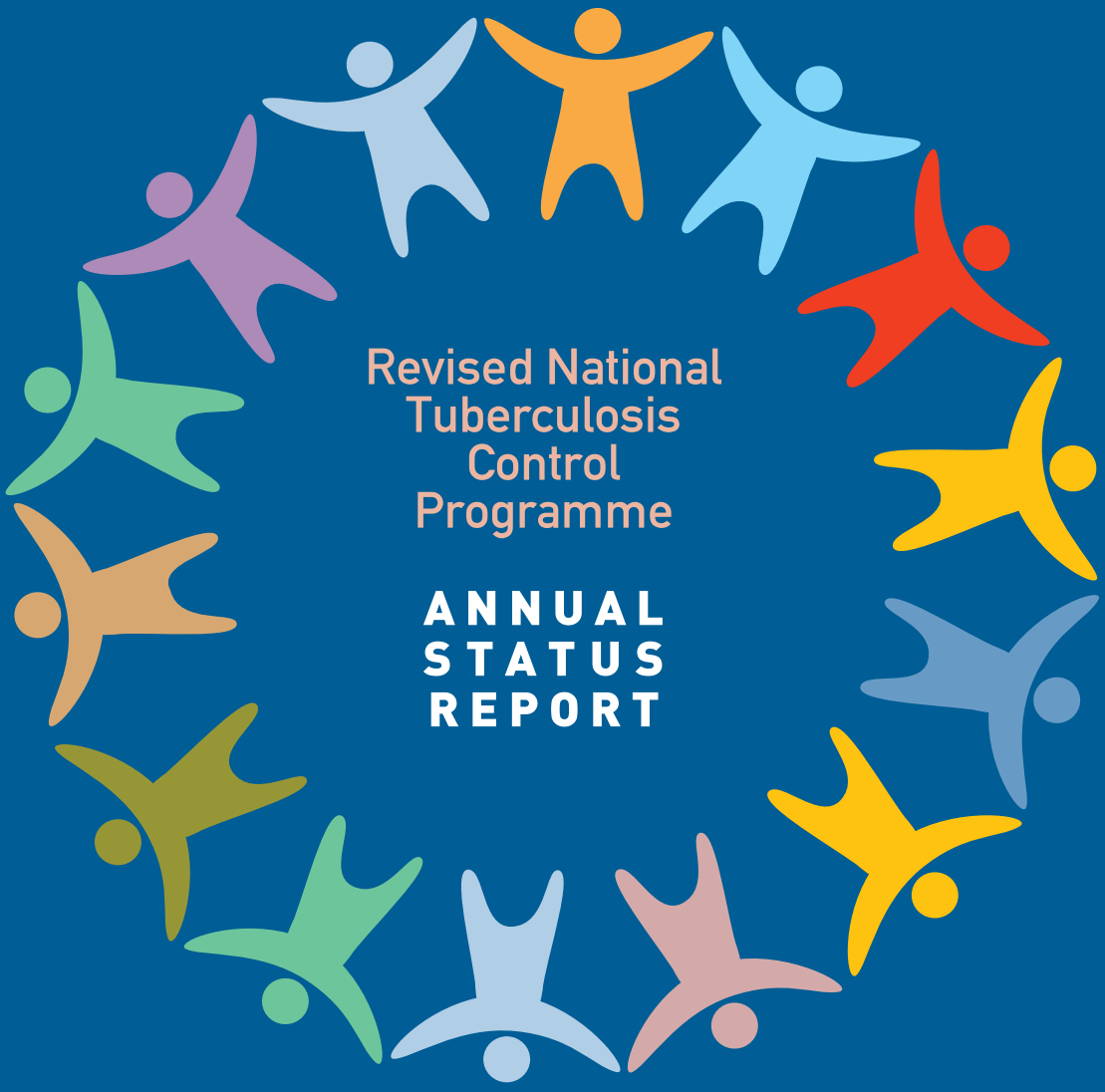
Government of India

TB INDIA 2017



Revised National Tuberculosis Control Programme

ANNUAL STATUS REPORT

UNITE TO END TB

Central TB Division

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

DOTS
Pura course. Pakka ilaaj.

NATIONAL HEALTH MISSION

World TB Day Slogans

World TB Day, falling on 24 March each year, is designed to build public awareness that tuberculosis today remains an epidemic in much of the world, causing deaths of several million people each year, mostly in the third world. 24 March commemorates the day in 1882 when Dr Robert Koch astounded the scientific community by announcing that he had discovered the cause of tuberculosis, the TB bacillus. At the time of Koch's announcement in Berlin, TB was raging through Europe and the Americas, causing the death of one out of every seven people. Koch's discovery opened the way towards diagnosing and curing tuberculosis, so this day is celebrated as World TB Day.

World TB Day 2017: Unite to End TB
2016: Unite to End TB
2015: Gear up to end TB
2014: Reach the 3 million
2013: STOP TB: in my lifetime
2012: STOP TB: in my lifetime
2011: ON THE MOVE AGAINST TUBERCULOSIS: Transforming the fight towards elimination
2010: On the move against tuberculosis: Innovate to accelerate action
2009: I am stopping TB: Fighting TB is the responsibility of every citizen
2008: I am stopping TB: Fighting TB is the responsibility of every citizen
2007: TB anywhere is TB everywhere
2006: Actions for life: towards a world free of tuberculosis
2005: Frontline TB Care providers: heroes in the fight against tuberculosis
2004: Every breadth counts – Stop TB now
2003: DOTS cured me – it will cure you too
2002: Stop TB, fight poverty
2001: DOTS: TB Cure for all
2000: Forging new partnerships to Stop TB
1999: DOTS: Key to success
1998: DOTS success stories and also TB disaster stories
1997: Use DOTS more widely

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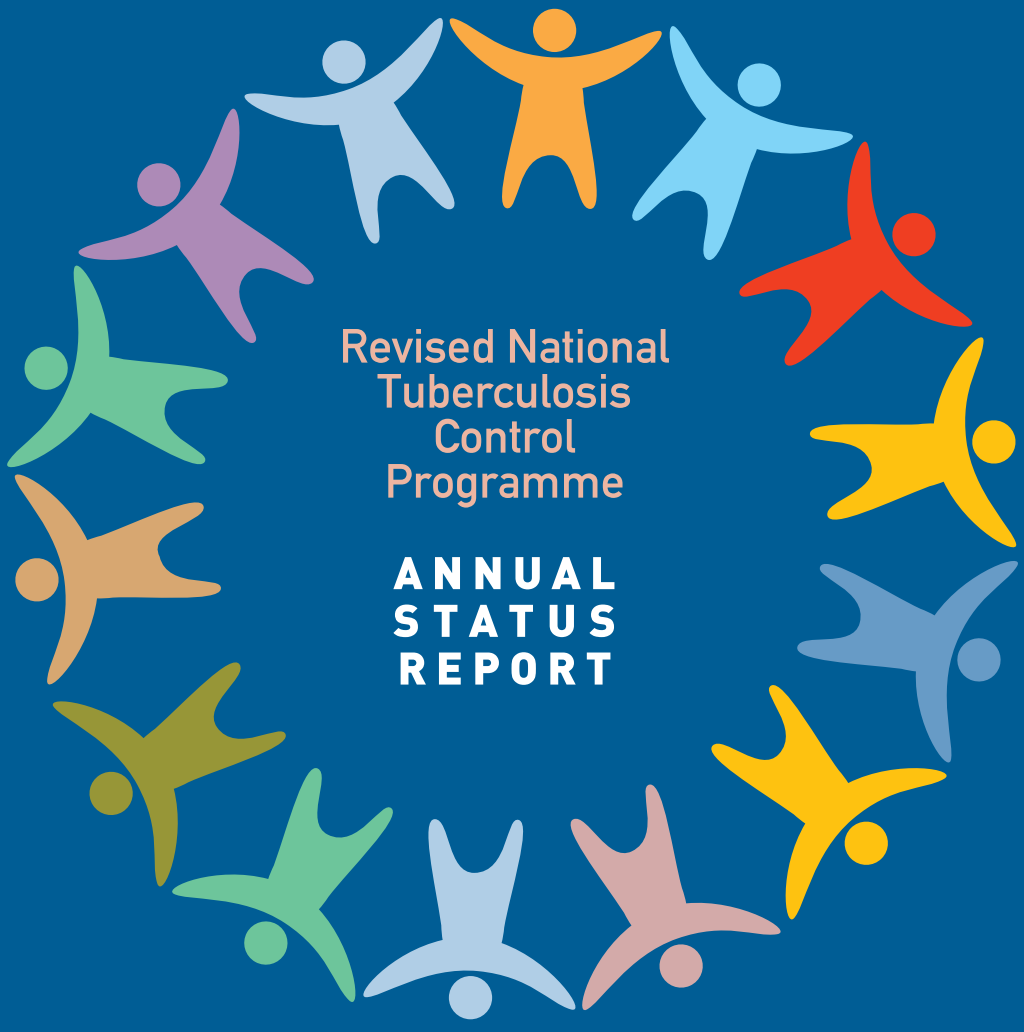
Government of India

TB INDIA 2017



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स्वास्थ्य एवं परिवार कल्याण मंत्री
भारत सरकार
Minister of Health & Family Welfare
Government of India

सत्यमेव जयते

एक कदम स्वच्छता की ओर

जगत प्रकाश नड्डा
Jagat Prakash Nadda

FOREWORD

Tuberculosis – a disease from ancient times still remains a major public health challenge. There has been a considerable expansion of TB care services. However, still more than 14 lakh persons die from this infectious disease around the globe, which includes 4.8 lakh in India alone.

The extent of the challenge is immense and our action should fall in the line. The Government of India have targeted to eliminate TB by 2025 and our efforts will remain in this direction. National Strategic Plan is being prepared for TB elimination in India (2017-25), which draws the roadmap to accelerating impact on the TB epidemic and reaching the targets by 2025, five years ahead of the targets under Sustainable Development Goals (SDG).

This year's World TB Day campaign runs under the strong and action-oriented tagline "Unite to End TB". The theme has more relevance to our country, where partnership with private healthcare providers will be the key to our endeavour to end TB in India.

I express the commitment of the Ministry of Health and Family Welfare, Government of India, to provide all possible support to achieve the vision of TB Free India.

March, 2017

(Jagat Prakash Nadda)

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Secretary

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स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health & Family Welfare

MESSAGE

Tuberculosis remains one of the top causes of death in the 21st Century. Each year, about 4.8 lakh people are estimated to die from TB in India. The Revised National TB Control Programme (RNTCP) is providing free diagnosis and treatment services through the country and has treated over 200 lakh TB patients till date. The country has achieved Millennium Development Goals for TB in 2015, though the country gets around 28 lakh TB cases every year.

The Ministry is preparing its National Strategic Plan for ending TB in India by 2025. The strategies will be more aggressive and targeted.

In the current year, a special campaign of Active TB Case Finding has been launched to identify TB patients in high risk areas. The Government has introduced more than 600 CBNAAT machines, expanding the rapid molecular diagnostic services to all districts of the country. 100 high-priority districts have been identified for intensified TB control services.

The challenge remains, however, to improve substantially, the notification of TB patients from the private health care providers. Even though more than 3 lakh TB patients were notified from private providers in 2016, we have to reach out to the estimated 15 lakhs patients who are seeking care outside the public sector.

I take this opportunity to urge all stakeholders both public and private to unite to end TB in India.

(C.K. Mishra)

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Director General of Health Services

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17th March, 2017
दिनांक/Dated.....

MESSAGE

Revised National TB Control Programme (RNTCP) aims for achieving universal access to TB diagnosis and treatment. Over the years, the programme has expanded its services for TB and drug resistant TB across the country with access to free diagnosis and anti-TB drugs. The programme is now striving to achieve Standards for TB Care in India across all sector of health care providers.

The RNTCP is now changing treatment strategy and prepared for starting daily regimen using daily fixed dose combinations in a phased manner. The programme has began the services from five states in its first phase in Bihar, Himachal Pradesh, Kerala, Sikkim and Maharashtra. The treatment regimen is in line with Standards for TB Care in India and will be uniform across all care providers. The drugs and diagnosis will be available for patients seeking care in both public and private sector.

Despite of all our efforts, TB continues to pause a formidable challenge to public health. Social determinants of the disease like under-nutrition, poverty, overcrowding need to be addressed for its effective control and preventions. The Programme division has developed Guidance document on nutrition support for TB patients. Patients Support for reducing out-of-pocket expenditure and nutrition support are being worked out in the next National Strategic Plan (2017-25).

The expansion of diagnosis and treatment services with newer tools and strategies to private sector will be the key to achieve our success of reaching every one. On this World TB Day, let's all join hands to end TB in India.

Jmasad

(Dr. Jagdish Prasad)

DOTS
Pura course ! Pakka ilaaj

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

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Dated 17 March, 2017

PREFACE

TB India 2017 is an annual report of Revised National TB Control Programme, wherein a comprehensive status of TB control activities carried out under the programme and its partners in the country has been reflected. The compilation is released every year on 24 March, World TB Day.

The year 2016, has been the year of beginning of reform in TB care services. The RNTCP has revised its technical and operational guideline with change of diagnosis and case finding strategy, introduction of daily treatment and newer drugs and enhancement of adherence and surveillance system. The Government introduced more than 600 CBNAAT laboratories and enhanced it capacity with high sensitive molecular diagnostic services across all districts of the country.

The programme for the first time introduced nationwide special campaign on systematic active TB case finding in selected districts. The platform was prepared in 2016 and launched in January 2017. Bedaquiline, a newer anti-TB drug has been introduced in its first phase in 5 states. The drug is expected to improve treatment outcomes of drug resistant TB.

RNTCP has received commitment and support from the highest political authority. The programme has been monitored through PRAGATI platform and reviewed through the office of Hon'ble Prime Minister.

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 efforts for betterment of TB care services. I am humbled by the efforts of all our RNTCP workers who continuously strive to serve TB patients with enthusiasm and dedication.

(Dr. Sunil 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	Clinton Health Access Initiative
CHC	Community Health Centre
CII	Confederation of Indian Industries
CTD	Central TB Division
DALYs	Disability Adjusted Life Years
DBS	Domestic Budgeting Source
DDG	Deputy Director General
DGHS	Director General of Health Services
DMC	Designated Microscopy Centre
DOTS	Directly Observed Treatment Short Course
DST	Drug Susceptibility Testing
DTC	District Tuberculosis Centre
DTO	District Tuberculosis Officer
DRS	Drug Resistance Surveillance
DRTB	Drug Resistant Tuberculosis
E	Ethambutol
EPTB	Extra-pulmonary Tuberculosis

EQA	External Quality Assessment
GMSD	Government Medical Store Depot
GoI	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
ICMR	Indian Council of Medical Research
ICTC	Integrated Counselling and Testing Centre
IEC	Information, Education and Communication
IMA	Indian Medical Association
IPT	Isoniazid Preventive Therapy
IUALTD	International Union Against Tuberculosis and Lung Disease
JMM	Joint Monitoring Mission
LT	Laboratory Technician
MDGs	Millennium Development Goals
MDRTB	Multi Drug Resistant
MIS	Management Information System
MO	Medical Officer
MoHFW	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
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
IRL	Intermediate Reference Laboratory
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
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

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EXECUTIVE SUMMARY

This Annual TB Report (TB India 2017) provides an update on services provided through the year under Revised National TB Control Programme (RNTCP) and progress / status of initiatives implemented in 2016.

The RNTCP, was launched in 1997 and expanded across the country in a phased manner. Nation-wide coverage was achieved in March 2006. Since inception, the programme has treated more than 20 million TB patients. The programme aims to achieve 'Universal Access' for quality diagnosis and treatment for all TB patients in the country. This entails sustaining the achievements of the programme to date, and extending the reach and quality of services to all persons diagnosed with TB.

Based on the newer in-country evidences, the Government of India together with the World Health Organisation (WHO) revised the National TB estimates upwards. Accordingly, an estimated 28 lakh incident TB patients occurred in a year (Global TB Report 2016). The revised estimates are based on data from various sources including sub-national prevalence surveys and enhanced TB notification from the private sector. The RNTCP notified 17.5 lakh TB patients in 2016 including both from public and private health sector and 33,820 drug resistant TB patients are notified additionally.

In 2016, the programme has expanded TB care services and made landmark changes in the strategy of diagnosis and treatment of TB. An additional 500 CBNAAT machines were installed through the year, expanding the rapid molecular diagnostic facilities to 628 laboratories.

A new drug Bedaquiline was introduced for treatment of MDR-TB at 6 identified sites. Single window delivery of HIV-TB services was expanded at all Anti-retroviral Treatment (ART) centres in the country. Along with it, ICT enabled treatment adherence support system (99 DOTS) was also extended for HIV-TB patients. E-NIKSHAY development and field testing began in Gujarat and Maharashtra. The programme revised its Technical and Operational guidelines with revision in diagnostic algorithm, change to daily regime strategy and improved surveillance systems.

The programme conducted key capacity building activities for use of daily regimen for treatment of TB, CBNAAT laboratory roll out, cartridge management , introduction of bedaquilline and implementation of revised technical and operational guidelines. Notifications from private health care providers have enhanced through UATBC interventions, Project AXSHYA and state level efforts. Nationwide large scale advocacy efforts were made through Call to Action project.

The programme was reviewed on the PRAGATI platform by the Hon'ble Prime Minister with all the State / UTs and also subsequently by the Prime Minister's Office (PMO) , reflecting politico-administrative commitment towards TB control efforts. The programme identified 100 priority districts for intensified efforts based on the recommendations from the PMO. Taking an edge forward, the program is developing its National Strategic Plan for TB elimination in India (2017-25), five years ahead of the Sustainable Development Goals (SDGs).

The subsequent chapters in this report bring out details of implementation status, various initiatives and activities undertaken during the year 2016.

Chapter 1

Activities Undertaken in 2016

Activities Undertaken in 2016

Chapter 1

January

1. Revised National Tuberculosis Control Program (RNTCP) modular training was organised from 11 to 23 January at National Institute of Tuberculosis and Respiratory Diseases (NITRD), New Delhi

2. A Training of Trainers (TOT) for introducing daily regimen was organised on 12 and 13 January at Trivandrum, Kerala and on 22 and 23 January at Patna, Bihar

3. Central Internal Evaluation of the RNTCP was undertaken from 18 to 22 January in the State of Bihar

4. National Training of Trainers (ToT) on bedaquiline was organised from 5 to 8 January at NTI, Bangalore

February

1. A Training of Trainers (TOT) for introducing daily regimen was organised on 8 and 9 February in Shimla, Himachal Pradesh

2. National Task Force meeting cum workshop was organised on 15 and 16 February at Trivandrum, Kerala

3. Media Campaign on RNTCP from February onwards, which included various awareness activities through outdoor publicity TV and Radio.

4. Eleventh Global meeting on Public-Private Mix TB care and prevention was organised from 29 Feburary to 2 Mar at Mumbai

5. The Global Fund Country Team Mission was undertaken from 9 to 13 February

March

1. World TB Day was observed on 21 March. On the day, Shri J P Nadda, Union Minister of Health and Family Welfare launched;
   - Roll out of 500 additional CBNAAT machines
   - New drug – Bedaquiline for treatment of drug TB
   - Third line ART Programme for People Living with HIV

On the same event, following guidelines were released
   - Technical and operational guideline
   - Guideline for implementation of Bedaquiline Conditional Access Programme
   - Guideline for prevention and management of adverse drug reaction
   - Handbook of Health worker Surveillance for TB in India

2. State level training of trainers for implementation of Bedaquilline CAP under Programmatic Management of Drug-resistant TB (PMDT)-RNTCP was organized in the months of February and March in Mumbai, Ahmedabad, Chennai, Delhi and Gauwhati

April

1. An expert committee meeting was organised on 11 April to examine type of drug regimen for drug sensitive TB under RNTCP

2. Central Internal Evaluation was undertaken from 18 to 22 April in the state of Arunachal Pradesh

3. Supervisory visit was undertaken from 18 to 22 April in the districts of West Champaran and Gaya of the state of Bihar

4. Lab Monitoring visits were undertaken from 6 to 8 April in the state of Madhya Pradesh

5. Workshop and meeting regarding implementation of daily regimen was organised on 13 April in 5 states at New Delhi.

6. Audit of the Global Fund Grant to the Republic of India was undertaken by The Office of The Inspector General, The Global Fund, Geneva

7. Review and update on UATBC was organised on 7 April in New Delhi

8. National TB prevalence meeting was organised from 27 to 29 April in Bangalore

May

1. Modular training on RNTCP was organised from 2 to 14 May at National Institute of Tuberculosis and Respiratory Diseases (NITRD), New Delhi

2. Review meeting of States implementing BDQ-CAP was organised on 9th May at New Delhi

3. Concurrent assessment of Universal Access to TB Care initiative (UATBC) project was undertaken from 16 to 21 May at Mehsana, Patna & Mumbai

4. Review of RNTCP on PRAGATI platform was undertaken by Hon'ble Prime Minister with Chief Secretaries of all states on 25 May

5. National Workshop on TB prevalance survey in India was organised from 10 to 12 May at New Delhi

June

1. Training of Trainers (ToT) for rolling out of daily regimen in the state of Maharashtra was organised on 8 & 9 June in Pune

2. Training of Trainers (ToT) for Technical and Operational Guidelines (TOG) for RNTCP was organised from 13 to 17 June at NTI Bangalore

3. Regional Programmatic Management of Drug-resistant TB (PMDT) review of north zone states was organised from 8 to 10 June at Chandigarh

4. Consultative meeting with STOs for selection of high priority districts was organised on 22 June in New Delhi

July

1. Research and academia conclave towards TB free India was organised on 9th July at Mumbai

2. Launch of Pediatric TB project on 9 July in Nagpur related to " Accelerating access to quality TB care for Pediatric TB"
3. CDC FIND meeting for piloting of EQA of CBNAAT on 11 July at Mumbai

4. Training of Trainers (ToT) for Technical and Operational Guidelines for RNTCP from 11 to 15 July at NTI, Bangalore

5. A meeting to track the progress of the ICT based treatment adherence system, 99 DOTS, was organised on 22 July at New Delhi

6. Teleconference on introduction of "Delamanid" in India was organised on 12 July

7. The Global Fund Country Team Mission was organised from 30 July to 03 August

August

1. BRICS (Brazil, Russia, India, China and South Africa) meeting for strengthening of Health surveillance system and best practices was organised on 2 August

2. Dissemination workshop on release of extra-pulmonary TB Guidelines (Index TB Guidelines) was organised on 9 & 10 Aug

3. Joint partners meeting to review Mumbai mission for TB control & bedaquiline CAP implementation was organised on 16th Aug in Mumbai

4. Regional workshop on introduction of new drugs and regimen for DRTB in SEAR was organised on 18 and 19 Aug at New Delhi

5. State Tuberculosis Officer (STOs)/ Consultant's review meeting was organised from 22 to 24 Aug at Hyderabad

September

1. Central Internal Evaluation of the RNTCP was undertaken from 29 Aug to 02 Sep January in the state of Himachal Pradesh

2. Programmatic Management of Drug-resistant TB (PMDT) review meeting of North East Zone was organised from 13 to 15 Sep

3. National Reference Laboratory (NRL) coordination meeting was organised on 20 & 21 Sep at Bhubaneswar

4. TOG training for STO and Consultants was conducted from 19 to 23 Sep at NTI, Banglore

5. Consultatve meeting with Partners on daily regimen on on 29-30 Sep at Gaya

6. PVPI causality assessment workshop organised from 6 to 9 Sep at New Delhi

7. Review of DTO of Bihar regarding Daily regimen & Partnerships

8. The Global Fund Country Team Mission was organised from 26 September to 05 October

October

1. National Expert Committee Meeting on Diagnosis & Management of Tuberculosis under RNTCP on 6 October

2. Consultative meeting for the development of National Strategic Plan for TB Control in India 2017-22 on 18 and 19 Oct

3. National Technical Working Group for HIV/TB meeting was held on 14 October

November

1. Cartridge management training was organised from 28 Nov to 2 Dec at NTI, Bangalore

2. Zonal Task Force South Zone meeting was organised from 30 November to 03 December at Puducherry

3. Consultative meeting on Roll out of "Payment for Results" Model under The Global Fund Grant at Geneva was organised from 9 to 11 November

December 2016

1. Zonal Task Force South Zone II meeting organised on 1 and 2 Dec at Puducherry

2. Zonal Task Force West Zone meeting organised on 22 and 23 Dec at Ahmedabad

3. Consultative meeting on drafting Guidance Document on Nutritional Support for TB patients held on 30 Dec

4. Sensitization of STOs of 18 states / UTs on Active Case Finding Campaign through video conference on 14 Dec

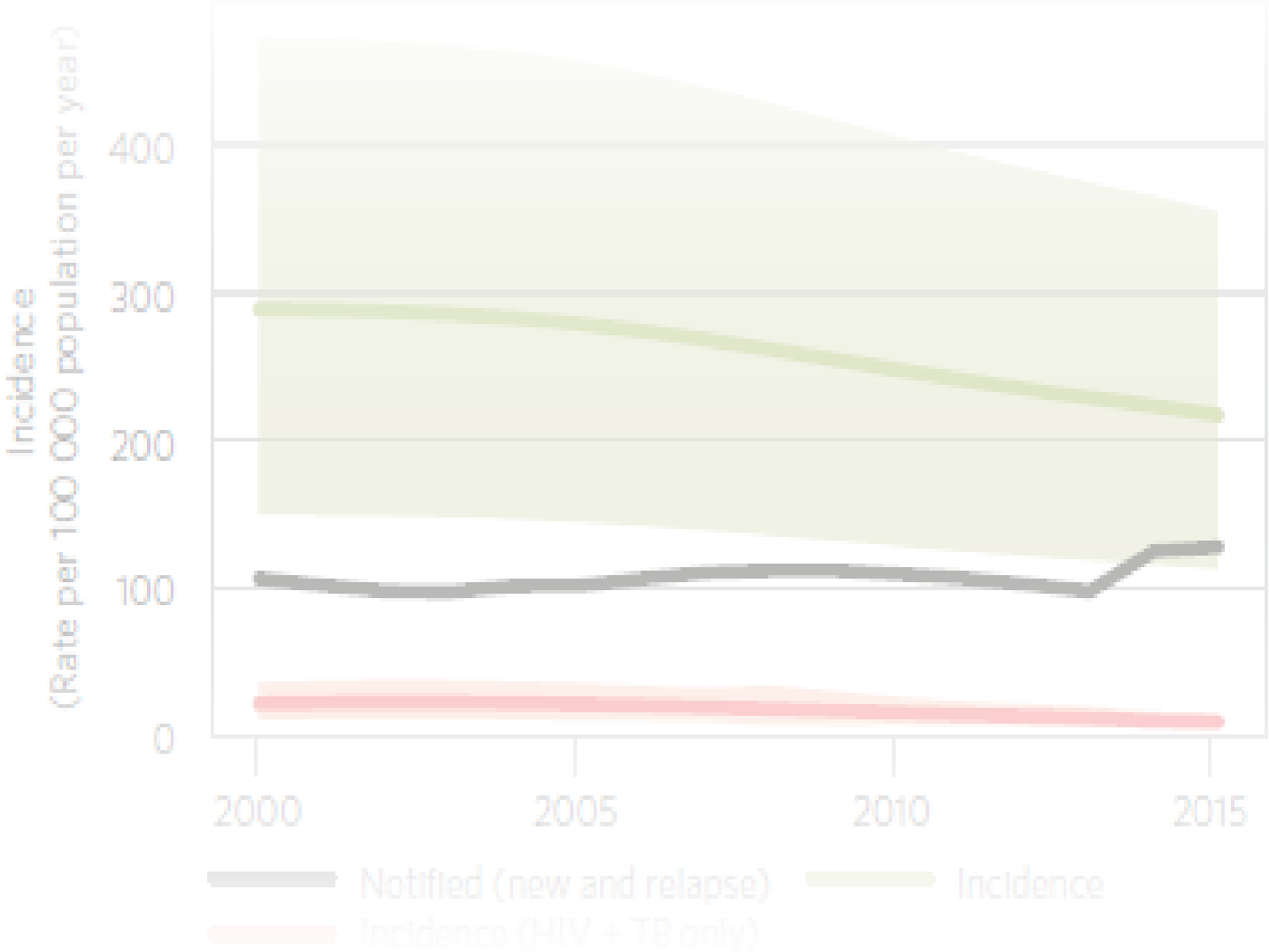
5. Drug Safety & Monitoring Committee meeting was organised on 5 Dec in New Delhi

6. The Global Fund Country Team Mission was organised from 5 to 14 December 2016

7. Workshop on revision of guidelines of PMDT to align with WHO PMDT guidelines from 19 to 21 Dec

TB Disease Burden in India

Chapter 2



TB Disease Burden in India

Chapter 2

India accounts for one fourth of the global TB burden. In 2015, an estimated 28 lakh cases occurred and 4.8 lakh people died due to TB. The table below shows the estimated figures for TB burden globally and for India reported in WHO Global TB Report for the year 2015

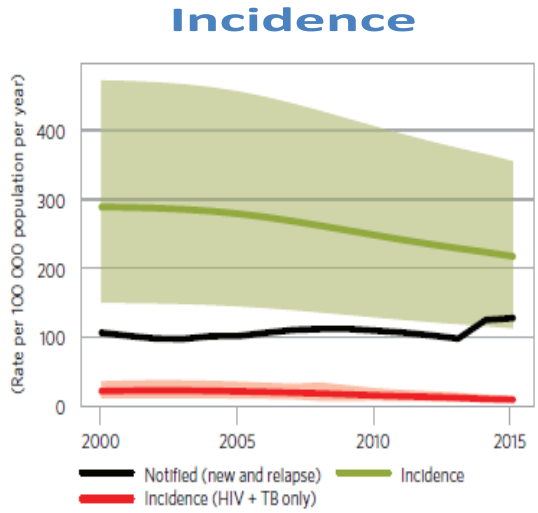
Estimates of TB Burden (2015)	Global	India
Incidence TB cases	104 lakh	28 Lakh
Mortality of TB	14 lakh	4.8 lakh
Incidence HIV TB	11.7 lakh	1.1 lakh
Mortality of HIV-TB	3.9 lakh	37,000
MDR-TB	4.8 lakh	1.3 lakh

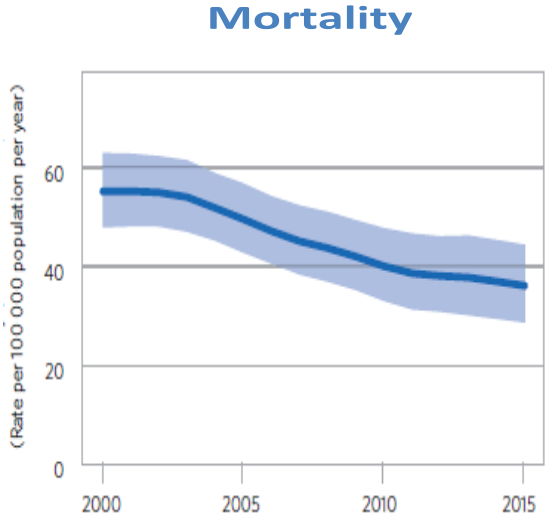
India has highest burden of both TB and MDR TB based on estimates reported in Global TB Report 2016. An estimated 1.3 lakh incident multi-drug resistant TB patients emerge annually in India which includes 79000 MDR-TB Patients estimates among notified pulmonary cases. India bears second highest number of estimated HIV associated TB in the world. An estimated 1.1 lakh HIV associated TB occurred in 2015 and 37,000 estimated number of patients died among them.

The estimates of TB for India has been revised upwards based on the newer evidences gained. This apparent increase in the disease burden reflects the incorporation of more accurate data. With backward calculations, both tuberculosis incidence and mortality rates are decreasing from 2000 to 2015.

The incidence of TB has reduced from 289 per lakh per year in 2000 to 217 per lakh per year in 2015 and the mortality due to TB has reduced from 56 per lac per year in 2000 to 36 per lac per year in 2015.

Moreover, these revisions are interim in nature, with further changes likely when India conducts its first national tuberculosis prevalence survey in 2017–18. (source Global TB Report, 2016)





RNTCP Implementation status

Chapter 3

RNTCP Implementation status

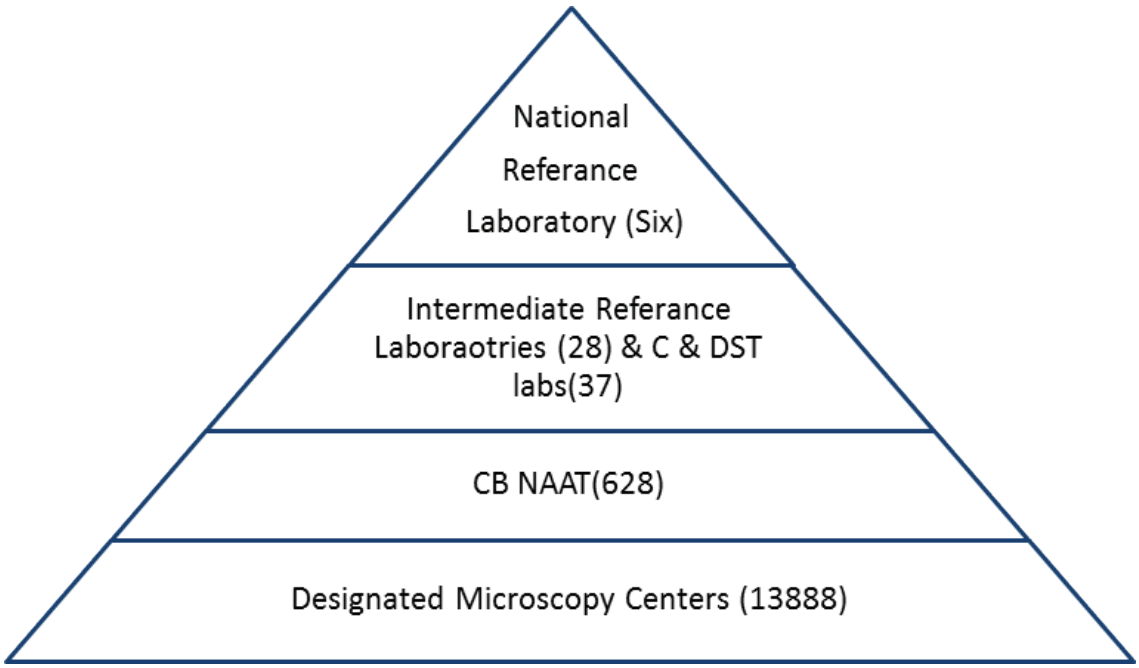
Chapter 3

3.1 Diagnosis and Case Finding

Diagnosis of Tuberculosis is done primarily using Smear Microscopy and by rapid molecular test (CB NAAT) in selected key population e.g Pediatric, TB-HIV and Extra-pulmonary Tuberculosis. RNTCP has three tier laboratory network for diagnosis of Tuberculosis including Drug Resistance TB.

National Reference Laboratories (NRL): There are six NRLs under the programme. These 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 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. For the purpose of supervision and technical support, the states are assigned to each NRL. The NRL microbiologist and laboratory supervisor / technician of NRLs visit 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.



Intermediate Reference Laboratory (IRL): One IRL has been designated at 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

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 (2016)
NTI, Bangalore	Karnataka, Maharashtra, Rajasthan	5	3	0
NIRT , Chennai	Tamil Nadu, Puducherry, Kerala, Gujarat, Andaman & Nicobar, Telangana, Andhra Pradesh Dadar & Nagar Haveli, Daman & Diu, Lakshadweep	5	9	2
NITRD, New Delhi	Delhi, Jammu & Kashmir, Chandigarh, Punjab Haryana, Bihar, Himachal Pradesh	8	7	6
JALMA, Agra	Uttar Pradesh, Uttarakhand	3	2	1
RMRC, Bhubaneswar	Odhisa, Meghalaya, Assam, Tripura, West Bengal, Sikkim, Arunachal Pradesh, Manipur, Nagaland, Mizoram	6	10	2
BMHRC, Bhopal	Madhya Pradesh, Chhattisgarh, Jharkhand, Goa	4	4	4

of EQA activities, providing Mycobacterial Culture and DST services and training of STLS/LTs. The IRL ensures proficiency of staff in performing smear microscopy activities by providing technical training to district and sub-district laboratory technicians and STLSs. The IRLs undertake on-site evaluation to each district in the state, at least once a year, during which the STLSs are panel tested.

Culture and DST Laboratories(C & DST): In additional 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 has provided additional human resources, equipments and trainings to C & DST laboratories.

CB NAAT (Cartridges Based Nucleic Acid Amplification Test) Laboratories: RNTCP has deployed the CB NAAT machines across the country for early diagnosis of MDR-TB and TB in high risk population e.g Presumptive TB cases in PLHIV, EP-TB and Pediatric populations. The CB NAAT machines have been placed at most of the districts in the country at headquarter or Medical College, ART-Center or major Pediatric hospitals. The existing staff deployed at these health care centers performs activities related to the CB NAAT. The CB NAAT sites send the report to the respective hospitals/referral center and compiled report is sent to IRLs and NRLs.

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). EQA is implemented at all districts in the country. 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.

The National Expert Committe on Diagnosis and Managment of TB under RNTCP: provides technical guidelines for diagnosis and management of all forms of Tuberculosis.

At present under the program there are 68 RNTCP certified Culture and DST laboratories in the country which includes laboratories from Public sector (IRL, Medical College), Private and NGO laboratories. 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.

Solid Culture Certification: 46 laboratories certified for solid C & DST includes:

- 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)
- 6-Medical colleges (PGIMER-Chandigarh, AIIMS-Dept. of Medicine-New Delhi, JJ Hospital-Mumbai, SMS- Jaipur and MGIMS-Wardha, MPSMS, Jamnagar)
- 5 NGOs (BPHRC-Hyderabad, Choithram Hospital - Indore and DFIT Nellore, MGIMS-Wardha, SVIMS-Tirupati)
- 4 -ICMR institutes (RMRC-Port Blair, RMRC Dibrugarh, DMRC Jodhpur and RMRC-Jabalpur)
- 3 Private laboratories (CMC-Vellore, Microcare-Surat and SVIMS-Tirupati)

Liquid Culture Certification: 34 laboratories certified by RNTCP for liquid culture include:

- 4 NRL (NTI, Bangalore, NIRT-Chennai, JALMA - Agra and NITRD-New Delhi)
- 17 IRLs (Ahmedabad, Kolkata, Nagpur, Delhi, Trivandrum, Puducherry, Bangalore, Pune, Indore, Chennai, Cuttack, Guwahati, Lucknow, Hyderabad, Patiala, Ajmer and Ranchi)
- 6 Medical Colleges (SMS Jaipur, MPSMS Jamnagar, JJ Mumbai, AIIMS Medicine, PGI Chandigarh and BHU Varanasi)
- 5 Private laboratories (Metropolis, SRL-Mumbai, SRL –Kolkata, Shankar Nethralaya-Chennai and Infexn –Thane, Mumbai)
- 1 NGO Laboratories (P D Hinduja- Mumbai)
- 1 Govt. laboratory – GTB Sewree, Mumbai

Proficiency testing for liquid culture is ongoing for other IRLs and C & DST labs for certification. RNTCP envisages establishing 40 TB containment 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): 54 LPA laboratories certified by RNTCP include:

- 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)

- 17 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 ,GTB Sewree Mumbai, JLNMCH Bhagalpur, GMC Raichur and GMC Madurai)
- 5 NGOs (DFIT-Dharbanga, DFIT-Nellore, BPHRC-Hyderabad, Nazerath-Shillong and P D Hinduja- Mumbai) ,2 private laboratories (Metropolis-Mumbai and Subharti Medical College, Meerut)

Performance of line Probe Assay in 2016

No of test	No of sensitive to both	No of resistance to INH	No of resistance to Rifampicin	No of MDR-TB
1,00,885	71,449	9,643	2,695	12,037

Second Line DST (SLD): Currently, 27 laboratories have been 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 States and UTs to these certified laboratories. The laboratories that are certified include 5 NRL (NIRT-Chennai, NTI-Bangalore and NIRTD-New Delhi, JALMA Agra, RMRC Bhubaneswar) 14 IRL (Ajmer, Trivandrum, Cuttack, Delhi, Pune, Chennai, Nagpur, Ahmedabad, Puducherry, Guwahati, Indore, Kolkata, Lucknow, Bangalore),6 Medical colleges (Jamnagar, JJ Mumbai, AIIMS Medicine, SMS Jaipur, PGI Chandigarh, BHU Varanasi) and NG0- P D Hinduja and Private-SRL Mumbai). All states are currently implementing baseline second line DST for all diagnosed MDRTB cases as per RNTCP policy.

National Reference Laboratories Coordination Committee Meeting: CTD convenes the 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 20th -21st September 2016 at RMRC Bhubaneswar. The discussions included: Updates on the TOG, Roles and responsibilities of the NRL and stewardship for DR-TB services, SLDST and inclusion of drugs for panel testing, Recording and reporting (EQA, Quarterly Performance), Training and Retraining plan and on-site training, Monitoring, Supervision, CB NAAT, reporting and Annual Maintenance Contract (AMC) for lab equipment. The team also had the discussion on the development of laboratory components of the National Strategic Plan from identification of newer

NRL Coordination Committee Meeting at Bhubaneshwar on September 2016

labs, technology introduction, human resource and others

Trainings: RNTCP's National Reference Laboratories conducts 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. In, The current year all NRLs National, supervised by them Regional and On-site training for states.

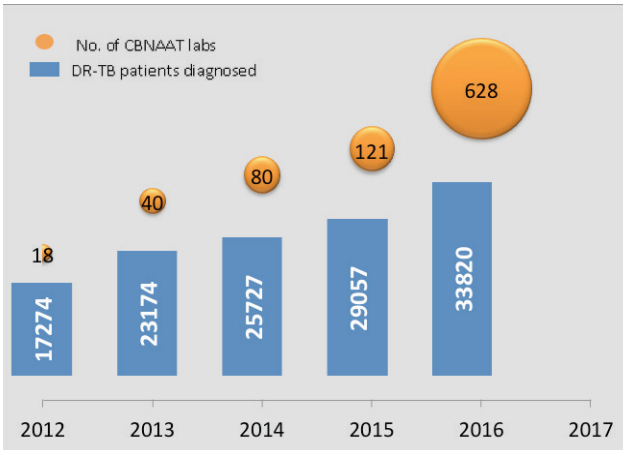
Onsite LC-DST Training at IRL Kolkata - 16-20 Aug 2016

New initiatives in laboratory services under RNTCP

Expanding CBNAAT Services Across the Country:

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.

In 2016, the RNTCP established 500 additional CBNAAT laboratories across country. With this expansion of laboratory network, now, the country has 628 CBNAAT laboratories linking every districts



Progress of drug resistant TB diagnosis along with expansion of CBNAAT laboratory

to these high sensitive rapid molecular diagnostic test for TB.

Currently, CBNAAT is used for;

- Diagnosis of drug resistant TB among previously treated TB patients, patients with smear microscopy positive result at any time during treatment, HIV-TB patients and TB patients who are contact of MDR-TB patients.
- Diagnosis of TB among children, PLHIV, extra pulmonary presumptive TB patients and person with Chest X-Ray suggestive of TB with smear negative result.

No of machines	No of Test performed	No of MTB detected	No of Rifampicin Resistant-TB detected
628	578173	221603	27822

With increase in CBNAAT laboratory network, there is exponential increase in drug resistant TB case finding. In 2016, more than 33,820 drug resistant TB patients diagnosed as compared to 29,057 in 2015.

Second line LPA Validation: RNTCP has completed Validation of LPA for detecting resistance to Fluoroquinolones, Aminoglycosides (Kanamycin, Amikacin) and Cyclic Peptides (Capreomycin) in Programme Setting in India using MTBDRsl® test

(Hain Life science).The study sites, NIRT Chennai, NITRD-Delhi, NDTBC-Delhi, IRL Ahmedabad and JJ hospital, Mumbai have completed the procedures and the interim results were submitted to the National Expert Committee. The National Expert Committee has endorsed the use of Second line LPA for use under RNTCP. It is planned to conduct the National and regional level training for SL-LPA for roll-out across country from April 2017.

Technical and Operational Guidelines: RNTCP has revised it technical and operational guidelines and made significant changes in case finding and diagnostic strategies. The key changes include the revision of diagnostic algorithm which offer early use of chest X-Ray and CBNAAT for smear negative presumptive TB patients. Another important addition of strategy is Systematic Active TB Case Finding in special settings over and above passive and intensified TB case finding strategies which followed under the programme.

Bedaquiline Conditional Access Programme: For the introduction of Bedaquiline CAP, laboratory confirmation of drug resistance to additional second line drugs as well as more frequent follow up cultures is a prerequisite. The laboratories at NITRD New Delhi, NDTB Centre, IRL Guwahati, NIRT Chennai, JJ Hospital Mumbai and IRL Ahmedabad have undertaken DST to extended panel of second line drugs. All laboratories certified for second line DST will provide services for expansion of Bedaquiline CAP across the country.

Laboratory Expansion Under RNTCP: Fifteen laboratories were identified to be upgraded with containment facility and Liquid Culture systems under the New Funding Model of the Global Fund Grant. Assessment visits to these laboratories have been completed and the upgradation will be completed by December 2017. In addition, two facilities have also been identified one each for Whole Genome sequencing and Pyrosequencing.

Moving towards NABL accreditation: RNTCP considers the quality assurance as a priority and as per the WHO global policy, plans to move towards ISO:11002 accreditation. RNTCP as a part of first initiatives conducted the stakeholders meeting on 14th November 2016 of NRLs, State TB Officers, NARI, Microbiologist for formulating the plan for moving towards NABL accreditation with support of FIND India under New Funding Model of Global Fund. The follow-up meeting of NABL assessors and site visits is planned as a part of next activities.

Stakeholders meeting for initiating preparatory activities towards NABL accreditation of select TB C&DST Laboratories at Pune, Maharashtra

CBNAAT External Quality Assessment: External Quality Assessment for CBNAAT is being planned to be rolled out in the country. As a first step, two master trainers have been trained at CDC Atlanta for developing dried spot panels for testing in CBNAAT. As a next step panels will be prepared in-house, pilot tested at laboratories in Mumbai and based on the experience gained expanded to the rest of the country.

National Drug Resistance Survey (NDRS): The RNTCP has successfully competed drug resistance surveillance across 120 TUs across the country. The team from Central TB Division, World Health Organization and other experts held detailed discussion on the findings. The survey report will be submitted in the standard WHO format by NTI after incorporating suggestions made by the team. The report of the NDRS will be released in the year 2017.

Team of National Drug Resistance Survey from NTI, Bengalore

3.2 Treatment Services

The National Tuberculosis Programme of India (NTP) was initiated in 1962 which was revised in 1997 as Revised National Tuberculosis Control Programme (RNTCP) that used WHO recommended DOTS (Directly Observed Treatment, Short-course chemotherapy) strategy. Countrywide coverage was achieved in March, 2006. Since inception till December 2016, more than 2 crores patients were initiated on treatment and more than 35 lakhs additional lives have been saved.

In March 2016, RNTCP revised its technical and operational guidelines. The major additions reflected in terms of strategies in treatment of TB are:

- Daily regimen for treatment of TB
- Use of Bedaquiline for treatment of drug resistant TB with Drug susceptibility testing (DST) guided treatment
- ICT based adherence support and
- post treatment follow up.

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

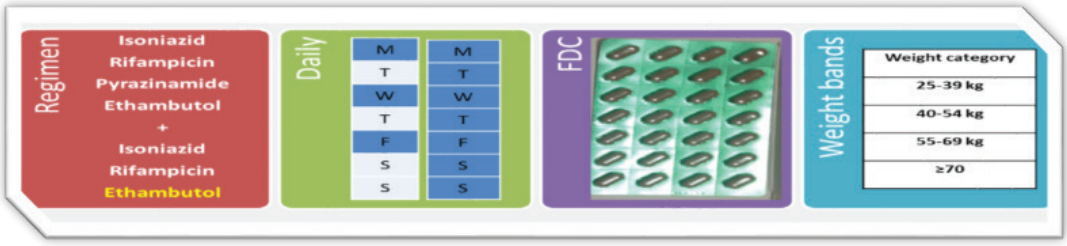
Revised National TB Control Programme is changing treatment strategy from Intermittent to Daily Regimen in phased manner. To begin with, it has been initiated in 5 states – Bihar, Himachal Pradesh, Kerala, Maharashtra and Sikkim covering 27 crore population of the country. Subsequently, remaining states will be covered by October 2017. Features of the daily regimen treatment strategy will be as follows:

- The drugs will be given daily
- The dose of drugs is according to body weight. It means that the patients will get appropriate dosages as per body weight.
- Fixed Dose Combination (FDC) tablets will be used which will reduce pill burden
- Treatment regimen is likely to be more effective with lesser relapses. This is expected to reduce drug resistance with greater compliance
- For children, child friendly formulations as dispersible tablets
- Use of Information Communication Technology (ICT) enabled treatment adherence support system
- Regimen is acceptable to all health care providers

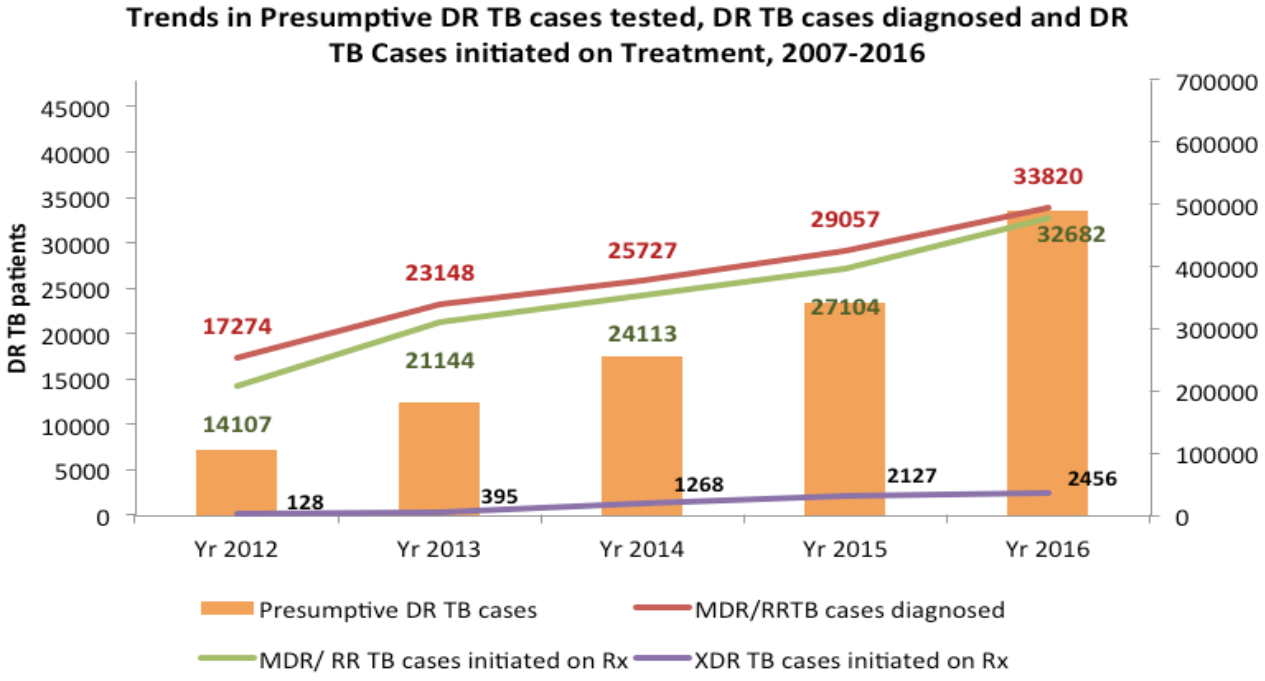
Programmatic Management of Drug Resistant TB services

India began services for diagnostic and treatment services for multi-drug resistant TB (MDR-TB) in 2007 and achieved complete coverage in 2013. Till 2016, 1,39,369 persons with MDR-TB/ RR TB diagnosed and 1,26,136 (91%) patients were put on treatment under RNTCP.

Introduction of newer anti-TB drug – Bedaquiline: The new drug Bedaquiline has been introduced at six sites in 5 states in the country in march 2016. The drug has been a novel one introduced after 40 years. The drug currently is used under RNTCP for MDR/RR-TB patients with resistance to fluoroquinolone and/or second line injectable, mixed pattern of drug resistance.



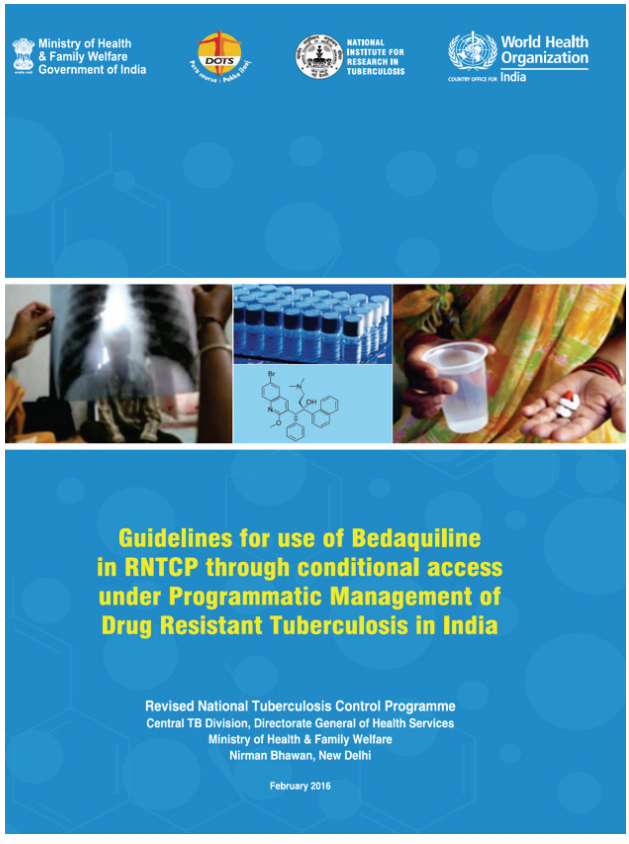
Features of daily regimen of treatment of TB under RNTCP



Launch of new drug - Bedaquiline for treatment of DRTB under RNTCP at Guwahati

The Bedaquilline is used along with optimum background regimen designed based on drug susceptibility testing. Being a new drug, the RNTCP has established drug safety monitoring committee at the national level following recommendations of Global guidelines on use of Bedaquilline. A system of cohort event monitoring has been established at all sites to systematically report and monitor adverse drug reactions. Till December 2016, more than 207 drug resistant TB patients have been initiated on Bedaquiline containing treatment.

The programme has started planning on expansion of use of this new drug along with drug susceptibility testing guided treatment in other parts of the country.

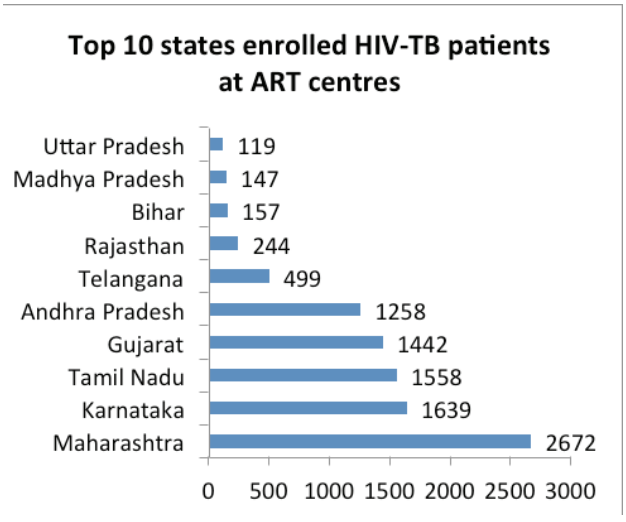


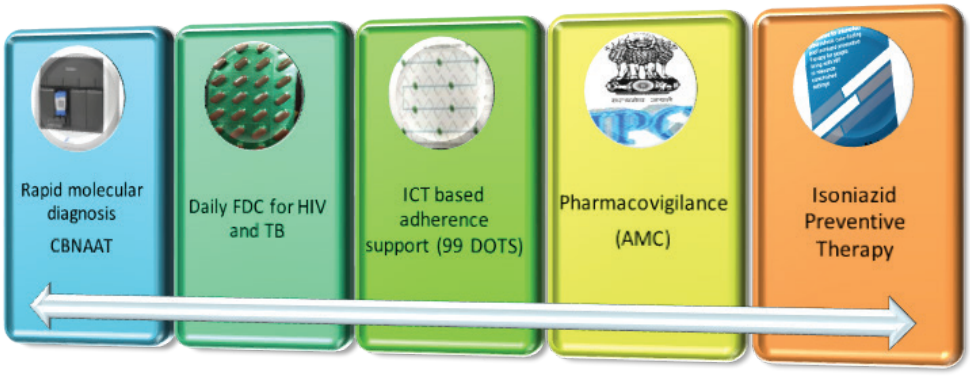
Treatment services in TB-HIV co-infected patients

With collaborative efforts of the RNTCP and the National AIDS Control Organization (NACO) effective management of these dual infections are ensured. More than 88% TB patients registered by RNTCP tested for HIV and 90% of HIv infected TB patients received anti-retroviral treatment (ART) and co-trimoxazole prophylaxis therapy (CPT).

In 2016, India has expanded 'Intensified TB case finding and appropriate treatment' through single window delivery of services from all ART centres. The strategy focuses on comprehensive nterventionsto reduce the burden of TB among People living with HIV/AIDS (PLHWA) from single window service delivery at ART Centres. A package of services includes intensified TB case finding through screening by four symptom complex, rapid diagnosis of TB among PLHIV with CBNAAT, Fixed Dose Combination daily treatment for TB, INH preventive therapy for prevention of TB among PLHIV, ICT enabled adherence support through 99 DOT, Airborne Infection Control measures at ART centers and implementation of pharmacovigilance by establishing adverse drug reaction monitoring centres at ART centres.

Launch of single window delivery of HIV-TB care at ART centre, Indira Gandhi Medical College and Research Centre, Puducherry





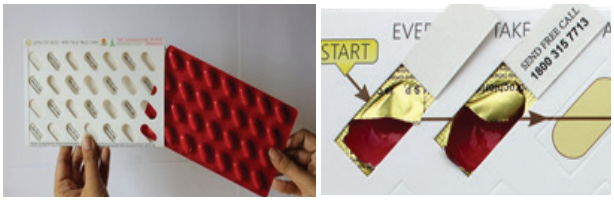
Intervention package for TB care at ART centres

ICT enabled adherence support - 99DOTS

RNTCP has started using ICT enabled solutions for patient centric adherence support. One among the successor is 99 DOTS. It was first used under the programme in 2015 in high-burden ART centers for TB-HIV co-infected patients along with use of daily fixed-dose combination (FDC) medications. In 2016, RNTCP expanded this ICT based adherence system to HIV-TB patients at all ART Centers in India.

99DOTS is an innovation that seeks to address issue of adherence by using basic mobile phones and augmented packaging for medication.

As illustrated, the approach utilizes a custom envelope into which each pack of medication is inserted and sealed.

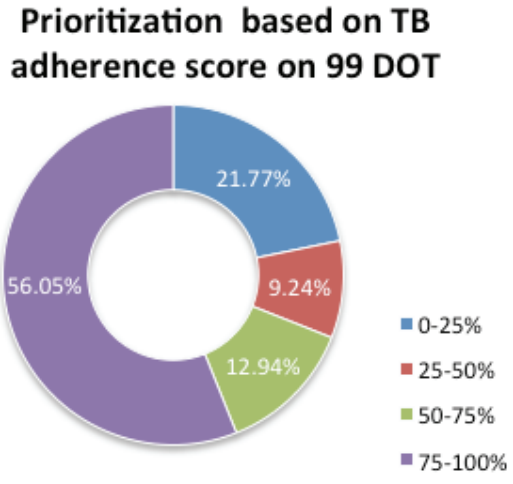


When the patient takes out medication from the blister pack, the pills also break through perforated flaps on the envelope. On the back side of each flap is a hidden number. Patients call these numbers using their mobile phone as evidence that they have consumed medicine. Patients make a call every day to the revealed toll-free number from any phone they have access to in order to report their adherence – the call is completely free, even when roaming, or from a landline. The number sequence for any patient is unique, so when a patient calls the correct number, the platform can assess with high confidence if the patient took medication that day.

Once the 99DOTS platform gets this real-time adherence information it can be used in multiple ways. Program staff can login into www.99dots.org from their computer / mobile (using Nikshay username and password) to see the patient adherence (as seen in figure below). Customized SMS reminders are also sent to patients and government healthcare staff (e.g. TBHV, STS) to alert missed doses and trigger additional counseling. Senior District / State / Country level program staff can also get actionable reports for all patients.

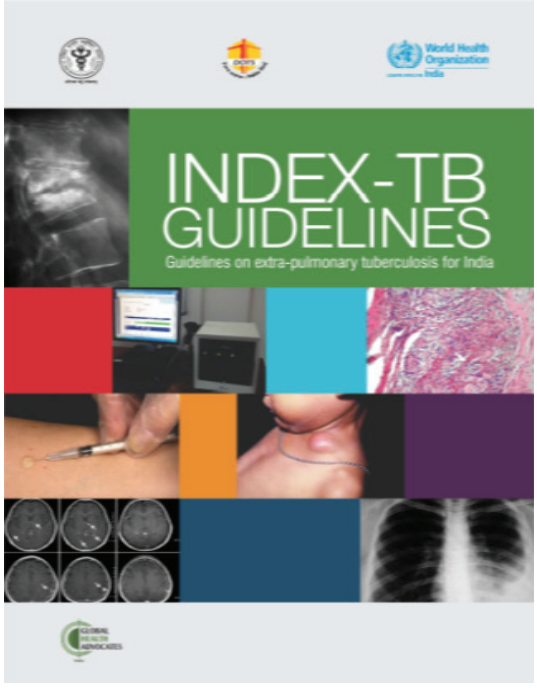
Patient adherence status on 99 DOTS website

The platform empowers staff with daily information about their patients' adherence and allows them to use differentiated care to counsel those patients who need it the most. Similarly, patients are empowered to take their medication independently, and receive immediate outreach if they start to waver in adherence. 99DOTS is also being integrated with Nikshay, e-Nikshay and other patient management systems so that patient adherence can also be visualized in them.



Index-TB Guidelines

There has been a substantial progress made in the diagnosis and treatment of pulmonary TB. Systems are in place for management of such patients at the most peripheral level. At the same time, there is a huge amount of uncertainty regarding the management of extra-pulmonary TB (EPTB). The latter accounts for about one-fifth of all TB cases. The EPTB, which can involve almost any system of the body, along with the ambiguity regarding management, have made it a formidable challenge in the war against TB. The Department of Medicine, All India Institute of Medical Sciences, New Delhi, Global Health Advocates, India, Cochrane Infectious Disease Group, Cochrane South Asia, WHO Country office for India in collaboration with the Central TB Division, Ministry of Health and Family Welfare, Government of India, brought forth the first time evidence-informed guidelines for the management of various forms of EPTB. Using methodology of systematic reviews and based on GRADE approach of giving recommendations, evidence based guidelines are developed which features three key areas i) use of Xpert MTB/RIF for diagnosis; (ii) use of corticosteroids; and (iii) duration of treatment.



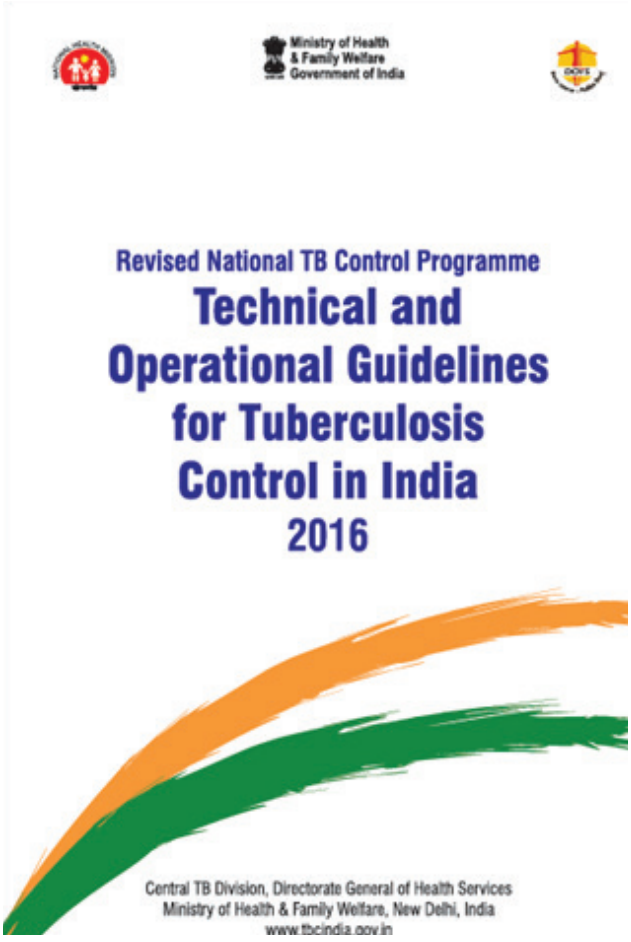
Dissemination Workshop For Launch of Index - TB Guidelines at AIIMS New Delhi on 9 August 2016

3.3 New Initiatives

Revision of Technical and Operational Guidelines

The RNTCP has revised its technical and operational guidelines and published in March 2016. The guidelines incorporate components and principles of End TB Strategy and prepared using recommendations of WHO TB treatment guidelines, Compadium of management of drug resistant TB, Guidelines of management of children with TB, Standards for TB Care in India, recommendations of Joint Monitoring Missions. Key features of revised technical and operational guidelines are as follows:

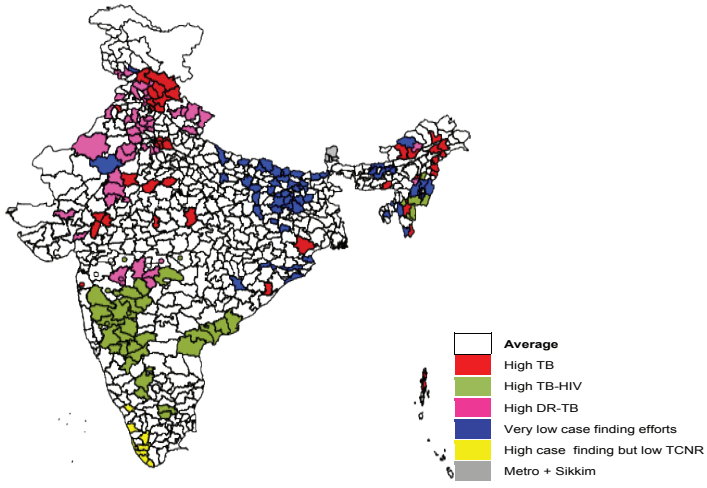
- Revision in diagnostic algorithm with use of CXR in screening and early use of CBNAAT
- Systematic active TB case finding strategy
- Transition from intermittent to daily regimen
- Treatment of all forms of drug resistant TB
- Use of new drug Bedaquiline along with DST guided treatment
- Use of ICT enabled adherence support for patient centric care
- Single window delivery approach for HIV-TB care
- Improved TB surveillance strategy
- Effective strategies to reach TB patients



These technical and operational guidelines are intended to be used by all the personnel engaged in control of TB in the country. This is a living document open to further improvements and will be updated as lessons are learned through its use in the field. In addition, supportive guidelines are developed and disseminated by RNTCP for use of Bedaquiline under RNTCP, Adverse Drug Reaction Management, Health Worker Surveillance and Index TB (Indian Guidelines for management of extrapulmonary TB).

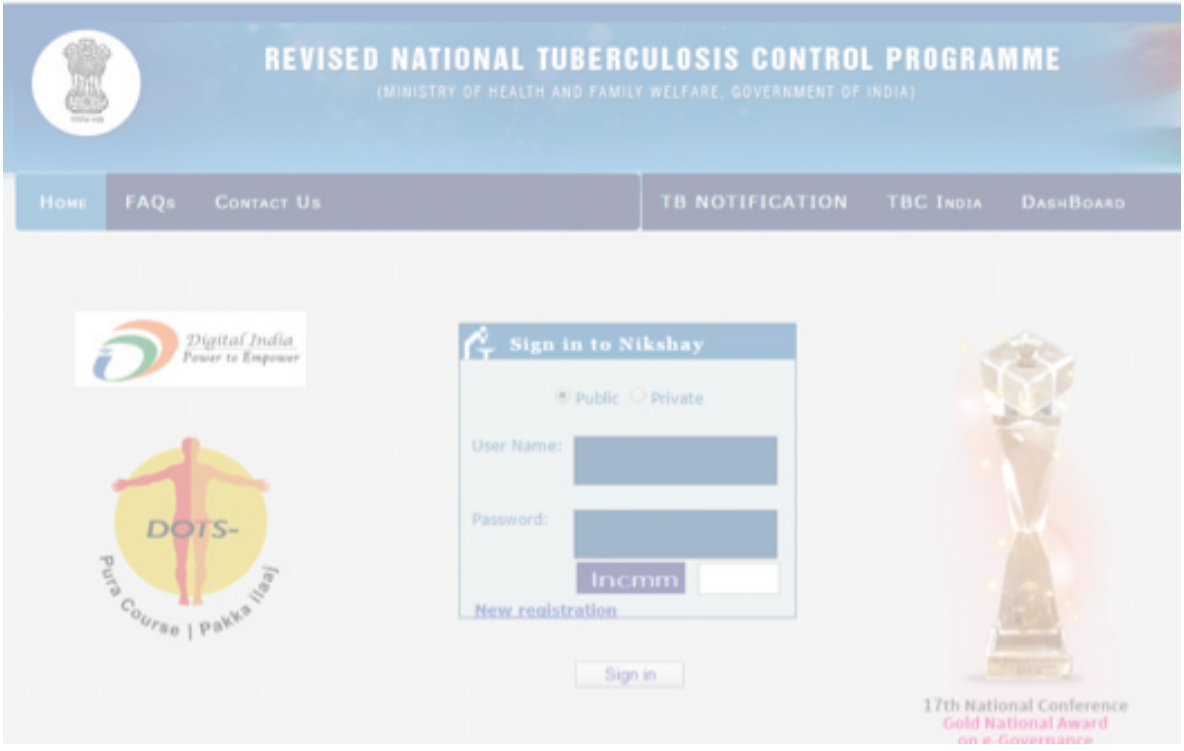
Targeted Strategy for High Priority Districts

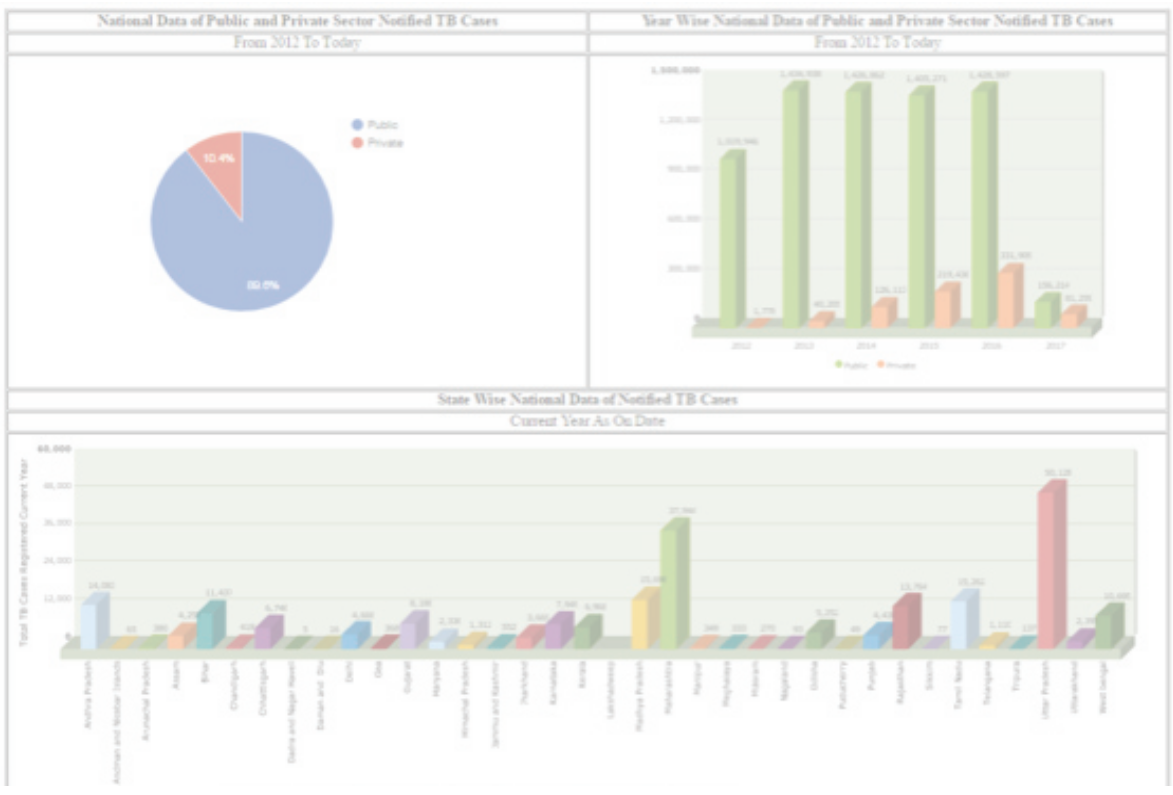
The programme has identified 100 high priority districts based TB case load, co-morbidity, drug resistance and case finding efforts. Targeted strategy will be implemented in these districts to intensify TB control efforts. Decentralized district specific action plans are prepared in these 100 districts. From the centre, the programme has been using active TB case finding campaign as a first strategy to intensify early case detection and put TB patients promptly on treatment.



TB Surveillance in India

Chapter 4





TB Surveillance in India

Chapter 4

Complete surveillance is an important public health function in the prevention and control of any disease. Prompt notification to the public health system is an important component of the surveillance process and achieves essential public health objectives to measure disease burden, monitor epidemiological trends, and plan and target preventative and treatment services. It identifies people needing follow-up to ensure that treatment is completed, and enables contact tracing and screening of close contacts.

A good TB surveillance system will require timely notification of all TB cases in the population and will be able to capture necessary variables for demographic, clinical, socio-economic, geographic, spatial characteristics to enable better understanding of the local epidemiology and trend of TB.

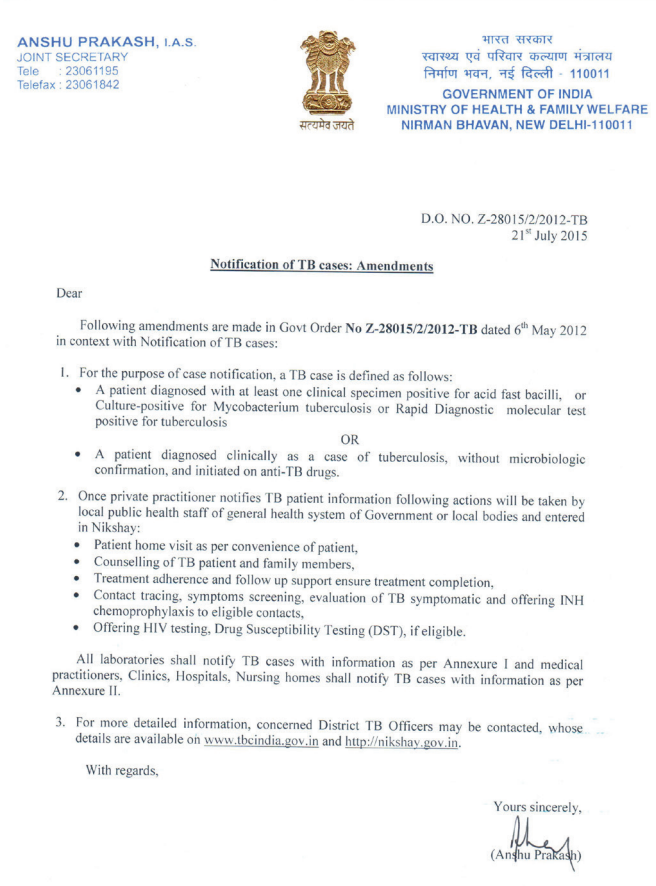
To ensure complete notification, all TB cases irrespective of method of diagnosis (microbiologically confirmed or clinically diagnosed), initiation of treatment (whether on treatment or not), source of treatment (Government or non-government), type of patients (TB or DR-TB), type of regimen used for treatment (daily or intermittent) should be notified to public health system. RNTCP has enhanced its surviellance system to notify all these patients.

Public sector: The RNTCP is moving from notification at treatment to notification at diagnosis. Henceforth, once a TB patient is diagnosed, s/he will be notified on the same day of diagnosis. For this, a TB notification register is being placed at each health facility. It brings those TB patients who are missing after diagnosis under the surveillance system and will enhance the programme capacity to address the issue of initial loss to follow up.

Private sector: TB has been made a notifiable disease in 2012 through Government of India Order. It has expanded the ambit of surveillance of TB in the country covering all public as well as private health facilities. TB patients seeking care in private sector are being reported along with their demographic and disease characteristics. The surveillance begins with the notification, and completed with acting on the information gathered.

The Government of India has amended its notification order with extension of public health services following TB notification.

TB Notification amendment
Government Order



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सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011
GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
NIRMAN BHAVAN, NEW DELHI-110011

D.O. NO. Z-28015/2/2012-TB
21st July 2015

Notification of TB cases: Amendments

Dear

Following amendments are made in Govt Order **No Z-28015/2/2012-TB** dated 6th May 2012 in context with Notification of TB cases:

1. For the purpose of case notification, a TB case is defined as follows:
   - A patient diagnosed with at least one clinical specimen positive for acid fast bacilli, or Culture-positive for Mycobacterium tuberculosis or Rapid Diagnostic molecular test positive for tuberculosis

   OR
   - A patient diagnosed clinically as a case of tuberculosis, without microbiologic confirmation, and initiated on anti-TB drugs.
2. Once private practitioner notifies TB patient information following actions will be taken by local public health staff of general health system of Government or local bodies and entered in Nikshay:
   - Patient home visit as per convenience of patient,
   - Counselling of TB patient and family members,
   - Treatment adherence and follow up support ensure treatment completion,
   - Contact tracing, symptoms screening, evaluation of TB symptomatic and offering INH chemoprophylaxis to eligible contacts,
   - Offering HIV testing, Drug Susceptibility Testing (DST), if eligible.

   All laboratories shall notify TB cases with information as per Annexure I and medical practitioners, Clinics, Hospitals, Nursing homes shall notify TB cases with information as per Annexure II.
3. For more detailed information, concerned District TB Officers may be contacted, whose details are available on www.tbcindia.gov.in and http://nikshay.gov.in.

With regards,

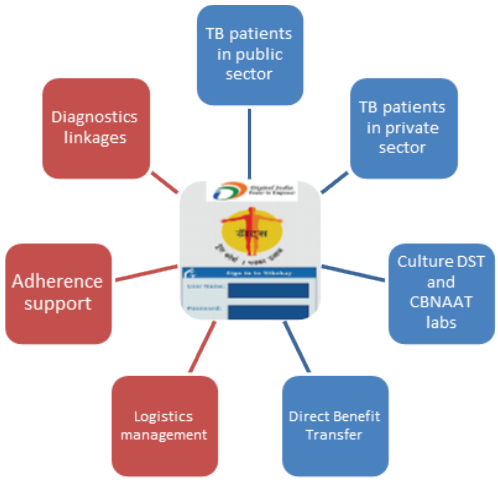
Yours sincerely,
(Anshu Prakash)

NIKSHAY

NIKSHAY platform is being used under the RNTCP as an ICT enabled state-of-art surveillance system to get notification of TB cases at diagnosis from both public and private sector including drug resistant TB patients. The programme also envisions continuous monitoring and treatment adherence for all TB patients registered with NIKSHAY, enable tracking of all notified TB patients across TB care cycle, geographies, transfers and referrals. Currently, following enhancements are underway in the NIKSHAY for patients support, logistics management, direct data transfers, adherence support and to support interface agencies which are supporting programme to expand the reach.

Enhancements	Functions
99 DOT	Mobile based "Pill-in-Hand" adherence monitoring tool for electronic treatment record of TB patient to monitor the treatment adherence.
Connected diagnostics	Extracting data from CBNAAT devices and making it available to Nikshay via the use of a single component of the CDP solution called Machine-to-Nikshay software
Drug and logistics MIS	ICT solution for real time inventory and stock data for forecasting and quantification
Direct Benefit Transfer	ICT based benefit transfer system for patients and providers using NIKSHAY, PFMS and AADHAR
Interface agency	Projects like UATBC, AXSHAYA PPM initiatives have developed interface to link with NIKSHAY to support programme in getting TB notification and treatment outcome reports of patients outside public sector.

NIKSHAY Components



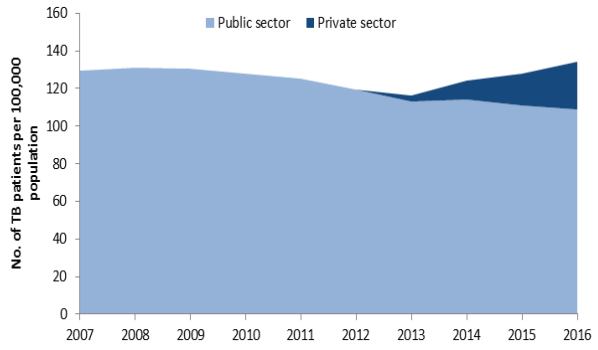
Information captured in NIKSHAY from 2012

TB patients reported	76,12,774
Public Sector	68,25,919
Private Sector	7,86,855
Patients registered from CBNAAT and C & DST laboratories	8,78,009
Drug resistant TB patients reported	48,066
Contractual staff registered	10,526
CBNAAT labs	629
C & DST labs	65
Drug resistant TB centres	158
Private Health Facilities	1,17,031

TB Notification in 2016
Trends in notified TB patients

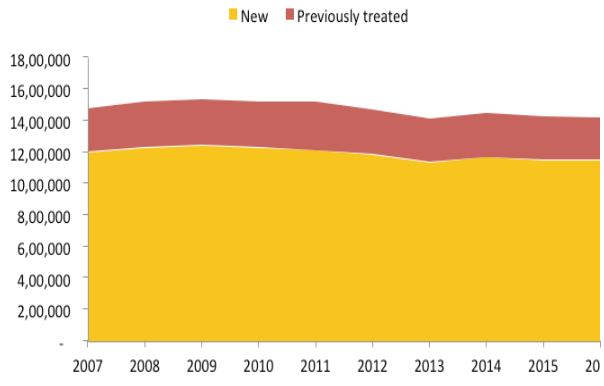
Since inception of RNTCP, TB notification steadily increased. With complete coverage of RNTCP in 2006, annual TB notification rate increased upto 130 patients per lac population and remained stable or slightly declined from public sector. TB disease was made a notifiable disease in 2012, TB patients reported from private health care provider had started increasing and taken TB notification in increasing

trend again. In 2016, the total TB notification rate was 134 patients per 100,000 populations.



The distribution of TB patients notified from the public sector is as follows:

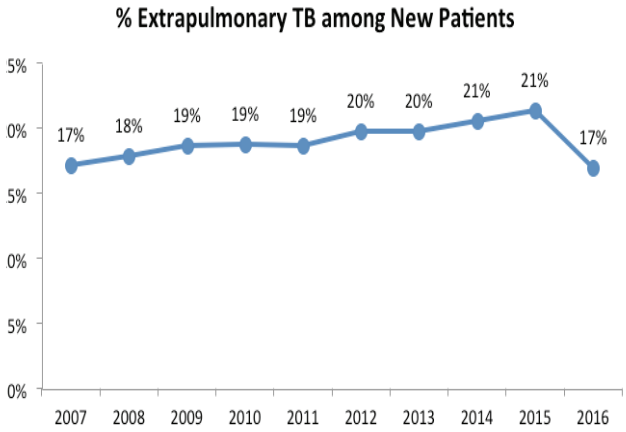
Trend of New and Previously Treated TB Patients ~20%TB patients notified from public sector are previously treated and its trend remained almost same over period of decade



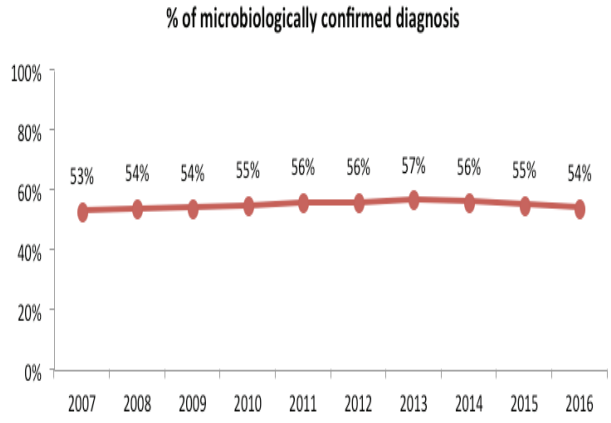
Pulmonary and Extra Pulmonary TB Patients

Extra-pulmonary TB patient reporting has been increased from 17% to 21% over period of 10 years. Better diagnostics availability, and improving access may have contributed to this sustained increase in detection of extra pulmonary TB patients.

Availability of 628 CBNAAT laboratories and strategy to offer CBNAAT upfront for diagnosis of extra pulmonary TB may further improve programme's capacity to diagnose Extra Pulmonary TB patients. Effective system to get extra pulmonary samples for testing is a challenge. Efforts will be made to improve ability of district and sub-district hospital to overcome this challenge.

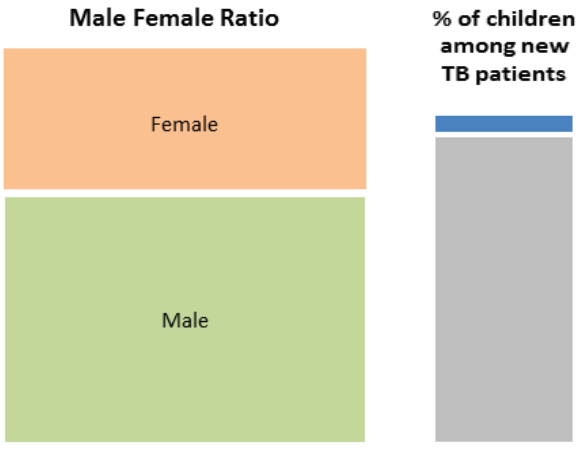


Microbiological Confirmation among notified TB Patients - Microbiological confirmation has been considered a quality parameter in diagnosis of TB. The programme has maintained ~55% TB patients diagnosed as microbiologically confirmed TB in public sector. Since inception, the RNTCP has used diagnostic algorithm which provide microbiological testing (smear microscopy) to all presumptive TB patients. Now, CBNAAT has been increasingly used for diagnosis of TB up front and as a sequential test would improve case finding efforts with maintaining microbiological testing.



Male to Female ratio among notified TB patients has been declined steadily. In 2016, the M:F ratio was 1.7. The M:F ratio ranged from 1.07 to 2.25.

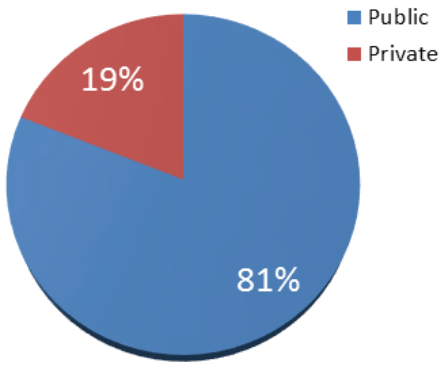
The proportion of children among new TB patients reported was 6% in 2016. Absence of appropriate samples coupled with decentralized capacity to get good samples from children to test for TB remains to be challenge in pediatric TB case detection. The programme has expanded scope of using CBNAAT and has been made available for diagnosis of TB among children presumptive to be TB. This strategy is expected to improve TB case detection in children. In a few states like Delhi, Chandigarh, Madhya Pradesh, Mizoram, Nagaland, Arunachal Pradesh could reported more than 10% TB patients were children.



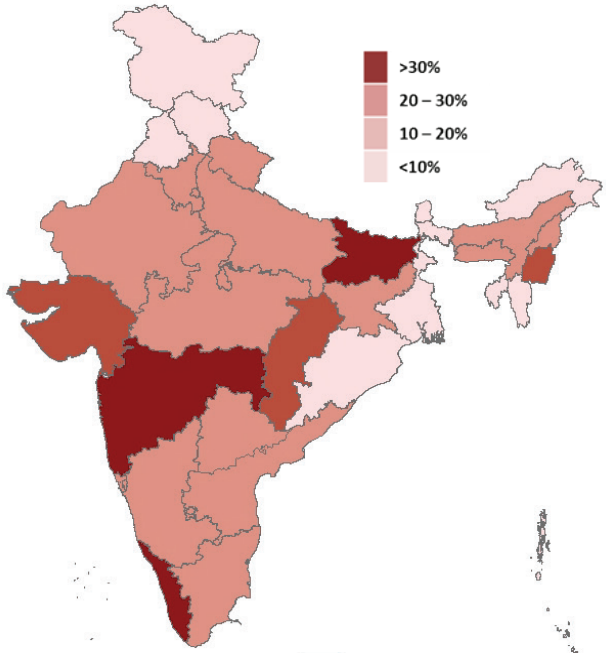
TB Notification from Private Sector In 2016, with help of NIKSHAY the programme reported almost one fifth of TB patients from private health care facilities out of total reported patients.

There is a wide variation in from state to state in terms of proportionate reporting of TB patients from public and private sector.

Reporting of TB patients from public and private sector is almost equal in Kerala to nil in some of the UTs and NE states.



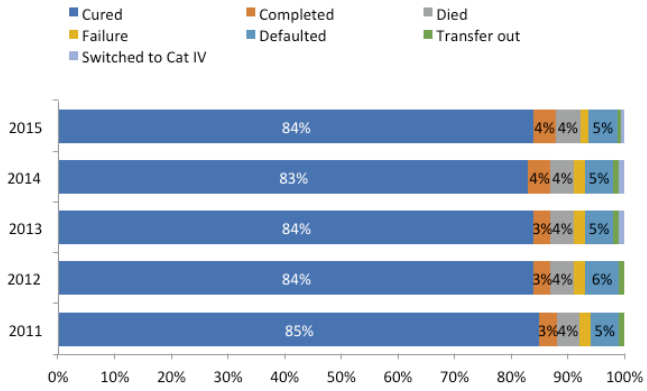
Proportion of Notification of TB Patients from Public and Private Sector in 2016



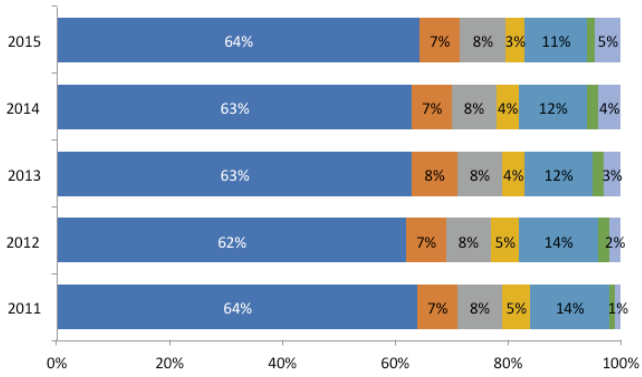
State wise Proportion of Notification of TB Patients from Private Sector in 2016

Trend of Treatment outcome of TB patients notified from Public Sector under RNTCP

Treatment success rate among microbiologically confirmed new TB patients remains consistently above 85%. Among previously treated microbiologically confirmed TB patients, the treatment success rate remained to be 70%.



Treatment Outcome of Microbiologically Confirmed New TB Patients



Treatment Outcome of Microbiologically Confirmed Previously Treated TB Patients

Treatment outcome of TB patients in private sector

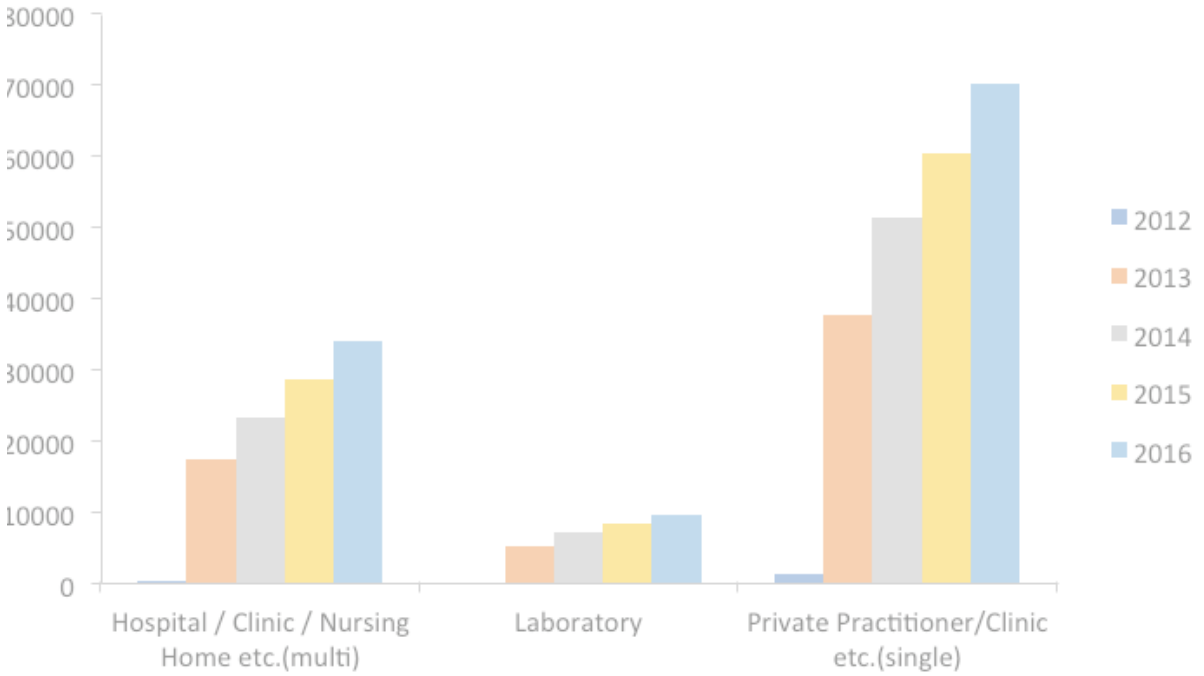
TB Patients notifications are in increasing trend from private sector over the years. Along with, it the programme is making efforts for ensuring completion of care. The notification order has been amended and responsibilities of public health actions are begin taken under the programme. Treatment outcome of TB patients notified from private providers are reported from the 3 districts. Following are treatment outcomes of TB patients notified from private sector in these districts.

Treatment Outcome of TB Patients Notified from Private Sectors in 2015

District	Notified patients	Treatment completed	Died	Lost to follow up	Not evaluated	Treatment Regimen Change
Patna	14940	73%	3%	5%	18%	1%
Mehsana	2909	73%	5%	5%	16%	1%
Mumbai	11370	76%	2%	5%	13%	3%

Public Private Partnership

Chapter 5



Public Private Partnership

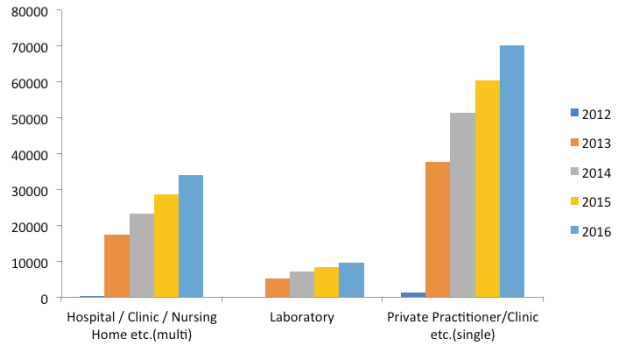
Chapter 5

Effective engagement of all health care providers (private practitioners, chemists, laboratories, NGOs, AYUSH) at a scale commensurate to their presence is crucial to achieve Universal Access to TB Care. Majority of times, these providers are first contact for care of patients. Since the inception of RNTCP, multiple prior interventions through various strategies have been deployed to engage NGOs and Private Providers for TB control efforts.

Engagement of Private Practitioners

Since TB has been made a notifiable disease, more than 1,13,961 private health establishments are registered under NIKSHAY till December 2016. Among them, 70,146 are private practitioners/clinics (single), 34,105 hospitals/clinics/nursing homes (multi) are and 9,710 are laboratories. Following chart shows how private health establishment registration grew over period of time. Maximum private health establishments got registered in 2013. Since then, more than 15,000 facilities are getting registered, every year. In 2016, 16,282 facilities registered and 3,30,186 TB patients were notified from private health establishments.

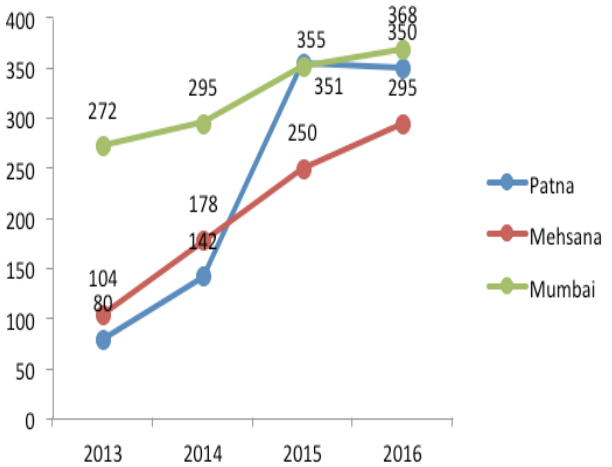
Private Health Establishment Register in NIKSHAY - Cumulative Over Years



Universal Access to TB Care (intervention to engage private providers)

To engage private sector providers, a package of interventions have been implemented in the project Universal Access to TB care (UATBC). The intervention are aimed at improving TB notifications by offering information and communication technology (ICT) support that is convenient to providers, free TB drugs for notified TB patients, (free/subsidized diagnostic services in Patna and Mumbai) and extending public health services including adherence support to treatment outcome for patients diagnosed and treated in the private sector. The interventions are implemented in the districts of Patna in Bihar, Mehsana in Gujarat and Mumbai and Nagpur in Maharashtra.

In Patna and Mumbai, a private provider interface agency (PPIA) is used to enrol and extend public health services for a large number of private providers to ensure efficient service delivery. In Mehsana and Nagpur, the RNTCP staffs are encouraged to manage the service delivery intervention. The interventions began in 2014 except Nagpur which started in September 2015. At the intervention sites, total TB case notification rates were increased 1.5-4 folds.



State wise Registration of Private Health Establishments

State	Hospital/Clinic/Nursing Home etc.(multi)	Laboratory	Private Practitioner/Clinic etc.(single)	Total
Andhra Pradesh	4024	524	1757	6305
Andman and Nicobar Islands	3			3
Arunachal Pradesh	19		6	25
Assam	205	123	546	874
Bihar	448	366	3605	4419
Chandigarh	8	3	111	122
Chhattisgarh	603	249	994	1846
Dadra and Nagar Haveli	21	9	44	74
Daman and Diu	5		10	15
Delhi	716	288	1674	2678
Goa	56	29	531	616
Gujarat	2947	473	6449	9869
Haryana	722	119	433	1274
Himachal Pradesh	152	97	332	581
Jammu and Kashmir	197	370	314	881
Jharkhand	382	103	540	1025
Karnataka	2417	846	8105	11368
Kerala	3290	1471	3865	8626
Madhya Pradesh	1228	383	2751	4362
Maharashtra	7405	1464	19909	28778
Manipur	22	16	4	42
Meghalaya	33	4	42	79
Mizoram	19	12	83	114
Nagaland	15		9	24
Odisha	263	43	588	894
Puducherry			13	13
Punjab	874	297	846	2017
Rajasthan	975	105	780	1860
Sikkim	3	9	27	39
Tamil Nadu	2984	355	6939	10278
Telangana	239	27	109	375
Tripura	18	135	19	172
Uttar Pradesh	3252	852	6364	10468
Uttarakhand	78	40	104	222
West Bengal	1699	1213	3901	6813
Total	35322	10025	71804	117151

Engagement of NGOs/Private Practitioners through Partnership Options

National Guidelines on Partnership provides 22 different partnership options for engagement of NGOs and Private Practitioners. These engagements are carried out at the State level and district level. Through these efforts, ~1900 collaborations were made with NGOs.

Partner support

In addition to programme activities, various development partners and civil society organizations help the programme in delivering TB care services effectively. Details of activities conducted by these partners engaged at central level are given below.

Foundation for Innovative New Diagnostics (FIND)

FIND is the technical and implementing partner, supporting the laboratory network for DR-TB services under RNTCP. This initiative began in India under EXPAND TB with funding support from UNITAID and was complemented by funding from GFATM from 2011 to September 2015. From October 2015 under the New Funding Model (NFM) of the Global Fund, the FIND provides support for human resources, training, quality assurance procedures, technical assistance, monitoring and supervision, supply of equipment and consumables, and National PMDT reviews.

Details of laboratories supported

	EXPAND TB	GFATM	GFATM NFM	EXPAND TB CBNAAT
Project Duration	**2010 - 2015**	**2010 - 2015**	**2015-2017**	**2012 - 2015**
No. of Sites planned	LPA: 46, LC: 40		LC: 15	14
No. of Sites Functional	LPA: 45*, LC: 40			14 + 24 additional sites

In addition to establishments of these laboratories, comprehensive maintenance contract of these facilities and equipment has been undertaken under the GFATM project. The mechanism for sustenance of these facilities beyond the corresponding project period is also being taken care of.

Additional HR support is made by providing about 300 lab personel under NFM project for 46 sites. These include microbiologists, technical officers, laboratory technicians, laboratory attendants and data entry operators to support day-to-day functioning of lab.

Under GFATM's NFM, FIND as an implementing partner is supporting the labs with supply of equipment and consumables. This is monitored on monthly basis in order to ensure that the labs have sufficient consumables and reagents to support the programme. Training has been a major focus for FIND, and its key driver is the International Centre of Excellence for Laboratory Training (ICELT) at the National TB Institute Bangalore established with funding from UNITAID. This Centre has trained 386 lab personnel at the national level since its inception. In addition to the trainings conducted at ICELT, FIND has so far provided hands-on on-site trainings to 2,399 lab staff (till November 2016).

Performance in 2016

	2016	Cumulative till 2016
Presumptive MDR-TB tested by molecular diagnostics (LPA & CBNAAT)	1,54,344	6,66,158
MDR/RR- TB patients diagnosed	14,492	90,458
MDR/RR-TB patients diagnosed by LC-DST	1,997	4,641

Accelerating access to quality TB Diagnosis for Paediatric Patients (supported by USAID)

Accurate and timely diagnosis of Paediatric TB

continues to remain an impediment in management of TB in children. FIND is implementing a project focussed on increasing access to TB/MDR TB in close coordination with RNTCP and with funding support from USAID, since April, 2014, initially in four major cities of India, namely New Delhi, Chennai, Hyderabad and Kolkata. In 2016, the project was expanded to 5 additional cities i.e. Surat, Nagpur, Guwahati, Vizag and Bengaluru.

Launch of accelerating access to TB diagnosis of pediatric cases project in Nagpur

Performance in 2016

Presumptive paediatric TB patients tested	30,977
TB patients diagnosed	2,148
Out of TB patients, RR-TB patients diagnosed	185

The Clinton Health Access Initiative (CHAI)

Clinton Health Access Initiative (CHAI) is supporting the RNTCP in increasing patient access to quality drugs and diagnostics in both public and private sector.

In the public sector, CHAI collaborates and support the program in operational and analytical aspects of PMDT scale up through data driven insights on areas such as sample collection to result delivery process analysis, stock management among others to support further increase in patient enrolments.

In the private sector, CHAI initiated the project "Initiative for Promoting Affordable and Quality TB tests" (IPAQT) in 2013. With this, it brought together various private labs with the support of test manufacturers and other major stakeholders. IPAQT aimed to promote use of WHO-endorsed tests (sputum microscopy, culture, GeneXpert & line probe assay) to presumptive TB cases at affordable prices through an agreed upon ceiling price and by building awareness among health providers, laboratories, and patients.

- The initiative has networked with 139 private laboratories that have 5,500+ collection centers spanning over 52 cities across 20 states and two Union territories.
- As part of the private provider awareness efforts, more than 4,000 private providers have been sensitized on diagnosis and treatment of TB according to the STCI through 48 continued medical education seminars in 26 cities in India.

Also, this year marked the consolidation of results from DENOTE- (a "Demand Generation & Notification Effort" pilot project started in October 2014 across seven cities namely Ahmedabad, Coimbatore, Delhi, Lucknow, Mumbai, Pune and Patna), to facilitate notification from private sector labs and increase adoption of quality TB diagnostic practices in the private sector.

- DENOTE helped sensitize over 2,300 private physicians treating TB patients on the importance of early and accurate diagnosis as per STCI. The learnings from the DENOTE project around working with private practitioners for microbiological testing are useful for capacity building of staff under RNTCP.
- The project also facilitated establishment of notification processes across 35 laboratories. It resulted in notification of over 31,000 microbiologically confirmed TB patients through Nikshay. Efforts were also taken to make laboratories self-sufficient at the end of

the project period, to integrate the notification process in the daily operations of labs to ensure continued reporting from their end without any active involvement from the field team.

World Vision India

World Vision as one of the Principal Recipient of GFATM (Global Fund for AIDS, TB, Malaria) launched Project Axshya with support Round 9 Grant and Central TB Division in April 2010 in 74 districts in 8 states (Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Telangana and West Bengal) of India as an initiative to engage the vulnerable communities in TB care and treatment. Six NGO-partners namely ADRA India, CARE India, GLRA India, LEPRA India, SHIS and TB alert India are SRs (Sub-Recipients) to World Vision India. The first two phases of Axshya were completed in September 2015 and projected entered New Funding Model phase (NFM) in October 2015. This phase is currently implemented in 70 districts of the same 8 states (including in 100 cities).

The Global Fund Grant under the New Funding Model:

The key objective of the NFM grant is to contribute towards the country's efforts to detect the missing TB patients. To achieve this, World Vision India along with partners has adopted following strategies:

- Improving case notification from the KAP (Key Affected Population) through ACF (Active Case Finding),
- Enhancing referrals from the unqualified private providers and
- Facilitating TB case notification from the private sector.

Additionally,

- The project provides home-based counselling and dry ration support to patients with MDR-TB
- Increasing access for TB patients to HIV screening and
- Improving access to INH prophylaxis for the children-contacts.

Project operational areas: 21,000 villages in the vulnerable pockets and mapped high-risk community groups of 100 cities which are located in the 70 districts of 8 states. The estimated high-risk population planned to be screened under active case finding of the project would be 26 million in these areas.

Achievements under NFM-grant from Jan'16 to Sept'16:

1) **Active case finding:** The project screened around 4.1 million people in the vulnerable urban and rural pockets of 70 districts and detected around 6,268 TB patients.
2) **Community referral:** Around 1,851 TB patients were detected through the referrals of the unqualified private providers whom the project had sensitized.
3) **Private sector notification:** The project had sensitized around 5,000 private doctors and facilities in 100 cities located in 70 project-districts on TB notification and assisted them to notify the TB cases. Around 14,194 private TB patients were notified and registered in the NIKSHAY e-system of RNTCP by the project.
4) **INH-prophylaxis:** The project initiated INH-prophylaxis to around 1,259 children-contacts who were identified during contact investigations by the project volunteers.
5) **HIV testing:** The project assisted around 4,733 TB patients to utilise the HIV testing services at the ICTC (Integrated Counselling & Testing Centre).
6) **Counselling of MDR TB patients:** The project brought around 1,000 MDR-TB patients under home-based counselling and food supplementation services.

TB screening among inmates in West Bengal

The project has initiated TB screening among the inmates of 4 prisons of West Bengal in collaboration with the State TB Cell and District TB Officers since December 2016. The results of the interventions are given below in tabular format:

Number of prisons intervened	4
No. of inmates in the 4 prisons	6929
No. of inmates verbally screened by using 4 TB symptom complex	6135 (88.5%)
No. of presemptive TB cases indentified by using 4 sysmptom complex	1232 (20%)
No. of Identified Presumptive TB cases who were screened by CXR	1078 (88%)
No. of cases suggestive of TB in CXR	147
Total no of presumptive TB cases whose sputum samples were tested at CBNAAT sites that included 147 TB suggestive by CXR as well	381
MTB detected (Rif Sensitive)	13
MTB detected (Rif Resistant)	0
Clinically diagnosed TB	2

The International Union Against Tuberculosis and Lung Diseases:

Project Axshya (supported by the Global Fund Grant)

Project Axshya is a civil society initiative that supports Government of India's Revised National Tuberculosis Control Programme (RNTCP) to expand its reach, visibility, and effectiveness. Supported by the Global Fund, it is implemented by The Union in 285 districts across 19 states of India through eight civil society organizations; around 1000 local NGOs and nearly 15000 community volunteers.

With a focus on enhancing access to vulnerable and marginalised communities including tribals, slum-dwellers, homeless, the trained community volunteers of Axshya (called Axshya Mitras) have reached over 14 million households disseminating information on TB and simultaneously screening the family members for symptoms of TB. Over 153,000 presumptive TB patients were identified and tested and this included collection and transportation of sputum samples of nearly 130,000 presumptive TB patients. Almost 15000 TB patients were diagnosed and initiated on treatment through the active case finding intervention.

Axshya also focuses on empowerment of community to enhance their participation in TB control. Over 25,000 TB patients including nearly 10,000 women have been sensitised on their rights and responsibilities during January to September 2016 through District TB forums.

In 30 districts, counselling services have been provided to over 8000 MDR-TB patients resulting in a significant reduction in loss to follow up and death amongst the MDR-TB patients by nearly two thirds. Over 200 personnel working with RNTCP have been trained in on key thematic areas. Preventive maintenance and emergency breakdown services have been provided for over 9000 binocular microscopes in 23 states ensuring uninterrupted diagnostic services.

As part of the urban interventions in 40 sites across the country, the project is engaging qualified private

providers including individual practitioners, hospitals and private labs and facilitating notification of TB patients and promoting rational management of TB as per STCI and supporting treatment adherence through daily sms and weekly interactive calls. During the reporting period the project has sensitised nearly 3000 practitioners, over 700 private hospitals and 500 laboratories resulting in notification of over 9000 TB patients.

The project is also promoting convenient TB services through 82 Axshya Kiosks which provide flexi -DOT for extended hours (6 am to 9 pm), serve as sputum collection and transportation centres, drop-in information and counselling centers.

Engaging private practitioners in TB care and prevention (supported by Eli-Lilly Foundation)

The Union in collaboration with the Lilly MDR-TB partnership is strengthening engagement of private health care providers. Three contextually diverse sites for involvement of Rural Health Care Providers (RHCP) are Khunti in Jharkhand, Alirajpur in Madhya Pradesh and Ghazipur in Uttar Pradesh. RHCPs are being trained to identify and refer presumptive TB patients, collect and transport sputum and serve as DOT providers in these three districts. During this period, RHCPs have contributed to referrals of 1210 symptomatics and 100 of them have been diagnosed and initiated on treatment.

The web based software developed for notification and treatment adherence facilitates notification and promotes treatment adherence through daily mobile sms reminders and weekly interactive voice calls. It is being successfully used by Apollo Hospitals at Jubilee Hills, Hydergudda & Secunderabad and KIMS, Trivandrum. 411 TB patients have been notified using the software and 370 (90%) of them are being supported for treatment adherence. The treatment success rate is over 84% among the patients who are being supported through this intervention.

Tata Institute of Social Sciences (TISS)

Counsellors' Project for DRTB patients (supported by The Global Fund Grant)

TISS is providing impetus to the outcomes of the Drug Resistant TB cases to join and participate in RNTCP by using the strategies developed for this purpose by the program, for patients suffering from drug resistant tuberculosis. This is occurring by providing counselling services to the DR-TB patients and their families, linking them to social protection schemes for improving the treatment outcomes in drug resistant TB cases registered under the program. Meetings are being conducted with Government Departments and other stakeholders to advocate easier enrolment of TB patients under various Government Social Protection Schemes.

TISS is operating in four states. These states are Gujarat, Karnataka Maharashtra and Rajasthan DRTB Counsellors have been recruited and placed in these states.

TISS is also conducting a survey to assess the mental status of DRTB patients and Improved knowledge about TB and reduce misconceptions among patients who received counselling services.

Training and workshops for staff recruited by TISS under this project have been undertaken in collaboration with the State TB Cell and District TB Centre functionaries.

The program is looking forward to the demonstration of results of treatment outcomes and attrition rates in Drug resistant TB cases as a positive outcome of this project

Tibetan Voluntary Health Association (TVHA)

Active Case Finding in Tibetan population of the Country (supported by The Global Fund Grant)

The Department of Health (DOH), one of the seven departments of Central Tibetan Administration (CTA) is registered in the name of Tibetan Voluntary Health Association (TVHA) under the Indian Society Registration Act XXI 1860. It is working as a registered charitable organization catering to the basic health care needs of Tibetan people living in India and Nepal. The total Tibetan refugee population in India is 94,203. Established in December 1981, its goal is to provide a comprehensive (preventive, promotive and curative) health care to the Tibetan refugee population in exile (India and Nepal) through a network of 54 health centers; 7 hospitals, 5 primary health centers and 42 clinics spread across India and Nepal. The Department plays a key and leadership role in overall policy in health, health care financing, planning and implementation of all health programs and projects in Tibetan communities in exile.

Performance Report (April- September 2016)

Number of persons screened for TB	3906
Number of presumptive TB cases identified	661
Number of presumptive TB cases tested for TB	571
Number tested with CBNAAT	102
Number of TB cases diagnosed	68
Number of TB cases notified in Nikshay	23
Number of TB cases initiated on treatment	64
Number of contacts screened for TB	159
Active case finding activities in school/monasteries held	16
Number of presumptive Tb cases which underwent X-ray examination	524

TVHA is responsible for implementing the following strategies in coordination with Central TB Division's RNTCP:

- TB awareness and community outreach campaign
- Intensified case detection and contract tracing in 15 remote refugee settlements and congregate institutional settings
- Treatment of diagnosed TB patients using DOTS strategy
- Capacity building of TB Control Program's workforce and infrastructure

Indian Council For Medical Research (ICMR)

The TIE –TB Project (supported by The Global Fund Grant)

The Indian Council of Medical Research (ICMR) under the Department of Health Research/Ministry of Health & family Welfare/Government of India, in collaboration with Central Tuberculosis Division (CTD)/Department of Health & Family Welfare/ MOHFW/GOI has undertaken this project in certain defined hard to reach and tribal areas spread over a few districts of the central, western and eastern parts of India. It is currently being implemented in 19 districts of 5 States (Chattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Rajasthan), covering a total population of approximately 17.6 million, out of which about 13 million (74%) is predominantly tribal. The project will be carried out in an implementation research mode wherein the interventions will be evaluated as per defined protocols through rigorous research methods qualitatively and quantitatively, thereby serving evidence to RNTCP for decisions on

further policy designing & scale up activities to the entire population, especially the tribal population.

The project is expected to improve the "Standard of Care" among these extremely deprived populations which will be measured through various programmatic and socio-economic indicators. The efforts will lead to early seeking of care and reduction in out of pocket expenditure of individual patients. The patients will have access to the correct and appropriate treatment regimen and will help in curbing of the individual patients from being directed to multiple providers for treatment which results in huge economic burden to the patient and his family.

A second component of the project carried out by ICMR is towards strengthening implementation and operational research. Currently 11 OR studies are being conducted under NIRT Chennai with the support of the Global Fund Grant.

Expected Outcomes of the TIE –TB project:

1. Quantitative
   - i. Increase in Case Detection of TB patients under the RNTCP. This implies an additional yield of 12240 cases from the project efforts for a period of ten months from February 2017 to December 2017
   - ii. Increased Community Involvement
   - iii. Increased Traditional Healer Involvement
2. Qualitative
   - i. Improvement in Community Awareness
   - ii. Improved convenience to TB patients for diagnosis as well as for treatment.
     - ➛ Decrease in time to diagnosis
     - ➛ Early initiation of treatment
     - ➛ Decreased out of pocket expenditure of TB patients
     - ➛ Decreased wage loss
     - ➛ Decreased Provider Visits as well as multiple provider visits.

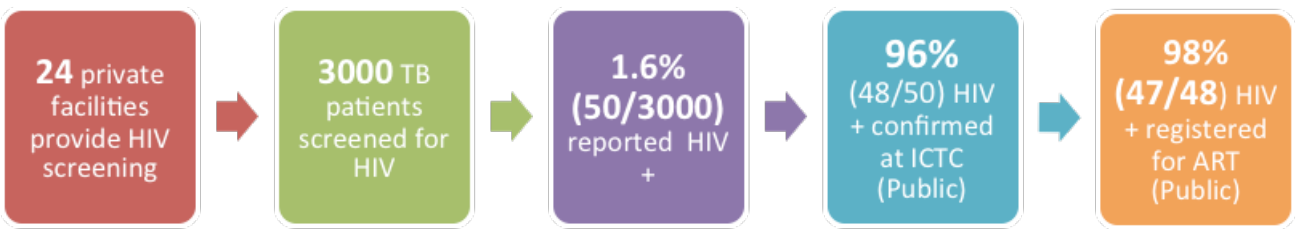
PATH

PATH is supporting Public Private Interface Agency in Mumbai for UATBC interventions with support of BMGF. In addition, the organization facilitated the early diagnosis of HIV by providing TB patients with a free Rapid Diagnostic Test for HIV at private facilities in Mumbai. This initiative was funded by USAID under Challenge TB Initiative.

The intervention supports a collaboration between the private and public sectors. Through trained link counselors, TB patients screened positive from private laboratories, are confirmed at the nearest Integrated Counselling and Testing center (ICTC) and linked for treatment to Anti-Retroviral Treatment centers (ART). Free TB treatment and adherence support is provided to all the TB/HIV patients for the duration of TB treatment.

Medical Colleges Involvement

Under RNTCP, the Medical Colleges play important roles in service delivery, advocacy, training and operational research. With advancement in TB care, the medical colleges are supporting case management of drug resistant TB patients, pharmacovigilance and private sector engagement. RNTCP provided a Medical Officer, a Laboratory Technician and a TB-HV to the involved Medical College for



Achievements under HIV - TB intervention by PATH (April to September 2016)

	2011-12	2012-13	2013-14	2014-15	2015-16
No. of Medical Colleges involved	315	320	347	363	382
Pulmonary TB patients	136072	136130	156858	171627	159560
Extra pulmonary TB patients	82067	78200	91367	110083	101434
TB patients diagnosed	218139	214330	252066	281719	260994

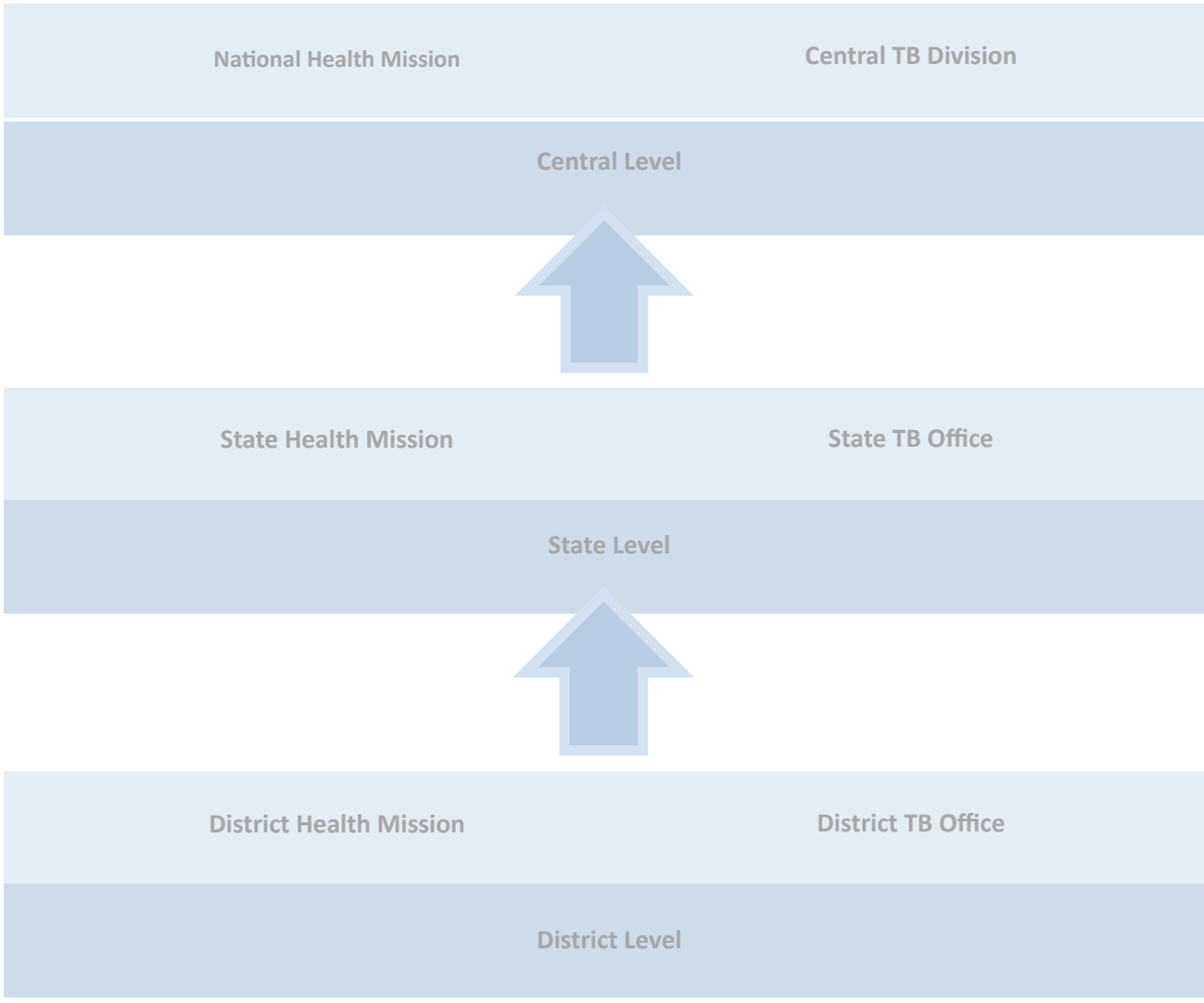
managing and coordinating with the program. There is a Task Force Mechanism for regular coordination, monitoring and advocacy purpose at the State, Zonal and National Level. Currently, 382 medical colleges are involved with RNTCP. They contribute 16-20% pulmonary TB patients and 50% extra pulmonary TB patients out of total TB patients notified from RNTCP.

The Zonal Task Force Meetings are conducted from Central level every year to review performance of State Task Force and share update of programme policies and strategies. For 2016-17 F.Y., 6 Zonal Task Force Meetings were held in each of six zones. Medical college faculties were appraised on recent changes in technical and operational guidelines of the programme during these meetings.

Zonal Task Force Workshop (West Zone) held at Ahmedabad on 22 and 23 December 2016

Chapter 6

Planning Under RNTCP



Planning Under RNTCP

Chapter 6

RNTCP is one of the components under the National Health Mission (NHM) which is a flagship scheme under Government of India. The Health Ministry follows equity-based approach to allocate funds under NHM. For the financial year 2016-17, states were requested to submit PIP in the software application developed by NIC but due to technical issues all states submitted PIPs in MS excel format. The underlying principles and processes of planning remain the same. The Framework for Implementation of the NHM remains the mainstay.

Preparation for PIP 2016-17

The State TB Cell is expected to submit its Programme Implementation Plan (PIP) through State Health Mission to NHM under MoHFW. RNTCP Program division has developed detailed PIP template (MS Excel) for both state and districts, which was circulated to all the states.

Record of Proceedings (RoP)/approvals for 2015-16 is the starting point for PIP 2016-17 preparation (Main and supplementary (if any) and progress both physical and financial against the approvals (State as well as district wise). State level Programme Divisions as well as districts was asked to reassess the approvals for 2015-16 and list down the changes required in 2016-17. It is important that the action plan is realistic, practically implementable and correlates the physical outputs with the cost estimates.

States along with their districts assessed the progress, both physical and financial, made till November 2015 against the approvals given in 2015-16 and filled up the required annexures in the MS Excel sheets and upload as part of the PIP in the relevant sections. PIP 2016-17 is consolidated plan of districts and the State.

PIP 2016-17: Type of Activities

A. Continued /Existing Activities

Based on the feedback of the Programme Divisions and the districts, State may propose the same budget and activities as approved in 2015-16, or propose changes which would fall in three categories:

1. Discontinuation of an activity: no budget required
2. Increase in budget: change would be either be in number of units or cost per unit
3. Decrease in budget: changes are likely to be in number of units and in some cases cost per unit

The changes required are to be clearly mentioned in the budget sheet and its explanation is to be provided in the remarks column.

B. New Activities

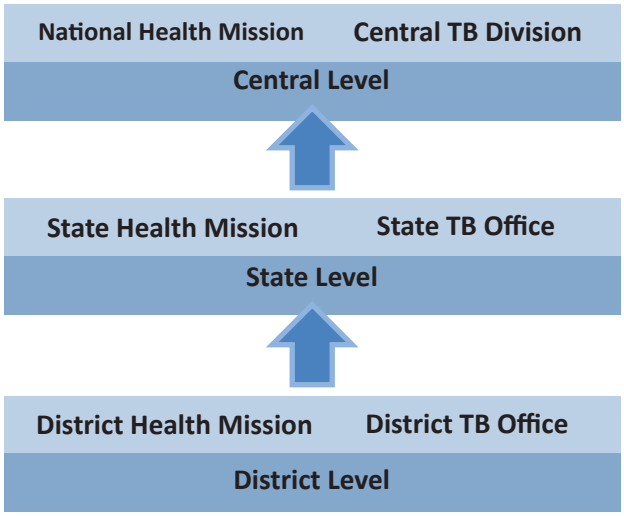
For all new activities the norms laid down in manual of PIP 2015-16 would apply. The State provided a brief description, rationale, data/ background information required to appraise the proposal and budget break-up for each new activity. New activities also address the priorities set for 2016-17.

Planning Process

As a part of NHM, RNTCP also follows a bottom up approach for planning and budgeting. The process begins at the districts level, which prepares the "District Health Action Plan" based on inputs from MO-TCs, STS, and STLS of Tuberculosis Centres in the districts. These Districts Health Action Plans are then aggregated to form an "Integrated District Health Action Plan (IDHAP)" which is further sent to the State Level. The DHAPs of all districts are compiled and aggregated at the state level for framing the "State

Program Implementation Plan (SPIP). All SPIPs are reviewed and compiled to estimate the next year's fund requirements for programme implementation activities under NHM/RNTCP.

PIP Planning Process



RNTCP Guidelines and Priorities for 2016-17

The PIP addressed the following key priorities such as:

- All the data for previous four last quarter's means from October to September. All figures are actual number, except for population which is to be written in lakh.
- Norms in the NSP are indicative and not a limitation. In case of higher amount is budgeted, a proper justification is required.
- Decentralization of Tuberculosis Units at block level or 1.5 to 2.5 lakh population to be considered in 2016-17. Budgets proposed for NGO/PP schemes will be as per new NGO/ PP Guidelines which has been circulated.
- Districts should plan for the PPM and ACSM coordinator however the post of communication facilitator is discontinued.
- As per the guidelines, a 10% increase in the budget for FY 2016-17 is allowed; but in case of particular new activity, an additional budget over and above state envelop may be proposed with proper justification.
- Patients from tribal areas / difficult to access areas, the norm for aggregate amount for travel support has been revised for completion of treatment (guidelines circulated). Similarly, for MDR & XDR patients, revised norms are applicable for budgeting purpose. The revised honorarium norms to be used for budgeting purpose.
- MDR TB and XDR TB suspects travel to DMC or sputum collection centre or DTC to be paid as per the actual with public transport. Similarly, travel cost to both MDR TB and XDR TB patients to DR-TB Centre or to district to be paid as per the actual with public transport.
- Vehicle hiring cost for transportation of drugs from district drug store to TU drug store to be included in the Office Operation.
- Training cost for ASHA or community DOT providers to be considered similar to paramedical staff. Training costs include cost of hiring vehicle for field visit during training and audio visual aids.
- Research proposals through task force mechanisms to be considered under Medical College Head. Research proposal other than from medical colleges to be considered under Research & Studies & Consultancy. Research proposals up to 5 lakhs may be approved by OR Committee of the STCS.
- All TB patients residing in notified tribal area (as per tribal department) to be provided with an amount of Rs. 750 per head under patients support system.

Budget Format

There was no major change in the activities listed or the FMR in the budget sheet for FY 2016-17. However in line with the requirement of the department of

Finance/Tribal Affairs, a few columns have been added and budgets for activities have to be further allocated/classified under Scheduled Caste sub plan, Scheduled Tribe Sub Plan and General sub plan.

Budget Envelope

As communicated vide letter no. 7 (139)/2015-NRHM I dated 16th November 2015, the NHM funding between the Centre and States would be in the ratio of 60:40 (for all states except NE and 3 Himalayan States), 60 from Central government and 40 from State.

It can be reasonably expected that there may be a 10% increase in the central budget over and above the budget given in 2015-16; Hence States are requested to estimate the resource envelope accordingly.

National Strategic Plan (2017-25)

The National Strategic Plan (NSP) 2017-25 for elimination of TB has been prepared as three year costed plan and eight year strategy document. The NSP incorporates recommendations of the Office of Hon'ble Prime Minister and abide to the framework of action submitted to his office in November 2017.

The NSP proposes bold strategies with commensurate resources to rapidly decline TB incidence and mortality in India by 2025, five years ahead of the global End TB targets and Sustainable Development Goals to attain the vision of a TB-free India. In the 12th plan period, India's Revised National TB Control Programme notified more than 70 lakh TB patients and put them on treatment. The NSP 2017-25 aims to notify 260 lakh TB patients in 8 years including public and private sector. The process began with first consultative workshops with various stakeholders engaged with TB services conducted in October 2016.

National Consultation with all Stakeholders for prepration of the NSP (2017-25) on 18 and 19 October 2016 at New Delhi

Chapter 7

Budgeting and Finance

Budgeting and Finance

Chapter 7

RNTCP is being implemented in line with the National Strategic plan effective 01st April 2012 with an increased allocation of approved budget 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). This is a centrally sponsored scheme and all the state governments who have agreed to implement the project as per RNTCP guidelines have signed a Memorandum of Understanding.

The disbursement and financial management of project funds at Central and state level is being done through trained staff. A Central Finance unit has been staffed 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 program website (Financial Manual for RNTCP).

The financial management arrangements to account for and report on program funds, includes both Domestic Budgetary Support (DBS) 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 Flexible Pool for Communicable Diseases 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 through State Treasury.

d. **Sanctions & Approvals:** Multiple level technical and financial approvals are required for making individual payments after sanctions are approved. 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 Offices (DDO) and Pay and Accounts Office (PAO). All the program expenditures follow the standard government systems of the PAO and are subject to control as per the General Financial Rules (GFR) of the Government of India. Payments are made through electronic funds transfer through treasury since the financial year 2014-2015.

e. **Accounting:** The accounting records for all payments are made against approved budget. 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 Director General of Audit and Central Expenditure (DGACE) under the Office of the Controller and Auditor General (C&AG) of India 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 being done as per state 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:

Description	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	Total
Budget requested	700	800	1358	1300	1000.00	5158.00
Budgetary estimates/approval	710	710	710.15	640	640.00	3410.15
Total Releases to states	224.72	323.52	373.87	483.19	342.43*	1747.73
Expenditure (Plan)	566.39	527	639.94	639.86	491.77*	2864.96

**Till 20th February 2017 #Figures In crores*

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 million for the TB program under the New Funding Model (NFM) for the implementation period 01st October 2015 to 31ST December 2017. The Grant is supporting 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
- Indian Council for Medical Research (ICMR)
- Foundation for Innovative and New Diagnostics (FIND)
- Tata Institute of Social Sciences (TISS)
- Tibetan Voluntary Health Association(TVHA)
- World 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 while 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.

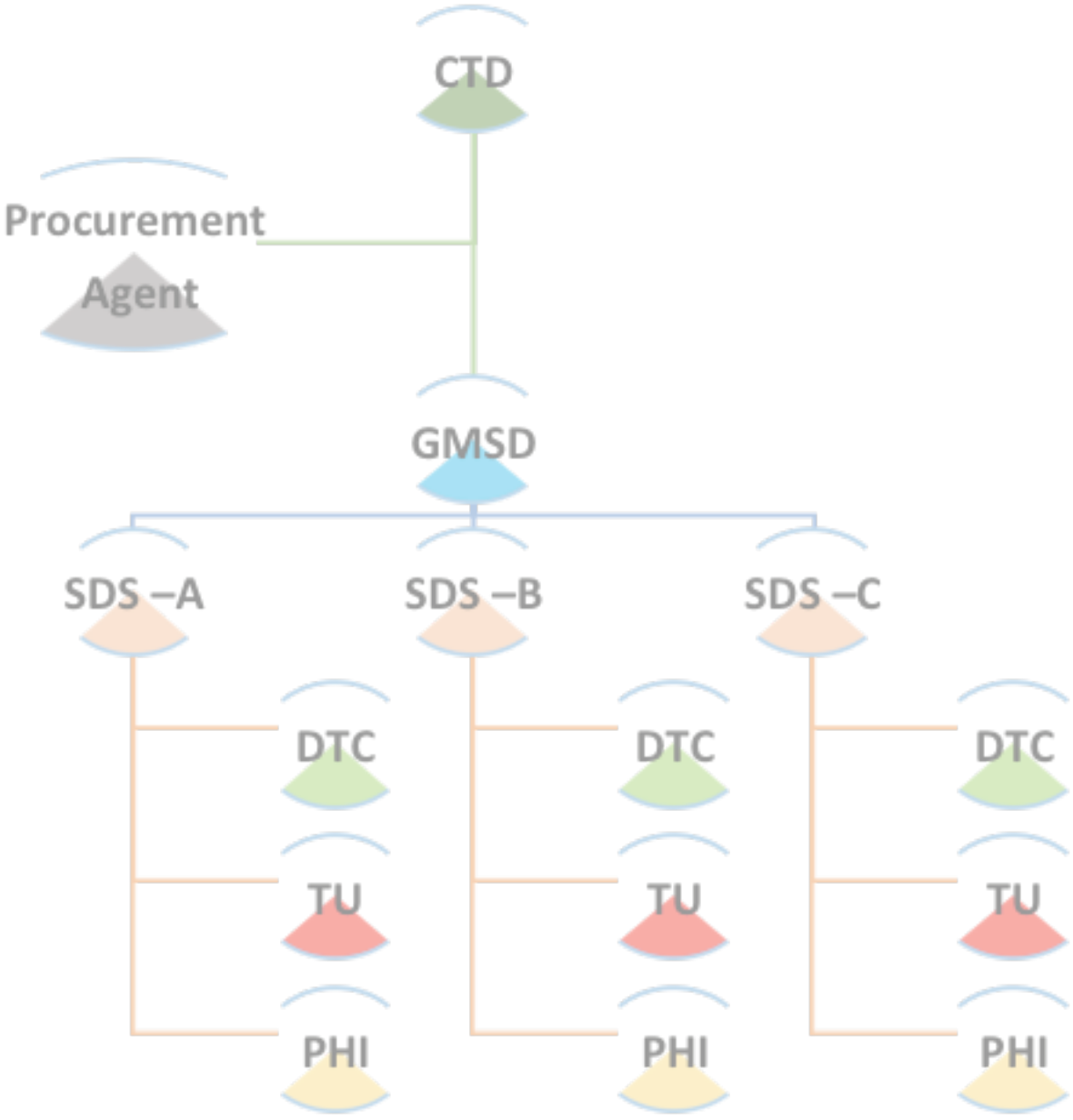
Component 3: Expand public tuberculosis services integrated with the primary health care system.

The Bank has completed the two joint review missions of the project (October 14-20; 2014 & April 10-25; 2015) under which project has been categorised "Moderately Satisfactory". 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.

In 2016-17 project has been able to claim USD 63 million. The project will end on 31st March 2018.

Procurement & Supply Chain Management

Chapter 8



Procurement & Supply Chain Management

Chapter 8

The Revised National Tuberculosis Control Programme (RNTCP) has been ensuring continuous and uninterrupted supply and availability of Quality Assured Anti TB Drugs, Diagnostics, consumables and all relevant health goods.

This is an important and critical activity for the timely diagnosis and treatment of the patients. Considering the importance of this activity, the procurement of Anti-TB drugs, equipments and diagnostics is planned, coordinated and carried out centrally, on annual basis through a well-defined procurement mechanism with the financial support from Domestic Budgetary Source (DBS), World Bank (WB) and The Global Fund (TGF). While laboratory consumables procurement is decentralized to states, anti-TB drugs are allowed for procurement by states only in case of emergency and estimated for a limited period of requirement after due authentication from Central TB Division (CTD).

The Procurement of 1st &, 2nd Line (MDR & XDR) Anti TB Drugs and Laboratory Equipments is undertaken at the Central level through a Procurement Agent, who is contracted by the Ministry of Health & Family Welfare (MoHFW) to undertake procurement for various Programme Divisions including RNTCP. Currently, M/s Central Medical Services Society (CMSS), an autonomous body under the MoHFW, GoI has been assigned the task of procuring first & second line drugs under the DBS and WB funding. The CMSS also undertakes the procurement of First Line Drugs supported by the Global Fund.

However, procurement of 2nd line drugs supported by the Global Fund is done through the Global Drug Facility (GDF) of the Stop TB Partnership housed and administered by the United Nations Office for Project Services (UNOPS). These authorized procurement agent/s are responsible for ensuring compliance of all formalities that are necessary for the procurement activities starting from bidding processes under National and International Competitive Bidding as may be needed and to supply the anti TB drugs as per the specifications of the Programme within the delivery period as decided and intimated by RNTCP to the Procurement Agents. These Procurement Agents are also responsible to ensure that the drugs procured are in compliance with the Quality Policy of the RNTCP/WB/TGF.

An Additional Deputy Director General (TB) under the RNTCP administers, coordinates and supervises all these procurement and its related activities duly supported by consultants and an outsourced agency comprising of support staff. This logistics team is also responsible for comprehensive inventory management of the anti-TB drugs and ensures availability of drugs at the desired points by inter/intra state transfers of the Drugs and appropriate Release Orders (ROs) from the Central Level under the supervision and approval of the Additional DDG (TB). The Procurement and Supply chain Management (PSM) Unit in Central TB Division (CTD) also caters and performs functions like procurement planning and monitoring, coordination with Procurement Agents, reporting and coordination with the Bank, implementation of procurement risk mitigation plan etc. On a day to day basis communication is maintained with State TB Officers, Pharmacists of the State Drug Stores and the Regional Government Medical Stores Depots at Chennai, Hyderabad, Mumbai, Karnal, Kolkata and Guwahati.

To strengthen and to provide a more dynamic professional approach to this PSM unit and access to real time data on the availability of the anti-TB drugs it is planned to equip them with a well-defined Logistics Management and Information System (LMIS) and more number of PSM professionals in the near future.

Summary of activities related to Procurement & Supply Chain Management during the year are briefed below:

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 (PMR) and the monthly State Drug Stores (SDS) Reports. Whereas, the 2nd line drugs (MDR & XDR) are delivered directly at SDS from the supplier after which the drugs are released further to districts and sub-district levels.

   To strengthen the Inventory Management system under RNTCP, new supplies of 2nd line anti TB drugs procured through GDF, are now being stored at GMSDs as primary consignee and based on Release Orders from CTD, drugs are supplied further to the states for onward distribution. The inter State transfers of second line drugs are done from CTD based on First Expiry First Out principle to ensure there are no losses of drugs due to expiry, in form of Drug Transfer Advice (DTAs) which are prepared as per a state's requirement on day to day basis. The States are required to maintain the required buffer stocks at each level i.e. PHIs, TUs, DTCs & the SDS as per the guidelines of the programme.

2) **Implementation of Daily Regimen:** In pursuance of the policy adopted by the programme, the fixed dose combinations (FDCs) drugs for daily regimen has been successfully procured for both adult and pediatric TB patients for 5 states. All the STOs, DTOs, Pharmacists and the dealing staff members of the SDSs and the District Drugs Stores have been trained for receipt, store and distribute daily regimen drugs. The next phase of daily regimen implementation is expected to be rolled out by 2nd/3rd Quarter of 2017 for the remaining states and to cover all the states uniformly.

3) **Implementation of Bedaquiline under Conditional Access Programme (CAP):** Bedaquiline, a new class of drug, effective against Drug Resistant Tuberculosis has been rolled out in six selected RNTCP sites under Conditional Access Programme (CAP) with 600 patients courses of Bedaquiline. Programme received Tab Bedaquiline-100 mg from M/s Janssen Pharmaceutical for six selected centers and the expansion plan for BQ has also been approved to roll-out BQ in the entire country by end of 2017. A request for 10,000 courses has already been sent to Global Drug Facility (GDF) of the Stop TB Partnership.

4) **TB-HIV daily regimen:** The treatment of HIV infected TB persons is being implemented using daily regimen as per national policy. The programme is supplying daily regimen drugs to all States in close co-ordination with National Aids Control Organization (NACO), funded by USAID, for this intervention of the targeted patients.

5) **Implementation of Isoniazid preventive therapy (IPT):** RNTCP recommends screening of all household contacts of tuberculosis patients and 6-month isoniazid preventive therapy (IPT) is provided for children below 6 years. Similarly, all People Living with HIV/AIDS (PLHIV) are screened with four symptom complex and after ruling out active TB, they are provided INH for 6 months for prevention of TB. For effective implementation of IPT among PLHIV patients, all States were supplied with drug - Isoniazid 100 mg (PC-7) for pediatric patients and Isoniazid 300 mg (PC-11) for adult patients.

6) **Procurement of Diagnostic Equipment:**

   a) CB-NAAT: The Programme had procured 500 CB-NAAT machines along with 7.8 lakh cartridges in 2016. Further, to ensure

uninterrupted supply of cartridges, approx 26 lakh cartridges have been budgeted under The Global Fund and to be supplied before end of 2017.

b) LED Fluorescence Microscopes (LED) & Binocular Microscopes (BM):- To provide better and faster diagnostic equipment's for the management of drug sensitive TB, programme has procured and distributed 2500 LEDs to facilities having high load of cases and 1500 BMs to the Designated Microscopic Centres (DMCs) all across the States in India.

7) **ICT Based Solution:** Programme has finalized a software through Centre for Development of Advanced Computing (C-DAC). The customization process of this software has been initiated by the Programme and expected for implementation in 2017. This software is expected to monitor and take care of the comprehensive inventory management of drugs, diagnostics on real time basis with regard to the stock in hand, supply in pipe line and the future orders with corresponding funding support etc., to manage the Inventories irrespective of the geographical location within the country.

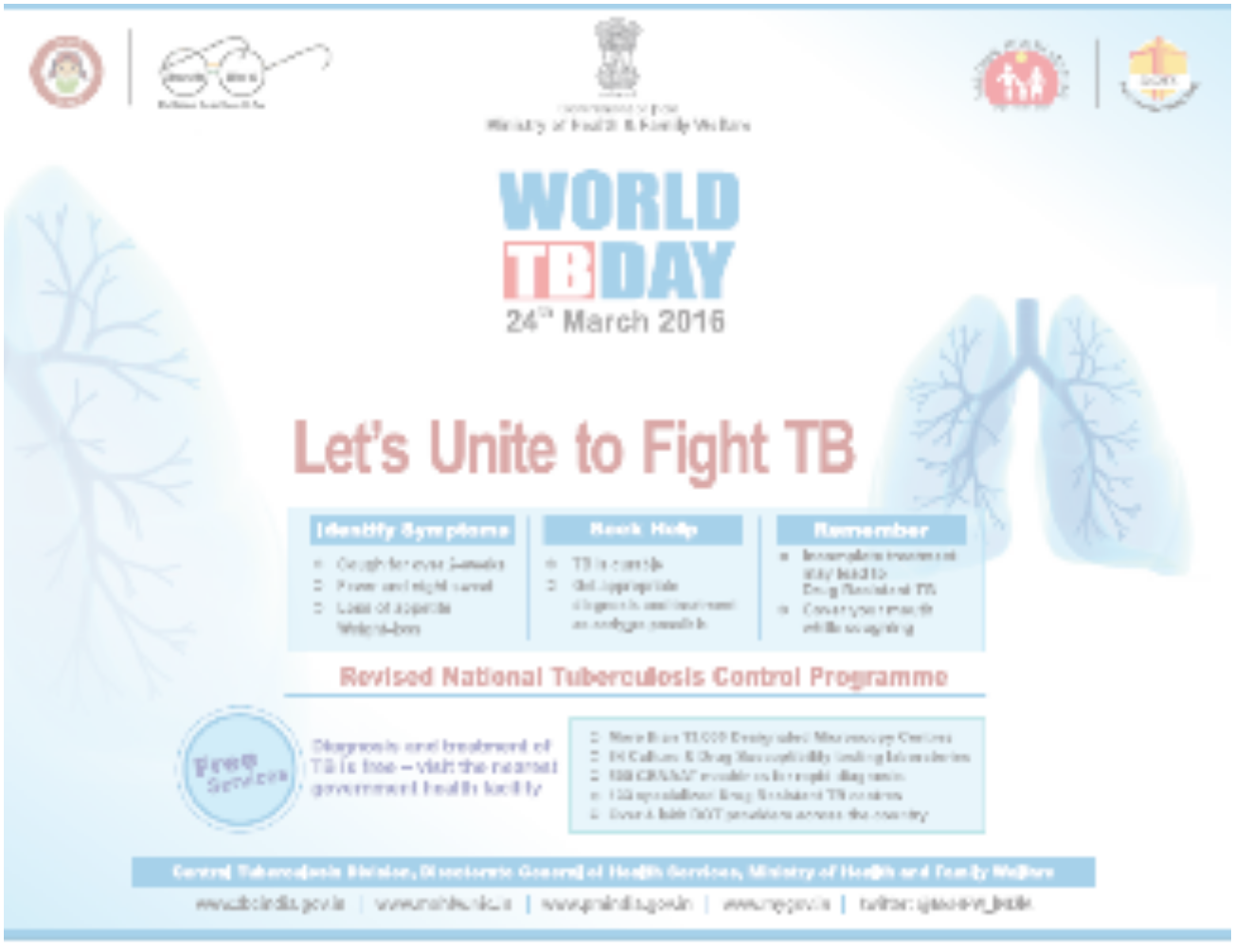
8) **Training on Procurement & Supply Chain Management:** To ensure that the States are able to manage their drug logistics as per RNTCP guidelines, regular trainings and refresher trainings on Procurement and Supply Chain Management have been conducted by Central TB Division for the state level staff during the year. This activity will be continuing in the year 2017 and onwards also to update the knowledge and in accordance with the latest National, International policies and WHO guidelines. In addition the overall procurement system of the Government, Financial rules, Good Storage Practices, critical components and documentation on the Procurement and Supply Chain Management activities etc., are specifically covered. The participants are also sensitized on the various Quality Assurance Policies of the anti-TB drugs depending upon the funding sources. In addition, three separate trainings were conducted for Cartridge Management practices in which the tools to monitor the consumption, guidelines to store and report cartridges was disseminated to all the States.

9) **Quality Assurance of Anti TB Drugs:** Procurement of quality assured drugs is a major area of focus in RNTCP. Accordingly, procurement of Anti TB drugs under Global Fund supported financing are WHO Pre-Qualified, from a country of Stringent Regulatory Authority (SRA) or evaluated to be of an acceptable quality by an Expert Review Panel (ERP). In case of funding from WB/DBS the product is expected from a WHO GMP certified site or the vendor is expected to have at least one product as WHO Pre Qualified. In addition, pre-dispatch inspection and testing of all batches of anti TB drugs are mandatory that are being procured. The programme has developed a protocol in which drug samples from various stocking / delivery points under the programme are taken and tested by an Independent Quality Assurance Laboratory contracted by RNTCP in a periodical manner or as and when felt necessary in the interest of the programme. 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 identified QA Lab. Based on test and analysis reports, appropriate action is taken by the Programme, if required.

10) **Other procurement** – Several miscellaneous procurement activities have also been undertaken by the programme which includes procurement of PC Tablets for capturing data by STLS under Project 'Nikshay', hiring media agency for IEC & awareness activities and QA testing agency for quality testing of anti-TB drugs.

Advocacy Communication & Social Mobilization

Chapter 9



Advocacy Communication & Social Mobilization

Chapter 9

Advocacy Communication & Social Mobilization (ACSM) is an important cornerstone in the RNTCP program. Moreover, with the proposed new National Strategic Plan of Tuberculosis, focusing on elimination of tuberculosis from the country, ACSM has become more important than ever.

Although advocacy, communication, and social mobilization are different sets of activities with different objectives, they are interlinked, mutually reinforcing, and most effective when used together and can contribute immensely in the efforts to eliminate TB from the country. ACSM activities not only helps in increasing the TB case detection, but also helps in increasing the TB treatment outcomes and reducing mortality due to TB.

Out of ACSM, advocacy targets decision-makers and people with influence, such as national and local politicians, government ministers, and department managers to bring about policy level changes, communication aims to improve knowledge about TB and its services and change attitudes and practices and to encourage people to seek care and complete treatment of TB, while social mobilization focuses on facilitating stakeholders engagement in planning and implementation of the TB program.

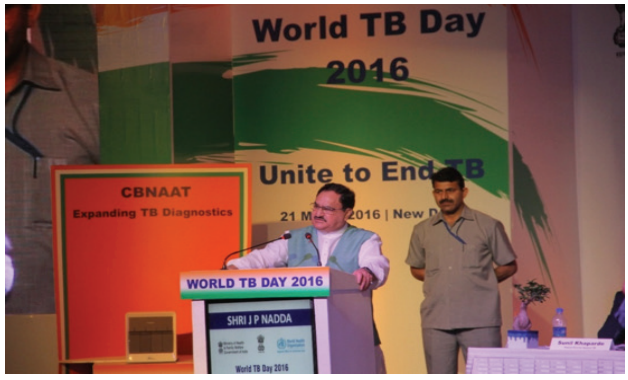
ACSM creates positive behaviour change, influences decision-makers, and empowers communities to change. Issues that can be addressed through ACSM are delayed detection and treatment, lack of access to TB treatment, difficulty in completing treatment, lack of knowledge and information about TB that can lead to stigma, discrimination & delayed diagnosis and/or treatment, stigma and discrimination that can prevent people from seeking care and diagnosis, myths surrounding TB and insufficient funding for TB programme.

The initiatives which are being undertaken at the National, State and District levels in 2016 are as follows:

National Level

World TB Day

The World TB Day was observed in 2016 at the National level. The event was organized on 21st March 2016 under the august presence of the Hon'ble Minister of Health and Family Welfare, Shri J. P. Naddaji, the then Secretary of Health, Shri B. P. Sharma, the then AS&MD Shri C. K. Mishra, Regional Director, WHO South East Asia Region, Dr Poonam Khetrapal Singh, the Director General of Health Service Dr Jagdish Prasad, s and the Secretary (DHR), Dr Soumya Swaminathan, Dr Lucica Deteu, Executive Director, Stop TB Partnership and the then Joint Secretary, Shri Anshu Prakash.



Hon'ble Minister of Health and Family Welfare, Shri J. P. Naddaji addressing the gathering during observation of World TB Day on 21st March 2016 at New Delhi

On the day, Shri J P Nadda,Union Minister of Health and Family Welfare launched

- Roll out of 500 additional CBNAAT machines
- New drug – Bedaquiline for treatment of drug resistant TB
- Third line ART Programme for People Living with HIV

In the same event, following guidelines were released

- Technical and operational guideline 2016

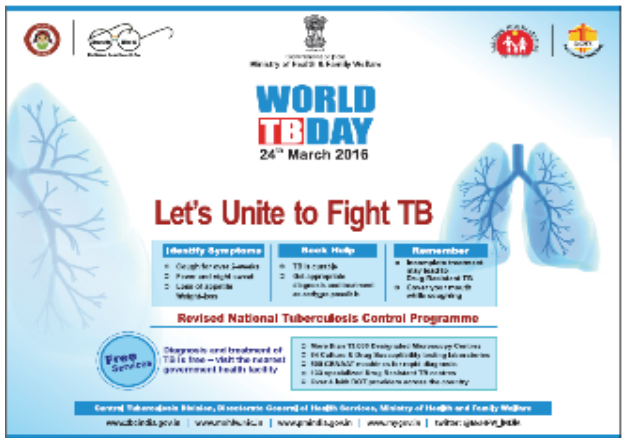
- Guideline for implementation of Bedaquiline Conditional Access Programme
- Guideline for prevention and management of adverse drug reaction
- Handbook of Health worker Surveillance for TB in India

Release of Publications under RNTCP during World TB Day 2016 at Delhi on 21 March 2016

Exhibition stalls were established at the event place of World TB Day Observation. All RNTCP partners had supported and displayed the activities conducted by them for TB control. National AIDS Control Organization had collaborated with RNTCP during the World TB Day activities.

Exhibition Stall of NACO during World TB Day Observation Event on 21 March 2016, visited by the Hon'ble Minister of Health and Family Welfare, Shri J. P. Nadda

Two Print Advertisements were Published with TB awareness messages were published in English and Hindi in vaious leading newspapers on 21st and 24th March 2016.

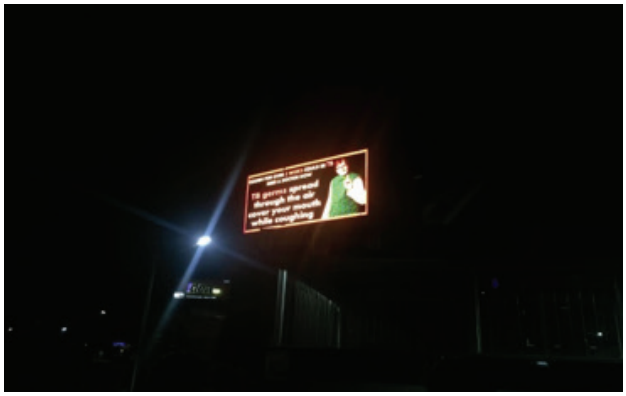


Newspaper ad in Published on 24th March

Media Campaigns

Media Campaign was run for 30 Days in which Radio spots on TB awareness were broadcasted through FM Radio Stations. Another Media Campaign was conducted using TV and Radio medium to create

awareness on TB. It incorporated various outdoor Publicity activities like bus panels, queue shelters, display boards, gantries, glow science, hoardings, TV screens and unipoles.



Call to Action for TB Free India initiative

The International Union against TB and Lung Diseases has been supporting the Call to Action initiative under Challenge TB project supported by USAID. The initiative has reached out to a wide range of stakeholders in engaging them for TB Free India Capaign.

Mr. Amitabh Bachchan lends his support as an ambassador for the TB-Free India Campaign. As a TB survivor, Mr Bachchan has spoken about his tryst with TB, advocating for increased awareness, combating stigma, and collaborating to end TB in India. He played a key role in the integrated advertising and social media campaign on radio, FB and Twitter.

Mr. Amitabh Bachchan lends his support as an ambassador for the TB-Free India Campaign.

In collaboration with the Indian Association of Parliamentarians for Population and Development (IAPPD), the Call to Action reached out to parliamentarians, members of legislative assembly and garnered their support for a TB-Free India.

Parliamentarians across party lines sensitized on TB in New Delhi

Leading corporates and Public Sector Undertakings (PSUs) joined hands and committed resources (estimated at US $3 million) for a TB-Free India: DLF Foundation, TCI Foundation, Jubilant Bhartia, Johnson & Johnson, Ambuja Cement, I L & FS, Crompton Greaves have so far announced CSR projects on TB. Shri Ratan Tata, who also participated in the Mumbai Dialogue organized by the Call to Action for a TB-Free India, announced the launch of the India Health Fund to support efforts in Malaria and TB in India.

Dr. Naresh Trehan, noted cardiologist and Managing Director of Medanta, emerged as a Champion

Vij flags off five mobile TB-free vans

TRIBUNE NEWS SERVICE

GURGAON, NOVEMBER 22

Having left an impact in Gurgaon, Mission TB-free Haryana will now be expanded in the entire state. It was announced by Health Minister Anil Vij, who flagged off five mobile TB-free vans from Medicity to commemorate the first anniversary of the mission.

"The battle against TB can only be won if we have a strong monitoring system and are able to trace victims across the city. This is possible only when we are able to screen them using advanced techniques. That's why we want to make diagnostic and treatment facilities available across the state," said Vij.

The mission was launched on November 20, 2015 by Medanta. The event was preceded by a meeting between the government's district TB officers and Medanta's doctors to chalk out a plan for the mission.

Under TB-free Haryana, Medanta renders the medical expertise and equipment for the secondary screening of TB. Chest X-rays will be used to detect TB among patients who may erroneously have shown to be sputum negative for TB.

The mission covers all districts of the state. In its first phase, the mission included Rewari, Gurgaon, Mewat, Palwal and Jhajhar, where vans equipped with chest X-ray machines and other equipment were deployed to work in tandem with the government primary and secondary health centres to ensure more effective TB diagnosis.

The mission is spearheaded by Dr Bornali Datta of the department of respiratory and sleep medicine, Medanta, under the aegis of "Call to action for a TB-Free India" by the Government of India.

Health Minister Anil Vij flags off a TB-free van in Gurgaon on Tuesday. TRIBUNE PHOTO: SAYEED AHMED

for TB and launched Mission TB-Free Haryana in partnership with CTD and the Government of Haryana. The mission was expanded by launching five diagnostic Mission TB Free Haryana vans, equipped with digital X-ray.

Call to Action reached out to central universities and state level universities with departments specializing in public health, social work and encouraged them to mainstream TB in their curriculum and promote research on TB and also prom ote student involvement and action in raising TB awareness.

Research and Academia Conclave at Mumbai on 9 July 2016

State & District Level

In order to increase awareness about TB, referrals of presumptive TB cases, notification, strengthen patient support systems etc, a large number of the activities are being undertaken at State levels.

REACH - TB Call to Action Project : Raising profile of TB at State Level

The Resource Group for Education and Advocacy for Community Health (REACH) is a non-profit organization dedicated to the fight against tuberculosis (TB). REACH seeks to transform the TB landscape in India by improving access to high quality services and reducing suffering and deaths.

Over the next four years, the Call to Action project will focus on at least six priority states - Assam, Bihar, Jharkhand, Odisha, Uttar Pradesh and Rajasthan.
In September 2016, TBC2A was launched in Bihar as part of a 2-day event in Bodhgaya, Bihar, organized in association with the Central TB Division. The event saw discussion on the RNTCP's Universal Access to TB Care and brought together key government stakeholders and NGO partners to develop a roadmap for the upcoming implementation of the daily regimen in the state.

In December 2016, the project was launched in Bhubaneswar, Odisha. The launch was inaugurated by Shri Priyadarshi Mishra, MLA, Bhubaneswar North. The launch was followed by a Civil Society Consultation, attended by various partners working in TB and Health at the district and state levels.

District Level Activities




TB awareness activities and sputum collection camp conducted in Pachamalai

District Collector inaugrating TB awareness Flex banners at Collectorate, Villupuram District

Hon'ble Chief Minister of Tamil Nadu inaugurating TB exhibition in Salem

TB awareness stickers pasted in state run buses

hool Awareness Campaign on Tuberculosis in Government Kolasib High School, Kolasib

Awareness Campaigns in Bairabi

College Awareness Campaign held at Mizoram College of Nursing, Falkawn

Display of Hoardings on roadside & waiting shed, Phullen

Display of Hoardings:

Active Case finding with TB awareness message for prison inmates in Central Jail , Salem

School Awareness Campaign at Little Diamond English School, Siaha.

School Awareness campaign was held at Christian English School.

Awareness campaign at JB college Lunglei

Community Meeting at Keitum village :

Patient Provider Meeting at DTC, Serchhip:

Students as awareness Volunteers in RNTCP

Competitions among the students about knowledge of Tuberculosis- Students became Messenger of RNTCP

Students of Mai Bhago Group of Institute(Girls) Ralla Distt Mansa participated in awareness session of TB

District Health Society-RNTCP Mansa (Punjab) organized competitions about TB-RNTCP in different parts of districts in schools and in village Gurdwaras under the leadership of Civil Surgeon Mansa and team. With help of these competitions knowledge about TB, RNTCP & DOTs disseminated among masses up to grass root level.

Community Meeting at Kawnpui South KTP:

DTO Mansa creating awareness among students

Research

Chapter 10

Research

Chapter 10

The RNTCP has been actively involved in conducting research since inception in the form of operational research which helps the programme to develop in-country evidence to guide the policy decisions from time to time. As new evidence became available, RNTCP has made necessary changes in its policies and programme management practices. In view of the End TB Strategy, RNTCP is incorporating innovative and more comprehensive approaches to TB control. Efforts of RNTCP to promote OR has resulted in success and most of the studies has are linked to the main priorities of TB control. Operational research aims to improve the quality, effectiveness, efficiency and accessibility (coverage) of the control efforts.

As the programme requires in depth knowledge and sufficient evidence to optimize policies, improve service quality and increase operational efficiency, mechanisms for strengthening operational research have been put in place to leverage the enormous technical expertise and generate evidence sufficient to guide changes in the programme policy.

Structure for operational research under RNTCP

- National OR Committee
- Zonal OR Committee
- State OR Committee
- Medical colleges

Priority Areas of Research include the following

1. Strengthening surveillance and tuberculosis notifications
2. Improvement of TB disease burden estimation
3. Understanding TB transmission and how best to interrupt it
4. Demand generation, Prevention, systematic screening of high-risk groups, and early case finding
5. Improving the cascade of care in public and private sector care

	East	North East	North	South 1	South 2	West	Total
Number of State OR Committee meetings held	9	8	14	7	7	7	52
Number of OR projects received by the State OR Committee	23	5	64	44	18	36	190
Number of OR proposals approved by the State OR Committee	10	5	51	18	13	9	106
Number of OR proposals reviewed by the State OR Committee and forwarded to the Zonal OR Committee for approval	7	2	6	2	2	1	20
Number of OR proposals approved by the Zonal OR Committee	3	2	5	1	0	0	11
Number of thesis proposals received by the State OR Committee	13	6	32	38	6	31	126
Number of thesis Proposals approved	12	4	30	34	6	24	110
Number of thesis initiated with RNTCP as a topic in the Zone	9	4	30	34	6	24	107

6. Socio-economic impact and poverty alleviation
7. Strengthening RNTCP management

Summary of Operational Research Proposals

Status of Operational Research proposals submitted and approved by different levels of OR Committees for FY 2016-17.

Developments in Research

Research Consortium for Tuberculosis: ICMR with the programme has established a Tuberculosis Research Consortium for streamlining all research related to TB within the country. This will include participation of, DBT, CSIR, DST and other academic/research institutions.

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.

National Institutes (NIRT, JALMA, NITRD & NTI) are exclusively focusing on TB research. ICMR & its basic science institutes, 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 are also leaders in basic, clinical, translational and operational research.

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.

National Research Committee provides technical guidance to Central TB Division on the RNTCP OR priority areas identified and helps the programme in taking evidence based policy decisions.

Monitoring and Evaluation

Chapter 11

Monitoring and Evaluation

Chapter 11

Monitoring and evaluation (M&E) is about collecting, storing, analyzing and finally transforming data into strategic information so it can be used to make informed decisions for program management, policy formulation, and advocacy, to ensure 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. The key questions that monitoring seeks to answer includes the following:

- Are the identified outputs being produced as planned?
- What are the issues (risks and assumptions) that need to be taken into account to ensure the achievement of results?
- What decisions need to be made concerning changes to the plan of work?
- Will the delivered outputs continue to be relevant for the achievement of the expected outcomes?
- Are the expected outcomes relevant and effective for achieving the overall priorities goals and impacts?
- What are we learning from the trend data provided by the monitoring process?

On the other hand, evaluation is an important part of programme planning as it provides an independent and in-depth assessment of what worked and what did not work, and why this was the case.

During and after the implementation of plan of work, it is an important to take stock of the situation through a formal evaluation. An evaluation provides evidence that can be used to improve future programming, policies and strategies. Information provided by evaluations:

- Identify the unintended results and consequences of interventions
- Contributes to organisational learning on development effectiveness.
- Provides evidence to base programmatic changes through informed management decisions.

Overall, 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 ninteen 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.

The following M&E activites are undertaken at the National level under RNTCP;

- National RNTCP Review Meeting with State Tuberculosis Officers
- Regional Review of RNTCP and Programmatic Management of Drug Resistant Tuberculosis (PMDT)
- Central Internal Evaluations
- Zonal Task Force Meetings
- National Task Force Meeting
- Regional TB/ DR-TB-HIV Review Meetings
- Coordination committee meeting of National Reference Laboratories (NRLs)
- World Bank Mission
- GFTAM Mission

The M&E activities of the year 2016 included the following;

Central Internal Evaluations (CIE)

Central Internal Evaluation (CIE) forms an integral component of RNTCP supervision and monitoring strategy. It acts as a tool to evaluate if good program practices are adopted and quality services are provided to the community. The evaluations also offer an opportunity for program managers to look into all aspects of program critically and swiftly. These activities help program managers in understanding determinants of good as well as poor performance for replication of good practices in other states /districts and take appropriate measures for improvement. The following activities are undertaken during the CIEs;

- Triangulation of data, for all the TB Units in the selected district
- Visit to DMC, DOT Centre, ICTC, ARTcentre, Medical College etc. Patient home visit for interview
- Compilation of the report
- Communication of Key observations to district authorities
- De-briefing of the findings to RNTCP staff
- Submission of IE report to STC and CTD

In the year 2016, CIE was undertaken in three states - Bihar, Arunachal Pradesh and Himachal Pradesh.

Field Visit by the CIE team in Himachal Pardesh

CIE team debriefing the state officials

National Review Meeting of State TB Officers and RNTCP Consultants

As every year, Central TB Division had conducted a national review meeting of the State TB Officers and RNTCP Consultants. The meeting was held in Hyderabad from 22 to 24 August 2016 with the objectives to review RNTCP performance from States/UTs and deliberate upon way forward towards implementation of components of RNTCP technical and operational guidelines.

National Review Meeting of State TB Officers and RNTCP Consultants at Hyderabad

Programmatic Management of Drug resistant TB (PMDT) review

Regional (PMDT) review meetings are conducted to review state PMDT activities for further improvement on critical indicators. The meetings are attended by all stake holders from Central TB Division, State TB office, partners and Medical College faculties. The detail deliberation on each and every aspect on PMDT provides learning for all states. The meeting also provides an opportunity to apprises states on newer initiatives and future scale up plans.

PMDT Zonal Review Meeting- Guwahati

Concurrent Assessment of Universal Access to TB Care Private Sector Engagement Intervention

The interventions under UATBC are being implemented in three sites – Patna, Mehsana and Mumbai since 2014. The interventions gained encouraging results in terms of attracting TB notification from private health care providers. In May 2016, the Central TB Division (CTD) and the World Health Organization Country Office for India (WCO) jointly conducted an assessment of UATBC to understand the efficacy of engaging the private sector through these interventions, understand the operational and technical challenges and provide recommendations for further improvement as

Field Visit in Mumbai during Concurrent Assessment of Universal Access to TB Care Interventions

Visit to chemist during concurrent assessment of UATBC at Mehsana

well as feasibility for scaling up such interventions. Experts in the field of public–private partnerships, members from National Technical Working Group, CTD, national institutes, development partners, experts from management schools, state programme officers and WCO had carried out 5 day assessment activities from 16 to 21 May 2016. Key findings of the assessment are given below, the detail report is placed at tbcindia.gov.in.

- Value proposition to the private providers and service transactions in turn led to increase in TB notification
- Effective use of ICT advancement makes the process of notification and patient support more acceptable to providers and patient centric
- Provision of high sensitive diagnostic tools with appropriate linkages improved the microbiological confirmation
- Relationship management of skills of staff and additional strength of field staff are needed to complete cycle of patients management
- Contracting and partnership management capacity are key to success

Eleventh Global Meeting on Public-Private Mix for TB Care and Prevention

The 11th PPM Subgroup meeting was held in Mumbai from 29 February to 02 March 2016. The meeting reviewed global progress and problems in scaling up private sector engagement in TB care and prevention; discussed innovations in engaging private practitioners and frontline care providers, including laboratories and pharmacies, through collaborative and regulatory approaches, made field visits to an ongoing innovative project to engage private practitioners practicing in the slums of Mumbai, and discussed strategies to scale up and replicate innovations in collaboration and regulation of private care providers in the context of the new End TB Strategy

Eleventh Global Meeting on Public-Private Mix for TB Care and Prevention at Mumbai

Chapter 12

Sucess Stories

Sucess Stories

Chapter 12

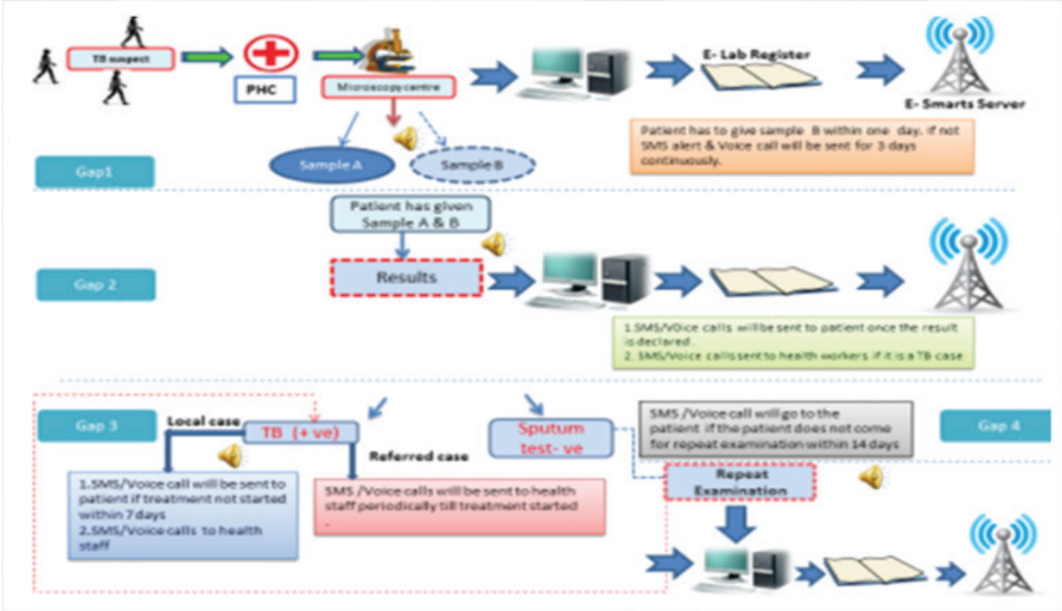
Andhra Pradesh

Digitalization of Microscopy Centers in Andhra Pradesh – 'E-Lab Register'

State TB Cell of AP State was the recipient of TB Reach Wave 4 grant in 2015. Under this grant, the State had developed and implemented the E-Lab register (Web version of the Lab register) across all DMCs (273) of 6 Districts in the State. All sputum testing centres were provided with computers. An SMS and Interactive Voice Response System (IVRS) gateway sent out pre-recorded messages and SMS templates defined points in the diagnostic algorithm. Patients giving single sputum samples, those not completing the diagnostic algorithm, those not initiated on treatment and information of referred cases were sent SMS/IVRS. The SMS were also sent to the RNTCP key staff to help them initiate action and track cases to ensure they complete diagnosis and start treatment on time. The application is linked with a server that automatically updates the e-Lab register, sends auto SMS/IVRS, performs backend functions, and generates output in the form of graphs, charts, tables, etc.

To sustain this project Hon'ble Chief Minister of Andhra Pradesh has launched "E-LAB Register software" on 22nd November, 2016 in the presence of Hon'ble Minister for Health, Principal Secretary Health, Commissioner of Health & Family Welfare, Director of Public Health, Director of Medical Education, Commissioner APVVP. The programme has relocated 275 computers to all high load DMCs across 13 districts of the State. This way, information of 67% of overall Presumptive TB case load in the State is now digitalized.

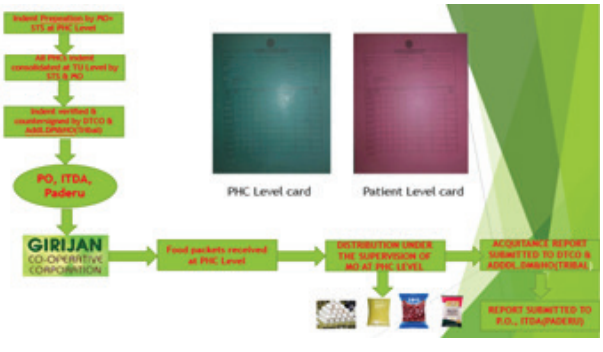
Till now (from 1st Nov 2016 to 28th Feb 2017) 48,887 Presumptive TB cases data is entered real time, with 93% Mobile numbers captured (increased from 23% in 2015 to 93% in 2016) and 95% Aadhaar linked data. Around 2,55,730 SMS have been sent to patients/Health workers as reminders to inform results of 48,887 TB suspects, 1104 B sample pending patients retrieved with SMS/IVRS reminders, 41,628 Smear negative patients are followed up for repeat



examination after 14 days, 1599 inter district referral cases retrieved and initiated treatment and 350 Initial defaulters were retrieved during this 4 month period. With the success of this intervention, the State has now gone ahead to deploy the e- Lab registers across all 611 DMCs of the State.

Nutritional Supplementation for Tribal TB patients in AP (Girijan Anurag Hastham)

Nutritional supplementation has been recognized as an incentive to TB patients to motivate them to stay on treatment and adhere to regimens. Poor nutritional status combined with the pill burden and long duration of treatment in TB especially MDR TB leads to poor treatment outcomes among the TB patients. There are 8 Tribal TB units in Visakhapatnam covering a population of 672621. On an average, there are around 600 cases on at any given point of time in these units of Visakhapatnam and about 100 new cases are newly diagnosed and initiated on treatment every month. Nutritional supplementation to all TB patients in the tribal PHC's of Visakhapatnam District -"Girijan Anurag Hastham", has been launched from Feb 1st 2016 with the support of the District Collector and Project Officer, ITDA, Paderu. In this, monthly food packets containing Rajma, Eggs, Ragi powder and dal (worth Rs.200) are distributed to every diagnosed TB patient till end of treatment.



As a result of this, patients have the opportunity of monthly clinical examination by the Medical Officers, and other morbidities like anaemia etc. are detected and treated early. This also helped to reduce the Deaths and Defaults in the Tribal TUs. Deaths have decreased to 11 in 2016 from 25 in 2015, whereas Defaulters have decreased to 2 in 2016 from 15 in 2015.

TB patient receiving the monthly food packets under the scheme Girijan Anurag Hastham

Assam

Use of ICT in better RNTCP management

The new forms of media has brought paradigm shift in communication arena. It has also impacted in health communication as a whole and RNTCP in Assam has started innovative ways of supervision and monitoring through WhatsApp.

Jorhat district of Assam is the pioneer as they have created a WhatsApp group for supervision and monitoring namely "Let us fight against TB". The basic objective of the group is not only to help Jorhat District TB cell feel united to stands against Tuberculosis but also communicate messages regarding field level activities to District Magistrate (Deputy Commissioner), State TB officer and all WHO consultants. The supervisory staffs like STS, STLS including LT feel motivated by the words of encouragement from administrative heads as they are also the members of this group.

On the other, DTO who is the administrator of the group asked all staff to upload important information as well as photographs so that one can monitor the activities. The greatest success of the group is its role in enabling start of an active case detection program in few high risk tribal villages and Tea Garden area of the district.

The WhatsApp group has ensured quick communication between district officials thereby helping the program. During the review meeting, STO Assam encouraged all DTOs to use this ICT tool of communication to enable the TB program to become more effective.

Madhya Pradesh

Nutrition Support to TB patients

In the district Indore of the state of Madhya Pradesh, nutritional support is being provided to poor TB patient with the help of Jain Swetambar Social Group Professional Unity. The nutrition pack consists of dry ration which include wheat flour, dhal, Poha, Rice, edible oil and spices. This facility is given for poor TB patients for whole TB treatment duration (First Line/MDR/XDR). Till date more than 250 patients have got benefited. Protein Powder supplementation is also given to all MDR/ XDR patient with the help of Vaklpik Padhiti Chikitsak Sangh.

TB patient receiving the nutrition pack

Telangana

Support to TB Patients

In the state of Telangana several success stories related to supporting the TB patient have been documented thereby helping the TB patient to tide over the challenging times of their treatment. The support through NGO partners, ranged from providing sustainable source of livelihood (petty shop, goats, shoe making materials, brass materials etc.) to providing dwelling houses.

A petty shop provided to a TB patient through a partner NGO in Telangana

An extra pulmonary patient back to school as family provided with livelihood source

TB patient preparing brass pots from the support of brass materials provided by the NGO partner

Successful Efforts of a Chemist

TB Alert India with the support of the State TB Cell, Telanagana is implementing a project called PRATAM (Pharmacist and RHCPs activism in TB Care and control as animators and motivators) in the state since Oct 2012. The project aims at making chemists and RHCPs (Rural Health Care Providers) important players in Revised National TB Program

(RNTCP) by building their capacities in identifying, referring presumptive TB patients and linking them to government health facilities.

Project identified a chemist who is managing a pharmacy outlet in Mancherial district. Project trained and enrolled him in 2013. The chemist referred 48 presumptive TB patients to Government DMCs during the period since Oct 2013 to Dec 2016. Out of those, 45 presumptive TB patients reached DMC and undertook the TB test and were diagnosed. 5 patients were identified as TB positive and all were put on DOTS. The chemist extended support and made follow-up on treatment cases and ensured them to take full course of treatment. Treatment outcome in 4 cases were cured and 1 case is on treatment. The chemist was also enrolled as DOTS provider and gave DOTS to one TB patient. He was also carried out 2 awareness programs in Mancherial urban slums and made aware community people about TB.

A chemist's shop, who is involved in the RNTCP program as part of PRATAM (Pharmacist and RHCPs activism in TB Care and control as animators and motivators) in the state of Telangana

Tamil Nadu

Rural Clinical Society members Sensitization in Private TB Referral and Notification

The Rural Clinical Society (RCS) member consists of the rural peripheral doctors of various towns of the district of Salem, which have high TB case load. The society members were sensitized on RNTCP updates, private TB referrals and notifications in the

Sensitization of Rural Clinical Society members on Private TB Referral and Notification in Salem district of Tamil Nadu

end of month of August 2016. Resultantly, 47 patients were referred from the RCS members, of which that 11 were taking private ATT and they were notified in NIKSHAY. 05 cases were referred for CBNAAT Testing.

Active Case Finding

In order to improve the case finding, active case finding activity was undertaken in the slum and adjoining schools of the various towns of Salem district. A total of 67 samples were collected, out of which 06 were found positive and 01 Extra-pulmonary case was found.

Punjab

Cure of MDR patient inspite of drug menace

The border district of Ferozpur is quite backward and has a huge drug addiction problem. However, due to persistent efforts of the RNTCP staff two MDR patients with support from their family members have been cured.

Chhattisgarh

Campaign to find, treat and cure TB in prisons of Chhattisgarh

In an effort to intensify TB case finding efforts, under the leadership of Director Health Services a state-wide campaign to find TB, treat TB & cure TB in all the prisons was conducted. In addition, this was done under the broader vision of giving ownership of health to other non-health departments thereby establishing inter-departmental coordination.

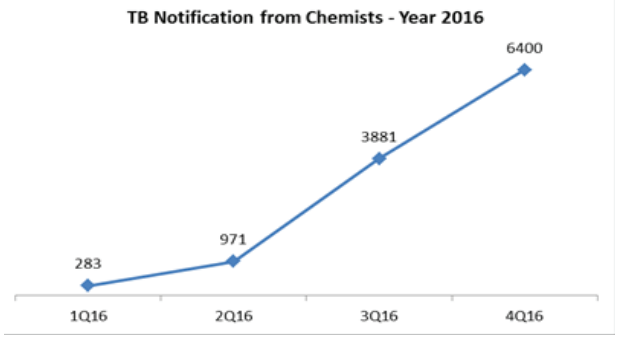
Hence guidance was issued from Director Health Services to all the CMHOs; similarly letter of support was issued by Commissioner Jail to all Jail Superintendent. Jail Campaign was successfully done in all the 28 Jails in the state in last week of December 2016. Considering jail inmates as high risk group for TB, all presumptive TB cases were subjected to CBNAAT for diagnosis of TB.

District Prison in Kabirdham, Chhatisgarh

TB Notification from Private Chemists in Chattisgarh

In spite of TB Notification from private health establishments, still there are many health establishments not notifying TB cases to the government authority which is leading to inadequate information on actual burden of TB in the state. Also, there is huge problem of uncontrolled unqualified practitioners who are first point of contact of TB suspects/patients in the rural and tribal areas of the state.

These unqualified practitioners may also be prescribing anti-tuberculosis medicines which are easily available over-the-counter in the pharmacies. Government of Chhattisgarh has sought help of gazette notification of Schedule H1 policy of Government of India as an opportunity to tackle with problems of getting notification from all qualified practitioners and to stop over-the-counter sale of anti-TB drugs based on prescription from unqualified practitioners.



TB Notifications from chemists in the state of Chhattisgarh (2016)

The Food and Drug Administration (FDA) under the Department of Health and Family Welfare, Government of Chhattisgarh is already implementing the Schedule H1 Policy. The Chief Medical and Health Officer (CMHO) of the district are the nodal officers for implementation of schedule H1 policy in their respective districts with the help of Assistant Drug Controllers and Drug Inspectors.

Leveraging on the successful implementation of schedule H1 policy in the state an order has been issued to all the CMHOs to gather information on anti-TB drugs sold, name and address of the patient, name of the prescribing physician. A monthly reporting format has been circulated to all the concerned for the same.

Maharashtra

Private Public Partnership helping young patients

"*I thought my life was over. A lot of people think this is the end, but it is not. There is an urgent need to create awareness and let people know that TB & HIV go hand in hand and both can be treated successfully. All you have to do is take your medicines. Ever since I'm on the treatment for TB and HIV, I feel happier and healthier*" says 18-year old who was first diagnosed with TB under PPIA and then HIV under the Challenge TB initiative at Fauziya Hospital (a private facility in the slums) in Mumbai.

Currently registered at Rajawadi Hospital-ART center, the yong man is all praises for his Challenge TB link counselor. According to him, these counselors have touched the lives of patients, been their constant support, and through selfless service have motivated patients to continue the treatment. He also mentioned that being a private sector patient, he had no trouble getting free medicines from a government facility. He is now working towards starting his own garments business. His case reinforces the private - public partnership within the TB /HIV program in Mumbai due to innovative interventions like PPIA and Challenge TB.

Human Resource

Chapter 13

Human Resource

Chapter 13

Human resource management and human resource development under RNTCP goes beyond 'training specific personnel for specific tasks'. It includes management of personnel, in addition to maintaining constant, high quality standards of training. Hence, the target is to achieve sustained professional competency in TB control activities that will benefit not just the States, but also the country at large. Overall, more than 80% of the personnel manning key posts are trained in RNTCP. Newer categories of human resources sanctioned in 12th five-year plan have also been included in various training programmes.

Being under the overall umbrella of NHM, the HR policy and practice is mostly governed by the State NHM setup. The Central TB Division supplements this by provisioning contractual staff at strategic positions of the programme network, developing terms of reference for hiring of these staff and formulating standardized training material for creating a uniform knowledge base among workers. Apart from general health system staff, RNTCP has provisioned dedicated programme staff at various levels. The organogram enumerates key RNTCP positions at various levels:

In the past one year, several new components like Daily Regimen, New Technical & Operational Guidelines, Nikshay enhancement, Pharmacovigilance, etc. have been added to RNTCP, creating an increased training need. Moreover, the alignment of TB Units with NHM Blocks has resulted in an increase in number of human resource under RNTCP, who need to be trained.

RNTCP has managed to meet with the enhanced training requirements by conducting a series of training sessions in year 2016 to train the trainers on new Technical & Operational Guidelines (TOG). Cumulatively, ¬¬____trainers from across the country were trained at National Tuberculosis Institute, Bangalore, who went on to train and sensitize State and District level staff and other stakeholders on the new TOG.

The programme plans to transition from conventional stand-alone modular training methodologies to newer composite tools which enable self-learning. These training tools will be designed in a way that they can be administered as per specific need and level of use.

These can be taken by the participant at his or her own pace. The National TB Institute, Bengaluru shall be playing a pivotal role in facilitating this transition and authoring and testing these e-learning tools. The first of a series of such meetings was held at NTI Bangalore in October 2016 to kick-off activities on development of e-learning. The STDCs will act as resource centres for translating the content to vernacular and adding relevant content as per local needs at the State level. The STDCs will also continue to act as centres for final certification of successful completion of training by interacting with the participants after culmination of e-learning and administering a post-test questionnaire, if needed.

These steps will not only help in rapidly filling the gap of untrained staff but will also prove to be an effective and sustainable way to keep-up with changing policy guidelines and percolating correct knowledge to every level of staff.

Chapter 14

Infrastructure

Chapter 14

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 more than 14,000 Designated Microscopy Centres (DMCs) across the country.

Currently, there are six National Reference Laboratories – NTI Bangalore, NIRT Chennai, NITRD Delhi, JALMA Agra, RMRC Bhubaneshwar 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. 68 Laboratories with a capacity to diagnose drug resistant bacilli using different technologies including solid culture, liquid culture and line probe assay (LPA) and 628 CBNAAT machines 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 around 4.6 lac DOT centers, 143 specialized Drug Resistant TB Centers providing services across the country. For further decentralizing and making treatment services patient friendly for DRTB patients, 55 Linked DR TB Centers have been established in states

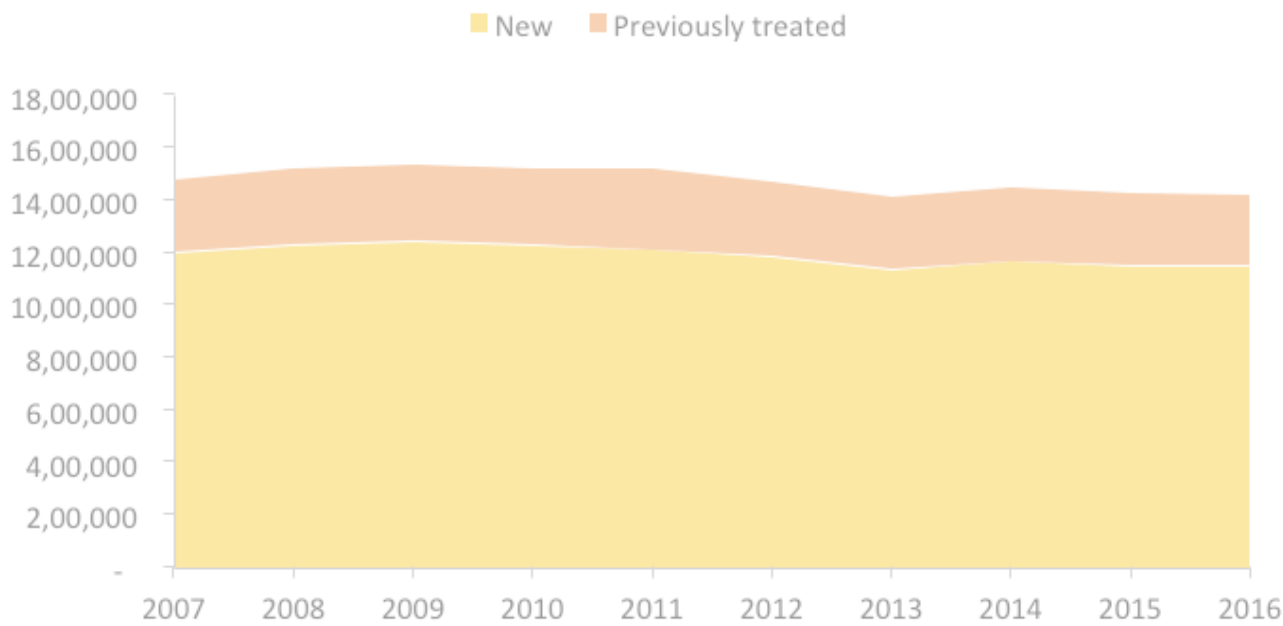
Procurement, Supply & Logistics Unit has been established in Central TB Division (CTD) for procurement and logistics functions at the Central level. Government Medical Stores Depots (GMSDs) are the primary stocking points, for receipt of first line anti-TB drugs from the manufacturers and distribution 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, 40 SDSs and 730 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.

Case Finding and Treatment Outcome under RNTCP in 2016

Chapter 15



Case Finding and Treatment Outcome under RNTCP in 2016

Chapter 15

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Table : 1

TB Case Notification in 2016 – State level performance status

State	Population (in Lakhs)	TB patients notified from public sector	Pulmonary	% Pulmonary TB	Extra pulmonary	% Extra Pulmonary TB	New	% of New TB	Previously treated	% Previously treated TB	Microbiologically confirmed	% of Microbiologically confirmed
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Andhra Pradesh	511	64420	56137	87%	8283	13%	52273	81%	12147	19%	38799	60%
Andman and Nicobar Islands	4	509	357	70%	152	30%	421	83%	88	17%	227	45%
Arunachal Pradesh	15	2758	1905	69%	853	31%	2111	77%	647	23%	1117	41%
Assam	333	36724	30143	82%	6581	18%	29798	81%	6926	19%	18229	50%
Bihar	1154	59020	54995	93%	4025	7%	49543	84%	9477	16%	34566	59%
Chandigarh	11	2980	1906	64%	1074	36%	2527	85%	453	15%	1456	49%
Chhattisgarh	286	30821	26998	88%	3823	12%	27441	89%	3380	11%	14948	48%
Dadra and Nagar Haveli	4	510	359	70%	151	30%	406	80%	104	20%	257	50%
Daman and Diu	3	368	287	78%	81	22%	275	75%	93	25%	169	46%
Delhi	180	55657	32024	58%	23633	42%	43740	79%	11917	21%	19900	36%
Goa	15	1576	1183	75%	393	25%	1340	85%	236	15%	778	49%
Gujarat	656	89293	75273	84%	14020	16%	64134	72%	25159	28%	57468	64%
Haryana	277	41389	32836	79%	8553	21%	31922	77%	9467	23%	21201	51%
Himachal Pradesh	72	14070	10545	75%	3525	25%	11180	79%	2890	21%	7480	53%
Jammu and Kashmir	138	9244	6591	71%	2653	29%	7237	78%	2007	22%	4506	49%
Jharkhand	366	35130	32782	93%	2348	7%	29865	85%	5265	15%	18654	53%
Karnataka	652	59732	49814	83%	9918	17%	47145	79%	12587	21%	35041	59%
Kerala	340	20969	16690	80%	4279	20%	18407	88%	2562	12%	11494	55%
Lakshadweep	1	23	23	100%	-	0%	23	100%	0	0%	10	43%
Madhya Pradesh	791	113172	98863	87%	14309	13%	96680	85%	16492	15%	55779	49%
Maharashtra	1193	122172	95693	78%	26479	22%	96068	79%	26104	21%	59449	49%
Manipur	29	1768	1336	76%	432	24%	1453	82%	315	18%	862	49%
Meghalaya	33	3934	2513	64%	1421	36%	3290	84%	644	16%	1658	42%
Mizoram	12	2162	1274	59%	888	41%	1850	86%	312	14%	699	32%
Nagaland	20	2274	1736	76%	538	24%	1837	81%	437	19%	1112	49%
Odisha	444	41807	34093	82%	7714	18%	36065	86%	5742	14%	22475	54%
Puducherry	14	1415	1048	74%	367	26%	1199	85%	216	15%	836	59%
Punjab	293	37093	28343	76%	8750	24%	30224	81%	6869	19%	19035	51%
Rajasthan	749	90032	76181	85%	13851	15%	70324	78%	19708	22%	47242	52%
Sikkim	6	1463	988	68%	475	32%	1169	80%	294	20%	593	41%
Tamil Nadu	771	82107	67427	82%	14680	18%	67585	82%	14522	18%	48448	59%
Telangana	365	38829	32813	85%	6016	15%	30712	79%	8117	21%	23074	59%
Tripura	39	2344	1948	83%	396	17%	1987	85%	357	15%	1473	63%
Uttar Pradesh	2178	260572	226235	87%	34337	13%	216041	83%	44531	17%	145631	56%
Uttarakhand	110	13255	10489	79%	2766	21%	10450	79%	2805	21%	6931	52%
West bengal	962	85179	67656	79%	17523	21%	71380	84%	13799	16%	50695	60%
Total	13029	1424771	1179484	83%	245287	17%	1158102	81%	266669	19%	772292	54%

Table : 1

TB Case Notification in 2016 – State level performance status

State	Clinically diag-nosed	% of Clinically diag-nosed	Pediatric TB	% of Pediatric TB	TB patients notified from private sector	% TB notifica-tion from private sector	Total TB patients notified	Annual TB notification rate (public sector)	Annual TB notifica-tion rate (private sector)	Annual TB notifica-tion rate (Total)	Proportion of regis-tered 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
(1)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
Andhra Pradesh	25621	40%	2163	3%	9953	13%	74373	126	19	145	99%	10%	10%
Andman and Nicobar Islands	282	55%	32	6%	25	5%	534	132	6	139	87%	0%	0%
Arunachal Pradesh	1641	59%	410	15%	30	1%	2788	181	2	183	84%	0%	0%
Assam	18495	50%	1526	4%	4127	10%	40851	110	12	123	50%	1%	0%
Bihar	24454	41%	3666	6%	37981	39%	97001	51	33	84	66%	2%	1%
Chandigarh	1524	51%	248	8%	433	13%	3413	266	39	305	97%	1%	1%
Chhattisgarh	15873	52%	1350	4%	8663	22%	39484	108	30	138	93%	1%	1%
Dadra and Nagar Haveli	253	50%	32	6%	42	8%	552	123	10	133	94%	2%	2%
Daman and Diu	199	54%	15	4%	119	24%	487	126	41	166	99%	1%	1%
Delhi	35757	64%	6677	12%	7049	11%	62706	309	39	348	90%	2%	1%
Goa	798	51%	71	5%	390	20%	1966	105	26	131	93%	6%	5%
Gujarat	31825	36%	3561	4%	37372	30%	126665	136	57	193	97%	3%	3%
Haryana	20188	49%	2066	5%	6156	13%	47545	150	22	172	94%	1%	1%
Himachal Pradesh	6590	47%	610	4%	891	6%	14961	195	12	207	88%	1%	1%
Jammu and Kashmir	4738	51%	601	7%	693	7%	9937	67	5	72	74%	0%	0%
Jharkhand	16476	47%	1342	4%	4385	11%	39515	96	12	108	74%	1%	0%
Karnataka	24691	41%	3191	5%	8730	13%	68462	92	13	105	96%	11%	10%
Kerala	9475	45%	1399	7%	26324	56%	47293	62	77	139	96%	1%	1%
Lakshadweep	13	57%	16	70%	0	0%	23	35	0	35	100%	0%	0%
Madhya Pradesh	57393	51%	9855	9%	16743	13%	129915	143	21	164	82%	1%	1%
Maharashtra	62723	51%	6394	5%	72967	37%	195139	102	61	164	94%	7%	6%
Manipur	906	51%	69	4%	625	26%	2393	60	21	81	89%	6%	5%
Meghalaya	2276	58%	260	7%	652	14%	4586	117	19	137	52%	3%	2%
Mizoram	1463	68%	295	14%	43	2%	2205	182	4	186	81%	12%	9%
Nagaland	1162	51%	185	8%	547	19%	2821	112	27	139	84%	5%	5%
Odisha	19332	46%	1922	5%	2044	5%	43851	94	5	99	93%	2%	1%
Puducherry	579	41%	64	5%	6	0%	1421	102	0	103	99%	2%	2%
Punjab	18058	49%	2031	5%	2743	7%	39836	126	9	136	91%	1%	1%
Rajasthan	42790	48%	3731	4%	16724	16%	106756	120	22	143	90%	1%	1%
Sikkim	870	59%	100	7%	76	5%	1539	229	12	241	98%	1%	1%
Tamil Nadu	33659	41%	3176	4%	13972	15%	96079	106	18	125	98%	5%	5%
Telangana	15755	41%	1624	4%	6174	14%	45003	106	17	123	97%	6%	6%
Tripura	871	37%	39	2%	30	1%	2374	61	1	61	72%	2%	1%
Uttar Pradesh	114941	44%	13941	5%	37174	12%	297746	120	17	137	84%	1%	1%
Uttarakhand	6324	48%	720	5%	1826	12%	15081	121	17	138	78%	1%	1%
West bengal	34484	40%	3093	4%	4477	5%	89656	89	5	93	88%	2%	1%
Total	652479	46%	76475	5%	330186	19%	1754957	109	25	135	88%	3%	3%

Table : 2 (a)
Treatment Outcome of Microbiologically Confirmed New TB patients notified in 2015 from public sector

State/UT	Registered	Cured	Completed	Died	Failure	Defaulted	Transfer out	Switched to Cat IV
Andaman & Nicobar	148	86%	3%	2%	1%	3%	3%	3%
Andhra Pradesh	28752	89%	2%	4%	1%	3%	0%	0%
Arunachal Pradesh	837	84%	2%	3%	2%	4%	1%	4%
Assam	15814	79%	7%	5%	2%	7%	1%	0%
Bihar	32057	77%	13%	3%	1%	6%	0%	1%
Chandigarh	1061	85%	1%	3%	3%	4%	3%	1%
Chhattisgarh	13072	85%	4%	5%	1%	4%	0%	0%
Dadar & Nagar Haveli	205	86%	0%	3%	2%	3%	4%	1%
Daman & Diu	83	80%	0%	5%	1%	0%	11%	4%
Delhi	11367	86%	0%	3%	2%	5%	1%	2%
Goa	559	87%	0%	3%	3%	3%	3%	1%
Gujarat	39093	88%	1%	5%	2%	3%	0%	1%
Haryana	14850	86%	2%	4%	2%	5%	1%	1%
Himachal Pradesh	5198	86%	4%	4%	2%	4%	1%	0%
Jammu & Kashmir	3667	83%	5%	4%	2%	4%	2%	0%
Jharkhand	16724	86%	5%	3%	1%	4%	0%	0%
Karnataka	25913	84%	1%	6%	2%	6%	1%	1%
Kerala	10586	85%	2%	5%	4%	3%	1%	0%
Lakshadweep	23	91%	0%	4%	0%	0%	0%	4%
Madhya Pradesh	42445	87%	4%	4%	1%	4%	0%	0%
Maharashtra	49108	82%	2%	5%	2%	5%	2%	2%
Manipur	725	78%	5%	5%	3%	9%	1%	0%
Meghalaya	1675	83%	3%	4%	2%	5%	1%	3%
Mizoram	519	88%	3%	4%	2%	3%	0%	1%
Nagaland	1523	53%	19%	1%	4%	9%	6%	8%
Orissa	20553	85%	4%	5%	1%	5%	1%	0%
Pondicherry	590	89%	0%	4%	2%	4%	0%	1%
Punjab	14525	82%	5%	5%	2%	5%	1%	0%
Rajasthan	34146	88%	3%	4%	1%	4%	0%	0%
Sikkim	470	77%	0%	2%	3%	1%	1%	16%
Tamil Nadu	34540	83%	3%	6%	2%	7%	0%	0%
Telangana	17246	85%	4%	4%	2%	3%	0%	1%
Tripura	1360	86%	2%	6%	2%	3%	0%	0%
Uttar Pradesh	116630	82%	5%	4%	1%	6%	1%	0%
Uttarakhand	5468	80%	6%	4%	1%	6%	2%	1%
West Bengal	43242	85%	2%	4%	2%	6%	1%	1%
Total	604774	84%	4%	4%	1%	5%	1%	1%

Table : 2 (b)
Treatment Outcome of Microbiologically Confirmed Previously treated TB patients notified in 2015 from public sector

State/UT	Registered	Cured	Completed	Died	Failure	Defaulted	Transfer out	Switched to Cat IV
Andaman & Nicobar	36	56%	11%	0%	14%	3%	6%	11%
Andhra Pradesh	8514	75%	3%	8%	3%	6%	0%	5%
Arunachal Pradesh	310	61%	8%	4%	4%	9%	1%	14%
Assam	3685	53%	13%	9%	3%	15%	2%	5%
Bihar	6989	60%	18%	5%	2%	10%	1%	5%
Chandigarh	330	78%	0%	6%	5%	7%	2%	2%
Chhattisgarh	2016	61%	11%	10%	3%	10%	1%	4%
Dadar & Nagar Haveli	77	74%	0%	8%	0%	9%	6%	3%
Daman & Diu	53	68%	11%	11%	0%	2%	2%	6%
Delhi	5165	71%	0%	6%	3%	10%	2%	7%
Goa	189	67%	1%	5%	8%	13%	2%	5%
Gujarat	15014	72%	2%	10%	5%	8%	0%	2%
Haryana	7246	69%	5%	8%	4%	10%	1%	3%
Himachal Pradesh	2092	73%	9%	6%	2%	6%	0%	4%
Jammu & Kashmir	1381	69%	8%	6%	4%	9%	2%	2%
Jharkhand	2704	67%	11%	6%	3%	9%	1%	3%
Karnataka	8295	58%	4%	11%	4%	16%	1%	6%
Kerala	2037	67%	5%	7%	5%	11%	1%	5%
Lakshadweep	1	0%	0%	0%	0%	0%	0%	100%
Madhya Pradesh	9967	62%	11%	8%	3%	11%	1%	4%
Maharashtra	15287	54%	5%	10%	4%	15%	3%	9%
Manipur	195	64%	8%	6%	2%	13%	2%	6%
Meghalaya	473	59%	6%	7%	3%	12%	3%	11%
Mizoram	173	73%	6%	7%	1%	6%	1%	6%
Nagaland	334	73%	9%	4%	6%	6%	0%	3%
Orissa	4192	60%	11%	8%	3%	14%	2%	2%
Pondicherry	185	71%	1%	8%	6%	12%	0%	2%
Punjab	5508	69%	9%	7%	3%	9%	1%	2%
Rajasthan	13768	72%	6%	7%	2%	8%	1%	4%
Sikkim	158	70%	0%	3%	1%	3%	0%	23%
Tamil Nadu	10295	60%	7%	9%	4%	17%	0%	3%
Telangana	5882	68%	9%	8%	4%	8%	0%	3%
Tripura	264	70%	3%	8%	3%	13%	0%	3%
Uttar Pradesh	27417	61%	10%	7%	3%	11%	2%	6%
Uttarakhand	2243	63%	10%	6%	3%	9%	5%	4%
West Bengal	10103	65%	3%	9%	4%	13%	1%	5%
Total	172578	64%	7%	8%	3%	11%	1%	5%

Table : 3 (a)
Treatment Outcome of Clinically diagnosed New TB patients notified in 2015 from public sector

State/UT	Registered	Completed	Died	Failure	Defaulted	Transfer out	Switched to Cat IV
Andaman & Nicobar	241	85%	5%	0%	6%	2%	2%
Andhra Pradesh	20562	94%	4%	0%	2%	0%	0%
Arunachal Pradesh	1252	94%	2%	0%	3%	1%	2%
Assam	14980	88%	4%	0%	7%	0%	0%
Bihar	20073	91%	2%	0%	5%	2%	0%
Chandigarh	1403	97%	1%	0%	1%	1%	0%
Chhattisgarh	13761	92%	4%	0%	4%	0%	0%
Dadar & Nagar Haveli	176	94%	3%	1%	1%	2%	0%
Daman & Diu	130	91%	3%	0%	2%	5%	0%
Delhi	23674	95%	1%	0%	2%	1%	0%
Goa	756	97%	2%	0%	1%	0%	0%
Gujarat	20907	93%	4%	0%	2%	0%	0%
Haryana	15960	92%	2%	0%	5%	0%	0%
Himachal Pradesh	6235	94%	3%	0%	2%	1%	0%
Jammu & Kashmir	4416	92%	2%	0%	4%	1%	0%
Jharkhand	12419	91%	3%	0%	6%	0%	0%
Karnataka	22024	89%	6%	0%	4%	1%	0%
Kerala	9494	93%	3%	0%	3%	1%	0%
Lakshadweep	15	100%	0%	0%	0%	0%	0%
Madhya Pradesh	44322	92%	3%	0%	4%	1%	0%
Maharashtra	52106	89%	4%	0%	4%	2%	0%
Manipur	836	90%	3%	0%	7%	0%	0%
Meghalaya	2091	90%	4%	0%	4%	1%	0%
Mizoram	1232	93%	4%	0%	4%	0%	0%
Nagaland	2175	82%	4%	4%	4%	3%	3%
Orissa	18498	90%	5%	0%	4%	1%	0%
Pondicherry	476	96%	3%	0%	0%	0%	0%
Punjab	16051	92%	4%	0%	3%	1%	0%
Rajasthan	37394	93%	3%	0%	4%	0%	0%
Sikkim	748	94%	2%	0%	0%	1%	2%
Tamil Nadu	31903	94%	3%	0%	3%	0%	0%
Telangana	12688	93%	5%	0%	2%	0%	0%
Tripura	814	87%	7%	0%	5%	0%	0%
Uttar Pradesh	91242	91%	3%	0%	6%	1%	0%
Uttarakhand	5966	93%	2%	0%	4%	1%	0%
West Bengal	29764	90%	4%	0%	5%	1%	0%
Total	536784	91%	3%	0%	4%	1%	0%

Table : 3 (b)
Treatment Outcome of Clinically diagnosed Previously treated TB patients notified in 2015 from public sector

State/UT	Registered	Completed	Died	Failure	Defaulted	Transfer out	Switched to Cat IV
Andaman & Nicobar	35	89%	3%	3%	0%	3%	3%
Andhra Pradesh	3997	90%	5%	0%	4%	0%	1%
Arunachal Pradesh	349	83%	4%	0%	8%	1%	5%
Assam	3496	81%	6%	0%	11%	1%	1%
Bihar	5820	87%	3%	0%	8%	1%	1%
Chandigarh	154	93%	1%	1%	3%	1%	1%
Chhattisgarh	1628	87%	5%	0%	7%	0%	0%
Dadar & Nagar Haveli	29	86%	3%	0%	3%	7%	0%
Daman & Diu	18	94%	0%	0%	6%	0%	0%
Delhi	4598	90%	3%	0%	4%	1%	1%
Goa	95	95%	1%	0%	3%	0%	1%
Gujarat	7570	88%	6%	0%	4%	1%	1%
Haryana	2857	85%	5%	0%	9%	0%	0%
Himachal Pradesh	775	88%	5%	1%	5%	1%	1%
Jammu & Kashmir	409	86%	4%	0%	8%	2%	0%
Jharkhand	2951	87%	4%	0%	9%	0%	0%
Karnataka	3787	80%	9%	0%	8%	2%	1%
Kerala	744	87%	6%	0%	6%	1%	0%
Lakshadweep	1	100%	0%	0%	0%	0%	0%
Madhya Pradesh	6057	85%	5%	1%	8%	3%	1%
Maharashtra	13524	77%	7%	0%	9%	5%	3%
Manipur	127	82%	6%	0%	12%	1%	0%
Meghalaya	436	79%	7%	0%	10%	1%	3%
Mizoram	165	81%	9%	1%	8%	1%	1%
Nagaland	165	91%	2%	0%	7%	0%	0%
Orissa	2521	84%	7%	0%	8%	1%	0%
Pondicherry	37	97%	3%	0%	0%	0%	0%
Punjab	1888	88%	4%	1%	6%	1%	0%
Rajasthan	4987	86%	6%	0%	7%	0%	1%
Sikkim	132	79%	5%	0%	2%	1%	13%
Tamil Nadu	3601	84%	7%	1%	7%	0%	1%
Telangana	2440	91%	5%	0%	4%	0%	0%
Tripura	90	90%	2%	0%	8%	0%	0%
Uttar Pradesh	15002	84%	4%	0%	8%	2%	1%
Uttarakhand	962	86%	3%	1%	8%	2%	0%
West Bengal	4680	83%	7%	0%	7%	2%	1%
Total	96127	84%	5%	0%	7%	2%	1%

Table : 4 (a)

Case finding of M/XDR-TB patients and 6 months interim report of MDR-TB patients (Reported by DR-TB centres in 2016)

State	Diagnosis					Indicators on 6 months interim report						
	Number of DR TB Centres functional in the state	Number of Pre-sumptive DRTB subject-ed to C-DST	Number of MDR TB Cases detect-ed	Number of MDR TB Cases detected that were registered and initiated on treatment in 2016#	Number of XDR TB Cases detected that were registered and initiated on treatment in 2016	Number of MDR TB Case registered and initiated on Cat IV in the 4 co-horts 6-9 months prior (2q15 to 1q16) (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	1239	56	52	2	51	26	51%	5	10%	2	4%
Andhra Pradesh	10	19045	946	849	28	802	560	70%	84	10%	61	8%
Arunachal Pradesh	2	1832	182	233	4	196	137	70%	5	3%	22	11%
Assam	3	6246	409	375	19	384	242	63%	33	9%	40	10%
Bihar	6	24832	1914	1762	102	1342	589	44%	102	8%	85	6%
Chandigarh	1	916	73	67	1	46	31	67%	1	2%	4	9%
Chhattisgarh	4	7801	242	198	2	175	101	58%	19	11%	12	7%
Delhi	4	16499	1367	1760	138	1600	824	52%	141	9%	185	12%
Goa	1	436	49	42	4	44	24	55%	3	7%	5	11%
Gujarat*	5	36248	2437	2222	245	2009	1097	55%	214	11%	247	12%
Haryana	2	10120	589	582	15	537	355	66%	82	15%	47	9%
Himachal Pradesh	2	3148	250	260	9	179	101	56%	11	6%	10	6%
Jammu & Kashmir	3	2837	124	106	5	102	68	67%	10	10%	9	9%
Jharkhand	4	6102	392	355	15	232	120	52%	9	4%	16	7%
Karnataka	6	29652	1338	1099	48	925	542	59%	123	13%	107	12%
Kerala*	2	4989	213	220	12	134	85	63%	10	7%	7	5%
Madhya Pradesh	9	26512	1794	1506	82	1298	743	57%	180	14%	130	10%
Maharashtra	17	55827	6286	7221	873	6056	2735	45%	596	10%	584	10%
Manipur	1	1673	60	60	1	41	16	39%	4	10%	4	10%
Meghalaya	2	1787	225	278	18	218	126	58%	21	10%	12	6%
Mizoram	1	1105	50	45	1	45	34	76%	3	7%	4	9%
Nagaland	2	896	47	52	0	64	30	47%	1	2%	4	6%
Orissa	3	6563	229	281	16	237	126	53%	21	9%	10	4%
Puducherry	1	940	14	18	2	8	4	50%	2	25%	1	13%
Punjab	3	10713	616	541	26	414	232	56%	45	11%	37	9%
Rajasthan	7	27248	2118	2031	127	1744	805	46%	205	12%	149	9%
Sikkim	1	1007	231	241	15	217	157	72%	20	9%	11	5%
Tamil Nadu	6	76334	1546	1209	35	1037	609	59%	108	10%	127	12%
Telangana	7	27796	726	628	22	700	457	65%	97	14%	52	7%
Tripura	1	453	13	15	2	14	11	79%	1	7%	1	7%
Uttar Pradesh	15	51848	6928	6143	376	4682	2472	53%	572	12%	414	9%
Uttarakhand	2	3286	364	269	50	242	136	56%	19	8%	26	11%
West Bengal	9	24005	1992	1962	161	1600	966	60%	153	10%	154	10%
Total	**143**	**489935**	**33820**	**32682**	**2456**	**27375**	**14561**	**53%**	**2900**	**11%**	**2579**	**9%**

Notes: * Data from Daman-Diu & Dadra Nagar Haveli is included in Gujarat: Lakshdweep 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 denominator also includes patients diagnosed from the private sector. The numerator includes patients diagnosed in the previous year and initiated in the current year.

$ This also excludes extra pulmonary patients put on treatment

TABLE : 4 (b)
12 months culture conversion report of MDR-TB patients
(Reported by DR-TB centres in 2016)

State	Indicators on 12 months Culture Conversion Report										
	Number of MDR TB cases registered in the 4 cohorts, 12-15 months prior (4q14 to 3q15) (b)	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	22	13	59%	0	0%	7	32%	1	5%	1	5%
Andhra Pradesh	497	294	59%	26	5%	18	4%	73	15%	72	14%
Arunachal Pradesh	143	71	50%	0	0%	36	25%	8	6%	24	17%
Assam	296	162	55%	17	6%	17	6%	42	14%	43	15%
Bihar	984	343	35%	37	4%	352	36%	115	12%	103	10%
Chandigarh	35	16	46%	0	0%	0	0%	8	23%	7	20%
Chhattisgarh	124	60	48%	5	4%	13	10%	19	15%	17	14%
Delhi	1177	577	49%	37	3%	107	9%	127	11%	187	16%
Goa	20	11	55%	1	5%	0	0%	2	10%	2	10%
Gujarat*	1392	618	44%	66	5%	106	8%	214	15%	214	15%
Haryana	322	165	51%	5	2%	20	6%	64	20%	54	17%
Himachal Pradesh	126	70	56%	5	4%	21	17%	7	6%	13	10%
Jammu & Kashmir	114	66	58%	3	3%	10	9%	14	12%	16	14%
Jharkhand	144	56	39%	6	4%	36	25%	16	11%	21	15%
Karnataka	993	479	48%	44	4%	77	8%	174	18%	173	17%
Kerala*	145	84	58%	4	3%	29	20%	12	8%	10	7%
Madhya Pradesh	892	454	51%	35	4%	90	10%	165	18%	122	14%
Maharashtra	3987	1454	36%	146	4%	541	14%	536	13%	578	14%
Manipur	21	13	62%	3	14%	2	10%	1	5%	1	5%
Meghalaya	141	80	57%	9	6%	23	16%	15	11%	6	4%
Mizoram	38	24	63%	1	3%	3	8%	3	8%	5	13%
Nagaland	52	16	31%	0	0%	24	46%	3	6%	13	25%
Orissa	211	92	44%	12	6%	65	31%	22	10%	13	6%
Puducherry	11	2	18%	3	27%	0	0%	3	27%	3	27%
Punjab	278	149	54%	10	4%	20	7%	37	13%	41	15%
Rajasthan	1227	532	43%	54	4%	196	16%	198	16%	203	17%
Sikkim	110	73	66%	4	4%	3	3%	13	12%	10	9%
Tamil Nadu	795	385	48%	32	4%	53	7%	136	17%	148	19%
Telangana	504	282	56%	15	3%	34	7%	99	20%	59	12%
Tripura	32	24	75%	1	3%	4	13%	3	9%	0	0%
Uttar Pradesh	3745	1846	49%	288	8%	313	8%	608	16%	494	13%
Uttarakhand	192	91	47%	5	3%	30	16%	33	17%	24	13%
West Bengal	1123	656	58%	72	6%	56	5%	131	12%	161	14%
Total	**19893**	**9258**	**47%**	**946**	**5%**	**2306**	**12%**	**2902**	**15%**	**2838**	**14%**

Notes: * Data from Daman-Diu & Dadra Nagar Haveli is included in Gujarat: Lakshdweep 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 denominator also includes patients diagnosed from the private sector. The numerator includes patients diagnosed in the previous year and initiated in the current year.

$ This also excludes extra pulmonary patients put on treatment

TABLE : 4 (c)
Treatment outcome report of MDR-TB patients
(Reported by DR-TB centres in 2016)

State	Indicators on Treatment Outcome of MDR TB Cases									
	Number of MDR TB cases registered in the 4 cohorts, 31-33 months prior (3q13 to 2q14) (c)	Out of c, No. reported as Cured	Out of c, No. 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	47	11	9	43%	11	23%	13	28%	1	2%
Andhra Pradesh	690	285	38	47%	166	24%	137	20%	14	2%
Arunachal Pradesh	168	63	28	54%	15	9%	50	30%	1	1%
Assam	406	151	43	48%	91	22%	76	19%	9	2%
Bihar	527	182	113	56%	102	19%	82	16%	13	2%
Chandigarh	32	18	0	56%	6	19%	5	16%	0	0%
Chhattisgarh	156	64	25	57%	21	13%	31	20%	3	2%
Delhi	826	336	85	51%	123	15%	183	22%	21	3%
Goa	88	28	6	39%	21	24%	17	19%	0	0%
Gujarat*	1839	629	160	43%	402	22%	344	19%	88	5%
Haryana	426	187	24	50%	115	27%	76	18%	1	0%
Himachal Pradesh	230	56	27	36%	38	17%	29	13%	2	1%
Jammu & Kashmir	145	47	11	40%	35	24%	32	22%	7	5%
Jharkhand	235	110	66	75%	44	19%	57	24%	8	3%
Karnataka	739	270	66	45%	194	26%	142	19%	15	2%
Kerala*	182	88	18	58%	36	20%	17	9%	3	2%
Madhya Pradesh	755	294	47	45%	187	25%	148	20%	39	5%
Maharashtra	4632	1110	580	36%	930	20%	978	21%	99	2%
Manipur	43	13	16	67%	8	19%	5	12%	0	0%
Meghalaya	129	47	35	64%	21	16%	16	12%	3	2%
Mizoram	54	21	5	48%	13	24%	10	19%	0	0%
Nagaland	144	65	28	65%	15	10%	27	19%	0	0%
Orissa	369	140	43	50%	78	21%	71	19%	4	1%
Puducherry	23	4	1	22%	11	48%	5	22%	0	0%
Punjab	334	129	32	48%	75	22%	67	20%	2	1%
Rajasthan	1531	595	131	47%	374	24%	327	21%	37	2%
Sikkim	177	99	6	59%	35	20%	18	10%	2	1%
Tamil Nadu	1323	441	130	43%	278	21%	381	29%	18	1%
Telangana	775	340	28	47%	209	27%	151	19%	11	1%
Tripura	44	15	11	59%	9	20%	3	7%	1	2%
Uttar Pradesh	2309	632	450	47%	593	26%	358	16%	55	2%
Uttarakhand	135	53	25	58%	24	18%	19	14%	1	1%
West Bengal	1549	619	210	54%	289	19%	289	19%	73	5%
Total	**21062**	**7142**	**2497**	**46%**	**4569**	**22%**	**4164**	**20%**	**531**	**3%**

Notes: * Data from Daman-Diu & Dadra Nagar Haveli is included in Gujarat: Lakshdweep 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 denominator also includes patients diagnosed from the private sector. The numerator includes patients diagnosed in the previous year and initiated in the current year.

$ This also excludes extra pulmonary patients put on treatment

Table : 5 (a)

Programme Staffing Status in 2016

States	State Level											
	Epidemiologist (APO)		MO-STC		TB-HIV Coordinator		Accounts Officer/ State accountant		Secreterial Assis-tant		Data Entry operator (STC)	
	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Andaman & Nicobar	0	0	1	1	1	0	1	1	1	1	1	1
Andhra Pradesh	1	0	1	0	1	0	1	1	1	0	1	0
Assam	0	0	1	1	1	1	1	1	1	1	1	1
Bihar	1	0	1	0	1	0	1	0	1	0	1	1
Chandigarh	0	0	1	1	1	1	1	1	1	1	1	1
Chhattisgarh	1	1	1	1	1	0	1	0	1	0	1	1
Dadar & Nagar Haveli	1	0	1	1	0	0	1	1	1	1	1	1
Daman & Diu	1	1	1	1	0	0	1	1	0	0	1	1
Delhi	1	1	1	1	1	0	1	1	1	1	1	1
Goa	1	1	1	1	1	0	1	1	1	1	1	1
Gujarat	1	1	1	1	1	1	1	1	1	1	2	2
Haryana	1	0	1	0	1	0	1	1	1	1	1	1
Himachal Pradesh	1	0	1	0	1	0	1	1	1	0	1	1
Jammu & Kashmir	2	2	2	1	2	2						
Jharkhand	1	0	1	0	1	0	2	1	1	0	1	1
Karnataka	1	1	1	0	1	0	2	2	1	0	2	2
Kerala	1	0	1	1	1	1	1	1	1	1	1	1
Lakshadweep	0	0	0	0	0	0	1	1	0	0	1	1
Madhya Pradesh	1	1	1	0	1	0	1	1	1	1	2	2
Maharashtra	2	1	1	0	1	1	3	3	2	2	2	2
Manipur	1	1	1	1	1	0	1	1	1	1	1	1
Meghalaya	1	1	1	1	1	1	1	1	1	1	1	1
Mizoram	1	1	1	1	1	1	1	1	1	1	1	1
Nagaland	1	1	1	1	1	1	1	1	1	1	1	1
Orissa	1	1	1	1	1	1	1	1	1	1	1	1
Pondicherry	0	0	1	1	1	1	1	1	1	1	1	1
Punjab	1	0	1	1	1	1	1	1	1	0	1	1
Rajasthan	1	0	1	0	1	0	1	1	1	1	1	1
Sikkim	1	0	1	1	1	0	1	1	1	1	1	1
Tamil Nadu	1	0	1	1	1	0	1	1	1	0	2	1
Telangana	1	0	1	0	1	1	1	0	1	0	1	1
Tripura	1	0	1	1	1	0	1	1	1	1	1	1
Uttar Pradesh	2	2	2	0	2	1	2	1	1	1	2	1
Uttarakhand	0	0	1	0	0	0	1	1	1	0	1	1
West Bengal	2	1	1	1	2	1	2	2	1	1	2	1
Total	87	76	92	72	90	91	108	91	97	101	105	70

Table : 5 (b)

Programme Staffing Status in 2016

States	State Level											
	DR-TB Coordinator		DEO-STF Chairman		Data Analyst		TO-Procurement & Logistics		ACSM Officer		PPM Coordinator	
	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place
(1)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
Andaman & Nicobar	0	0	0	0	1	0	0	0	1	1	0	0
Andhra Pradesh	1	0	1	0	1	1	1	0	1	0	1	0
Assam	1	1	1	1	1	1	1	1	1	1	1	1
Bihar	1	0	1	0	1	0	1	0	1	1	1	0
Chandigarh	0	0	0	0	0	0	0	0	1	1	0	0
Chhattisgarh	0	0	0	0	0	0	0	0	1	1	1	1
Dadar & Nagar Haveli	0	0	0	0	0	0	0	0	1	1	0	0
Daman & Diu	1	0	0	0	0	0	0	0	0	0	0	0
Delhi	1	0	1	1	1	0	1	0	1	1	1	0
Goa	0	0	0	0	0	0	0	0	1	1	0	0
Gujarat	1	1	0	0	0	0	1	0	1	1	1	0
Haryana	0	0	0	0	0	0	0	0	1	0	1	0
Himachal Pradesh	1	0	1	0	1	0	0	0	1	1	1	0
Jammu & Kashmir	0	0	0	0	0	0	1	0	2	1	0	0
Jharkhand	1	0	1	0	1	0	1	0	1	1	1	0
Karnataka	1	0	1	0	0	0	1	0	1	0	1	1
Kerala	1	0	0	0	0	0	1	0	1	0	0	0
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	1	0	1	0	0	0	1	1	1	0	1	1
Maharashtra	1	0	1	0	2	2	1	0	1	1	1	0
Manipur	1	1	0	0	0	0	1	0	1	1	1	1
Meghalaya	1	1	0	0	1	0	1	0	1	0	1	0
Mizoram	1	0	0	0	0	0	0	0	1	1	1	1
Nagaland	1	0	0	0	1	0	1	1	1	1	1	1
Orissa	1	0	0	0	0	0	0	0	1	0	1	0
Pondicherry	0	0	0	0	0	0	0	0	1	1	0	0
Punjab	1	0	0	0	0	0	1	0	1	1	1	0
Rajasthan	1	0	1	0	1	1	1	1	1	1	1	1
Sikkim	1	1	0	0	1	1	1	0	1	0	1	1
Tamil Nadu	1	0	1	0	1	1	1	1	1	1	1	1
Telangana	1	0	1	0	1	0	1	0	1	1	1	0
Tripura	0	0	0	0	1	1	0	0	1	1	0	0
Uttar Pradesh	2	0	1	0	2	2	2	0	2	2	2	2
Uttarakhand	0	0	0	0	0	0	0	0	1	1	0	0
West Bengal	2	0	1	1	2	0	1	1	2	2	2	0
Total	47	23	37	33	52	38	64	69	91	68	68	51

Table : 5 (c)
Programme Staffing Status in 2016

States	IRL		CDST Lab						SDS			
	Microbiologist-EQA		Microbiologist		Sr.Lab.Tech for IRL		DEO(IRL)		Pharmacist cum storekeeper		Store Assistant	
	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place
(1)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
Andaman & Nicobar	1	0	0	0	1	1	1	1	1	0	1	1
Andhra Pradesh	1	0	1	0	1	0	1	0	1	0	1	0
Assam	1	1	1	1	1	0	1	1	1	1	1	1
Bihar	1	0	3	0	3	1	3	1	1	1	1	1
Chandigarh	0	0	1	1	2	2	1	1	1	1	1	1
Chhattisgarh	1	1	1	1	1	0	1	1	1	1	1	1
Dadar & Nagar Haveli	0	0	0	0	0	0	0	0	1	1	0	0
Daman & Diu	0	0	0	0	0	0	0	0	1	1	0	0
Delhi	2	0	1	1	2	1	2	1	2	1	2	0
Goa	0	0	1	1	1	1	1	1	1	1	1	1
Gujarat	1	0	2	2	1	1	1	1	1	1	1	1
Haryana	0	0	1	1	1	1	1	1	1	1	1	1
Himachal Pradesh	1	0	1	1	1	1	1	1	1	1	1	1
Jammu & Kashmir	0	0	2	2	2	2			2	2	2	2
Jharkhand	1	0	1	1	1	1	1	0	1	1	1	1
Karnataka	1	0	3	3	2	1	1	1	2	2	2	1
Kerala	1	0	1	1	1	1	1	1	1	1	1	1
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	2	2	3	2	2	1	2	2	1	1	1	1
Maharashtra	2	2	7	2	3	3	3	2	5	3	6	4
Manipur	1	1	1	1	1	1	1	1	1	1	1	1
Meghalaya	0	0	0	0	0	0	0	0	1	1	1	0
Mizoram	1	0	1	0	1	1	1	1	1	1	1	1
Nagaland	0	0	0	0	0	0	0	0	1	0	1	1
Orissa	1	0	1	1	1	0	1	1	1	0	1	0
Pondicherry	0	0	1	1	1	1	1	0	1	1	1	1
Punjab	1	0	1	1	1	0	1	1	1	0	1	0
Rajasthan	1	1	3	1	3	1	3	1	2	1	3	2
Sikkim	1	1	0	0	1	1	1	1	1	1	1	1
Tamil Nadu	1	0	1	1	3	2	2	0	2	2	3	2
Telangana	1	0	2	0	3	0	1	0	1	1	1	1
Tripura	0	0	1	0	1	0	1	0	1	1	1	1
Uttar Pradesh	2	2	4	2	4	2	4	1	4	4	8	2
Uttarakhand	0	0	1	1	1	1	1	1	2	2	2	2
West Bengal	1	0	2	2	1	1	1	1	2	2	4	2
Total	87	91	128	108	118	95	114	112	142	130	319	369

Table : 5 (d)
Programme Staffing Status in 2016

States	District Level											
	MO-DTC		STS		STLS		LT		Driver		DEO	
	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place
(1)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)
Andaman & Nicobar	1	0	9	9	4	4	4	3	1	1	3	3
Andhra Pradesh	5	4	225	135	134	113	242	188	1	0	13	11
Assam	10	1	153	149	78	76	98	92	28	24	27	27
Bihar	35	28	534	138	240	145	561	376	1	1	38	35
Chandigarh	1	1	4	4	5	5	11	11	0	0	1	1
Chhattisgarh	9	3	155	115	67	60	140	120	16	13	27	24
Dadar & Nagar Haveli	0	0	2	2	1	1	1	1	0	0	0	0
Daman & Diu	1	1	2	2	2	2	2	2	0	0	1	1
Delhi	11	9	72	32	38	32	185	169	12	12	38	23
Goa	0	0	6	5	4	4	6	4	1	1	2	2
Gujarat	4	4	306	303	150	146	189	172	7	7	38	37
Haryana	5	0	74	73	52	50	73	74	2	1	21	19
Himachal Pradesh	5	1	72	70	51	46	75	69	44	36	12	12
Jammu & Kashmir			59	47	43	41	7	7			14	14
Jharkhand	8	1	207	64	101	65	415	370	24	24	24	23
Karnataka	8	6	189	184	134	131	181	181	0	0	32	31
Kerala			73	72	73	70	62	56	3	1	14	14
Lakshadweep	1	0	1	1	1	1	19	19	0	0	1	1
Madhya Pradesh	20	9	248	157	166	144	246	202	5	5	51	35
Maharashtra	34	11	460	404	318	297	0	0	19	18	87	74
Manipur	3	1	22	21	16	16	23	21	8	8	9	9
Meghalaya	2	0	18	18	13	13	19	1	4	3	7	7
Mizoram	2	2	12	12	9	9	7	7	9	9	8	8
Nagaland	2	1	18	13	13	13	44	44	8	8	11	11
Orissa	9	4	314	204	109	87	163	112	31	15	31	15
Pondicherry	0	0	7	6	5	5	4	4	1	0	0	0
Punjab	9	3	134	116	59	40	142	104	1	1	22	15
Rajasthan	0	0	283	265	152	87	67	20	5	5	34	30
Sikkim	0	0	5	5	5	5	4	3	5	5	4	4
Tamil Nadu	20	7	461	321	143	134	263	216	25	19	34	25
Telangana	5	5	171	148	96	77	150	141	0	0	11	11
Tripura	3	1	20	15	13	9	13	8	0	0	8	5
Uttar Pradesh	3	2	997	806	410	387	978	912	16	6	89	81
Uttarakhand	0	0	95	63	31	29	72	68	3	2	13	13
West Bengal	12	0	462	373	194	186	380	333	13	11	39	33
Total	6203	10327	13152	9812	10306	11486	9249	4639	1293	1654	2155	2046

Table : 5 (e)

Programme Staffing Status in 2016

States	District Level											
	Sr PMDT-TBHIV Supervisor		DRTB Center Sr MO		DRTB SA		District PPM Coordinator		TBHV		Counsellor DRTB Center	
	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place
(1)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(56)	(58)	(59)	(60)	(61)
Andaman & Nicobar	3	3	1	0	1	1	0	0	4	3	1	0
Andhra Pradesh	13	11	9	1	9	4	0	0	165	123	9	3
Assam	27	27	5	3	5	3	27	27	40	38	5	3
Bihar	38	28	6	4	7	6	0	0	95	28	6	0
Chandigarh	1	1	1	1	1	1	0	0	16	16	0	0
Chhattisgarh	27	23	4	2	4	3	27	23	48	34	4	4
Dadar & Nagar Haveli	1	1	0	0	0	0	0	0	1	1	0	0
Daman & Diu	1	1	0	0	0	0	0	0	0	0	0	0
Delhi	26	23	4	3	4	4	25	0	202	185	4	0
Goa	2	2	1	0	1	1	2	2	10	9	1	1
Gujarat	38	38	5	4	5	5	35	33	262	252	5	4
Haryana	21	19	0	0	1	1	21	0	79	67	0	0
Himachal Pradesh	12	12	3	1	3	2	0	0	13	1	3	0
Jammu & Kashmir			2	2	2	1						
Jharkhand	24	20	5	0	5	2	24	6	72	47	5	1
Karnataka	32	31	6	2	6	6	32	25	250	232	6	4
Kerala	14	14	2	1	2	2	0	0	45	45	0	0
Lakshadweep	1	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	51	40	9	3	9	0	51	0	224	151	9	3
Maharashtra	84	70	21	11	24	17	79	30	505	453	20	6
Manipur	9	7	1	1	1	2	9	9	10	10	1	1
Meghalaya	7	7	2	1	2	2	7	0	6	6	2	0
Mizoram	8	8	1	1	1	1	8	8	4	4	1	1
Nagaland	11	11	2	2	2	2	11	0	2	2	2	0
Orissa	31	30	4	2	4	3	31	22	71	57	3	1
Pondicherry	1	1	1	0	1	1	0	0	19	17	0	0
Punjab	22	18	3	1	3	2	22	0	111	78	3	0
Rajasthan	34	28	7	5	7	6	34	29	90	29	7	5
Sikkim	4	4	1	1	1	1	4	4	2	2	1	1
Tamil Nadu	34	32	8	4	8	7	35	32	410	343	8	4
Telangana	11	11	7	1	7	2	11	0	122	96	7	0
Tripura	8	5	1	1	1	1	0	0	6	5	1	0
Uttar Pradesh	89	83	23	17	23	18	89	73	534	465	23	18
Uttarakhand	13	12	2	1	2	2	0	0	32	28	2	2
West Bengal	39	34	9	5	9	9	36	13	315	201	9	3
Total	1548	892	398	360	899	1074	4721	7129	6941	3241	860	1139

Table : 5 (f)
Programme Staffing Status in 2016

States	District Level				Medical College			
	Accountant		District programme Coordinator		MO		LT-MC	
	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place	Sanc-tioned	In Place
(1)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)
Andaman & Nicobar	3	2	3	3	0	0	0	0
Andhra Pradesh	13	6	13	8	22	10	22	21
Assam	27	27	27	0	6	3	6	6
Bihar	0	0	38	0	13	4	13	7
Chandigarh	0	0	0	0	2	2	2	1
Chhattisgarh	27	17	27	22	7	3	7	6
Dadar & Nagar Haveli	0	0	1	1	0	0	0	0
Daman & Diu	0	0	0	0	0	0	0	0
Delhi	25	0	25	0	13	7	13	6
Goa	1	0	0	0	1	0	1	1
Gujarat	36	34	35	31	17	12	26	22
Haryana	0	0	0	0	4	1	4	4
Himachal Pradesh	12	0	0	0	4	0	4	2
Jammu & Kashmir	14	7	14	7	5	4	5	5
Jharkhand	24	9	24	8	3	1	3	3
Karnataka	31	19	31	21	41	26	45	43
Kerala	14	14	14	0	18	13	24	23
Lakshadweep	0	0	0	0	0	0	0	0
Madhya Pradesh	51	18	51	18	13	8	13	9
Maharashtra	81	51	34	0	41	25	41	40
Manipur	9	9	9	9	2	2	2	2
Meghalaya	7	7	7	0	1	1	1	1
Mizoram	8	8	0	0	0	0	0	0
Nagaland	11	11	11	0	0	0	0	0
Orissa	31	28	31	24	4	1	4	3
Pondicherry	1	0	0	0	4	2	9	9
Punjab	22	0	0	0	9	5	9	9
Rajasthan	34	27	34	32	6	2	8	5
Sikkim	5	5	4	4	1	0	1	1
Tamil Nadu	34	28	33	28	41	21	49	36
Telangana	11	0	11	0	22	9	22	15
Tripura	8	5	0	0	2	1	2	2
Uttar Pradesh	75	70	75	69	36	21	40	30
Uttarakhand	13	10	13	11	4	1	4	3
West Bengal	19	15	19	12	14	9	15	12
Total	1658	1319	1248	858	945	916	722	327

Table : 6

TB Case Notification from Districts in 2016 – District level performance status

State	District	Population	TB patients notified from public sector	Pulmo-nary	% Pul-monary TB	Extra pulmo-nary	% Extra Pulmo-nary TB	New	% of New TB	Previ-ously treated	% Pre-viously treated TB	Micro-biologi-callycon-firmed	% of Micro-biologi-callycon-firmed	Clin-ically diag-nosed	% of Clin-ically diag-nosed	Pediat-ric TB	% of Pediat-ric TB	TB patients notified from private sector	% TB notifi-cation from private sector	Total patients notified	Annual TB noti-fication rate (public sector)	Annual TB noti-fication rate (private sector)	Annual TB noti-fication rate (public sector)
Andhra Pradesh	Anantapur	4228370	5124	4550	89%	574	11%	4143	81%	981	19%	3201	62%	1923	38%	146	3%	879	15%	6003	121	21	142
Andhra Pradesh	Chittoor	4318619	4731	4049	86%	682	14%	3931	83%	800	17%	3112	66%	1619	34%	155	3%	548	10%	5279	110	13	122
Andhra Pradesh	Cuddapah	2986993	3609	3150	87%	459	13%	2808	78%	801	22%	2221	62%	1388	38%	78	2%	813	18%	4422	121	27	148
Andhra Pradesh	East Godavari	5334551.424	6742	5786	86%	956	14%	5734	85%	1008	15%	4147	62%	2595	38%	215	3%	714	10%	7456	126	13	140
Andhra Pradesh	Guntur	5062914	6640	5700	86%	940	14%	5380	81%	1260	19%	4140	62%	2500	38%	208	3%	1206	15%	7846	131	24	155
Andhra Pradesh	Krishna	4689896.458	5354	4547	85%	807	15%	4286	80%	1068	20%	3120	58%	2234	42%	112	2%	482	8%	5836	114	10	124
Andhra Pradesh	Kurnool	4190352	5828	5238	90%	590	10%	4518	78%	1310	22%	3093	53%	2735	47%	255	4%	1304	18%	7132	139	31	170
Andhra Pradesh	Nellore	3071448	3210	2955	92%	255	8%	2498	78%	712	22%	2132	66%	1078	34%	94	3%	491	13%	3701	105	16	120
Andhra Pradesh	Prakasam	3513288	4506	4132	92%	374	8%	3476	77%	1030	23%	2548	57%	1958	43%	144	3%	1372	23%	5878	128	39	167
Andhra Pradesh	Srikakulam	2795366	3437	3099	90%	338	10%	2860	83%	577	17%	2107	61%	1330	39%	127	4%	112	3%	3549	123	4	127
Andhra Pradesh	Visakhapa-tnam	4440443	6131	4928	80%	1203	20%	5218	85%	913	15%	3616	59%	2515	41%	303	5%	1417	19%	7548	138	32	170
Andhra Pradesh	Vizianaga-ram	2426095	3799	3104	82%	695	18%	3070	81%	729	19%	2083	55%	1716	45%	196	5%	198	5%	3997	157	8	165
Andhra Pradesh	West Godavari	4074560.277	5309	4899	92%	410	8%	4351	82%	958	18%	3279	62%	2030	38%	130	2%	417	7%	5726	130	10	141
Andman and Nicobar Islands	Andamans & Nicobars	385317	9	9	100%		0%	7	78%	2	22%	4	44%	5	56%		0%		0%	9	2	0	2
Andman and Nicobar Islands	Nicobars		144	115	80%	29	20%	115	80%	29	20%	65	45%	79	55%	18	13%		0%	144			

State	District	Population	TB patients notified from public sector	Pulmonary	% Pulmonary TB	Extra pulmonary	% Extra Pulmonary TB	New	% of New TB	Previously treated	% Previously treated TB	Microbiologically confirmed	% of Microbiologically confirmed	Clinically diagnosed	% of Clinically diagnosed	Pediatric TB	% of Pediatric TB	TB patients notified from private sector	% TB notification from private sector	Total patients notified	Annual TB notification rate (public sector)	Annual TB notification rate (private sector)	Annual TB notification rate (public sector)
Andman and Nicobar Islands	North & Middle Andaman		104	67	64%	37	36%	90	87%	14	13%	49	47%	55	53%	2	2%		0%	104			
Andman and Nicobar Islands	South Anda4 man		252	166	66%	86	34%	209	83%	43	17%	109	43%	143	57%	12	5%	25	9%	277			
Arunachal Pradesh	Changlang	163182	135	115	85%	20	15%	108	80%	27	20%	83	61%	52	39%	4	3%		0%	135	83	0	83
Arunachal Pradesh	Dibang Valley	68310	76	75	99%	1	1%	49	64%	27	36%	56	74%	20	26%	4	5%		0%	76	111	0	111
Arunachal Pradesh	East Kameng	86485	300	191	64%	109	36%	176	59%	124	41%	84	28%	216	72%	94	31%		0%	300	347	0	347
Arunachal Pradesh	East Siang	109213	228	175	77%	53	23%	176	77%	52	23%	109	48%	119	52%	11	5%		0%	228	209	0	209
Arunachal Pradesh	Kurung Kumey	98953	81	45	56%	36	44%	64	79%	17	21%	25	31%	56	69%	19	23%		0%	81	82	0	82
Arunachal Pradesh	Lohit	183780	197	172	87%	25	13%	156	79%	41	21%	108	55%	89	45%	9	5%		0%	197	107	0	107
Arunachal Pradesh	Lower Subansiri	91367	98	63	64%	35	36%	78	80%	20	20%	30	31%	68	69%	16	16%		0%	98	107	0	107
Arunachal Pradesh	Papumpare	194543	958	603	63%	355	37%	708	74%	250	26%	339	35%	619	65%	148	15%	30	3%	988	492	15	508
Arunachal Pradesh	Tawang	55092	46	30	65%	16	35%	36	78%	10	22%	21	46%	25	54%	2	4%		0%	46	83	0	83
Arunachal Pradesh	Tirap	123527	279	168	60%	111	40%	260	93%	19	7%	94	34%	185	66%	58	21%		0%	279	226	0	226
Arunachal Pradesh	Upper Siang	38922	27	21	78%	6	22%	22	81%	5	19%	17	63%	10	37%	4	15%		0%	27	69	0	69
Arunachal Pradesh	Upper Subansiri	91771	119	86	72%	33	28%	100	84%	19	16%	47	39%	72	61%	16	13%		0%	119	130	0	130
Arunachal Pradesh	West Kameng	95971	112	88	79%	24	21%	89	79%	23	21%	54	48%	58	52%	15	13%		0%	112	117	0	117
Arunachal Pradesh	West Siang	123830	102	73	72%	29	28%	89	87%	13	13%	50	49%	52	51%	10	10%		0%	102	82	0	82
Assam	Baksa	992168	1119	978	87%	141	13%	897	80%	222	20%	593	53%	526	47%	18	2%		0%	1119	113	0	113
Assam	Barpeta	1742210	1241	1074	87%	167	13%	1021	82%	220	18%	552	44%	689	56%	36	3%	122	9%	1363	71	7	78
Assam	Bongaigaon	756222	643	572	89%	71	11%	523	81%	120	19%	391	61%	252	39%	18	3%	234	27%	877	85	31	116
Assam	Cachar	1856350	1953	1385	71%	568	29%	1752	90%	201	10%	775	40%	1178	60%	76	4%	71	4%	2024	105	4	109

State	District	Population	TB patients notified from public sector	Pulmonary	% Pulmonary TB	Extra pulmonary	% Extra Pulmonary TB	New	% of New TB	Previously treated	% Previously treated TB	Microbiologically confirmed	% of Microbiologically confirmed	Clinically diagnosed	% of Clinically diagnosed	Pediatric TB	% of Pediatric TB	TB patients notified from private sector	% TB notification from private sector	Total patients notified	Annual TB notification rate (public sector)	Annual TB notification rate (private sector)	Annual TB notification rate (public sector)
Assam	Chirang	527051	665	631	95%	34	5%	553	83%	112	17%	429	65%	236	35%	8	1%	13	2%	678	126	2	129
Assam	Darrang	970903	605	519	86%	86	14%	522	86%	83	14%	306	51%	299	49%	21	3%	74	11%	679	62	8	70
Assam	Dhemaji	735690	667	572	86%	95	14%	554	83%	113	17%	440	66%	227	34%	11	2%	86	11%	753	91	12	102
Assam	Dhubri	2083331	2166	2056	95%	110	5%	1664	77%	502	23%	1031	48%	1135	52%	62	3%	51	2%	2217	104	2	106
Assam	Dibrugarh	1419553	2576	1745	68%	831	32%	2155	84%	421	16%	1245	48%	1331	52%	178	7%	412	14%	2988	181	29	210
Assam	Goalpara	1078740	1051	883	84%	168	16%	853	81%	198	19%	539	51%	512	49%	30	3%	269	20%	1320	97	25	122
Assam	Golaghat	1131890	1744	1354	78%	390	22%	1507	86%	237	14%	689	40%	1055	60%	72	4%	99	5%	1843	154	9	163
Assam	Hailakandi	704805	485	348	72%	137	28%	412	85%	73	15%	218	45%	267	55%	17	4%		0%	485	69	0	69
Assam	Jorhat	1166764	1284	960	75%	324	25%	1050	82%	234	18%	588	46%	696	54%	71	6%	55	4%	1339	110	5	115
Assam	Kamrup	1641997	1163	963	83%	200	17%	908	78%	255	22%	586	50%	577	50%	28	2%		0%	1163	71	0	71
Assam	Kamrup Metro	1341615	1464	1230	84%	234	16%	925	63%	539	37%	677	46%	787	54%	45	3%	659	31%	2123	109	49	158
Assam	Karbi Anglong	1032044	1214	1139	94%	75	6%	986	81%	228	19%	607	50%	607	50%	30	2%	18	1%	1232	118	2	119
Assam	Karimganj	1301156	1008	815	81%	193	19%	850	84%	158	16%	472	47%	536	53%	34	3%	32	3%	1040	77	2	80
Assam	Kokrajhar	963013	1413	1255	89%	158	11%	1078	76%	335	24%	785	56%	628	44%	44	3%	78	5%	1491	147	8	155
Assam	Lakhimpur	1112614	1002	859	86%	143	14%	786	78%	216	22%	557	56%	445	44%	43	4%	224	18%	1226	90	20	110
Assam	Marigaon	1024103	972	902	93%	70	7%	725	75%	247	25%	434	45%	538	55%	26	3%	3	0%	975	95	0	95
Assam	Nagaon	3021318	2835	2603	92%	232	8%	2204	78%	631	22%	1342	47%	1493	53%	91	3%	465	14%	3300	94	15	109
Assam	Nalbari	903424	705	544	77%	161	23%	606	86%	99	14%	442	63%	263	37%	24	3%	212	23%	917	78	23	102
Assam	North Cachar Hills	228358	281	235	84%	46	16%	216	77%	65	23%	144	51%	137	49%	12	4%	14	5%	295	123	6	129
Assam	Sibsagar	1229795	1596	1136	71%	460	29%	1360	85%	236	15%	728	46%	868	54%	107	7%	3	0%	1599	130	0	130
Assam	Sonitpur	2059108	2946	2460	84%	486	16%	2453	83%	493	17%	1772	60%	1174	40%	179	6%	236	7%	3182	143	11	155
Assam	Tinsukia	1408007	2715	1895	70%	820	30%	2278	84%	437	16%	1343	49%	1372	51%	206	8%	670	20%	3385	193	48	240
Assam	Udalguri	890378	1211	1030	85%	181	15%	960	79%	251	21%	544	45%	667	55%	39	3%	27	2%	1238	136	3	139
Bihar	Araria	3120315	1760	1726	98%	34	2%	1619	92%	141	8%	993	56%	767	44%	229	13%	475	21%	2235	56	15	72
Bihar	Arwal	777869	409	389	95%	20	5%	346	85%	63	15%	232	57%	177	43%	18	4%	284	41%	693	53	37	89
Bihar	Aurangabad-Bl	2792341	1341	1293	96%	48	4%	1008	75%	333	25%	996	74%	345	26%	62	5%	692	34%	2033	48	25	73
Bihar	Banka	2256495	487	471	97%	16	3%	426	87%	61	13%	235	48%	252	52%	18	4%	22	4%	509	22	1	23
Bihar	Begusarai	3285067	1920	1815	95%	105	5%	1566	82%	354	18%	990	52%	930	48%	148	8%	380	17%	2300	58	12	70
Bihar	Bhagalpur	3371641	2309	1923	83%	386	17%	1895	82%	414	18%	1204	52%	1105	48%	233	10%	215	9%	2524	68	6	75

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Bihar	Bhojpur	3024638	1123	1024	91%	99	9%	745	66%	378	34%	695	62%	428	38%	51	5%	1028	48%	2151	37	34	71
Bihar	Buxar	1898790	551	538	98%	13	2%	434	79%	117	21%	398	72%	153	28%	34	6%	43	7%	594	29	2	31
Bihar	Darbhanga	4360981	3172	2681	85%	491	15%	2584	81%	588	19%	2117	67%	1055	33%	208	7%	680	18%	3852	73	16	88
Bihar	Gaya	4869594	3186	3051	96%	135	4%	2662	84%	524	16%	1486	47%	1700	53%	187	6%	2250	41%	5436	65	46	112
Bihar	Gopalganj	2844373	1556	1488	96%	68	4%	1351	87%	205	13%	975	63%	581	37%	80	5%	727	32%	2283	55	26	80
Bihar	Jamui	1952646	1013	973	96%	40	4%	827	82%	186	18%	630	62%	383	38%	48	5%	223	18%	1236	52	11	63
Bihar	Jehanabad	1250012	836	793	95%	43	5%	698	83%	138	17%	460	55%	376	45%	68	8%	42	5%	878	67	3	70
Bihar	Kaimur	1809009	775	752	97%	23	3%	624	81%	151	19%	481	62%	294	38%	32	4%	133	15%	908	43	7	50
Bihar	Katihar	3411585	1788	1700	95%	88	5%	1506	84%	282	16%	1350	76%	438	24%	83	5%	436	20%	2224	52	13	65
Bihar	Khagaria	1843144	868	799	92%	69	8%	775	89%	93	11%	580	67%	288	33%	78	9%	30	3%	898	47	2	49
Bihar	Kishanganj	1880226	843	800	95%	43	5%	756	90%	87	10%	641	76%	202	24%	37	4%	239	22%	1082	45	13	58
Bihar	Lakhisarai	1112733	598	565	94%	33	6%	442	74%	156	26%	296	49%	302	51%	32	5%	164	22%	762	54	15	68
Bihar	Madhepura	2217888	1020	990	97%	30	3%	859	84%	161	16%	768	75%	252	25%	64	6%	141	12%	1161	46	6	52
Bihar	Madhubani	4977074	2337	2143	92%	194	8%	2050	88%	287	12%	1633	70%	704	30%	124	5%	25	1%	2362	47	1	47
Bihar	Munger	1511181	1363	1225	90%	138	10%	1056	77%	307	23%	605	44%	758	56%	86	6%	534	28%	1897	90	35	126
Bihar	Muzaffarpur	5313508	3211	2985	93%	226	7%	2827	88%	384	12%	1479	46%	1732	54%	213	7%	87	3%	3298	60	2	62
Bihar	Nalanda	3194062	1110	1050	95%	60	5%	968	87%	142	13%	676	61%	434	39%	64	6%	116	9%	1226	35	4	38
Bihar	Nawada	2464776	861	833	97%	28	3%	756	88%	105	12%	598	69%	263	31%	39	5%	468	35%	1329	35	19	54
Bihar	Pashchim Champaran	4361880	1920	1857	97%	63	3%	1550	81%	370	19%	1333	69%	587	31%	64	3%	53	3%	1973	44	1	45
Bihar	Patna	6418989	3056	2460	80%	596	20%	2402	79%	654	21%	1194	39%	1862	61%	333	11%	25274	89%	28330	48	394	441
Bihar	Purba Champaran	5651824	2215	2151	97%	64	3%	1959	88%	256	12%	1260	57%	955	43%	90	4%	652	23%	2867	39	12	51
Bihar	Purnia	3639508	2634	2523	96%	111	4%	2414	92%	220	8%	1691	64%	943	36%	154	6%	696	21%	3330	72	19	91
Bihar	Rohtas	3294214	1274	1248	98%	26	2%	1063	83%	211	17%	757	59%	517	41%	72	6%	213	14%	1487	39	6	45
Bihar	Saharsa	2109456	730	720	99%	10	1%	681	93%	49	7%	470	64%	260	36%	24	3%	1	0%	731	35	0	35
Bihar	Samastipur	4731045	2294	1988	87%	306	13%	1973	86%	321	14%	1017	44%	1277	56%	131	6%	145	6%	2439	48	3	52
Bihar	Saran	4384473	2672	2529	95%	143	5%	2038	76%	634	24%	1379	52%	1293	48%	129	5%	764	22%	3436	61	17	78
Bihar	Sheikhpura	705998	212	204	96%	8	4%	131	62%	81	38%	107	50%	105	50%	14	7%	18	8%	230	30	3	33
Bihar	Sheohar	730449	455	436	96%	19	4%	378	83%	77	17%	307	67%	148	33%	31	7%	6	1%	461	62	1	63
Bihar	Sitamarhi	3802401	2215	2080	94%	135	6%	2014	91%	201	9%	1456	66%	759	34%	160	7%	142	6%	2357	58	4	62
Bihar	Siwan	3689599	1858	1835	99%	23	1%	1528	82%	330	18%	1239	67%	619	33%	60	3%	250	12%	2108	50	7	57

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Bihar	Supaul	2477835	765	747	98%	18	2%	656	86%	109	14%	518	68%	247	32%	26	3%	16	2%	781	31	1	32
Bihar	Vaishali	3886493	2283	2210	97%	73	3%	1976	87%	307	13%	1320	58%	963	42%	142	6%	317	12%	2600	59	8	67
Chandigarh	Chandigarh	1120481	2980	1906	64%	1074	36%	2527	85%	453	15%	1456	49%	1524	51%	248	8%	433	13%	3413	266	39	305
Chhattisgarh	Balarampur	804880	918	885	96%	33	4%	801	87%	117	13%	261	28%	657	72%	30	3%	47	5%	965	114	6	120
Chhattisgarh	Balod	907295	941	829	88%	112	12%	863	92%	78	8%	393	42%	548	58%	24	3%	100	10%	1041	104	11	115
Chhattisgarh	Baloda Bazar	1494498	1332	1227	92%	105	8%	1230	92%	102	8%	746	56%	586	44%	68	5%	322	19%	1654	89	22	111
Chhattisgarh	Bastar	915731	1386	1094	79%	292	21%	1192	86%	194	14%	580	42%	806	58%	62	4%	200	13%	1586	151	22	173
Chhattisgarh	Bemetara	873902	676	624	92%	52	8%	585	87%	91	13%	319	47%	357	53%	17	3%	143	17%	819	77	16	94
Chhattisgarh	Bijapur	267753	415	377	91%	38	9%	388	93%	27	7%	251	60%	164	40%	27	7%		0%	415	155	0	155
Chhattisgarh	Bilaspur-CG	2308570	2359	2012	85%	347	15%	2128	90%	231	10%	1168	50%	1191	50%	89	4%	1894	45%	4253	102	82	184
Chhattisgarh	Dhamtari	853793	946	850	90%	96	10%	846	89%	100	11%	507	54%	439	46%	19	2%	538	36%	1484	111	63	174
Chhattisgarh	Durg	1891000	2307	1715	74%	592	26%	2061	89%	246	11%	1122	49%	1185	51%	201	9%	927	29%	3234	122	49	171
Chhattisgarh	Gariyaband	708007	834	807	97%	27	3%	725	87%	109	13%	462	55%	372	45%	23	3%	33	4%	867	118	5	122
Chhattisgarh	Janjgir	1813314	1822	1565	86%	257	14%	1627	89%	195	11%	814	45%	1008	55%	63	3%	415	19%	2237	100	23	123
Chhattisgarh	Jashpur	915506	1084	1041	96%	43	4%	1007	93%	77	7%	544	50%	540	50%	25	2%		0%	1084	118	0	118
Chhattisgarh	Kabirdham (Kawardha)	1002614	681	654	96%	27	4%	587	86%	94	14%	397	58%	284	42%	21	3%	136	17%	817	68	14	81
Chhattisgarh	Kondagaon	635265	633	583	92%	50	8%	570	90%	63	10%	356	56%	277	44%	21	3%		0%	633	100	0	100
Chhattisgarh	Korba	1326869	1590	1327	83%	263	17%	1384	87%	206	13%	680	43%	910	57%	79	5%	609	28%	2199	120	46	166
Chhattisgarh	Koriya	700630	605	544	90%	61	10%	524	87%	81	13%	299	49%	306	51%	35	6%	149	20%	754	86	21	108
Chhattisgarh	Mahasamund	1140090	1247	1172	94%	75	6%	1108	89%	139	11%	737	59%	510	41%	59	5%	202	14%	1449	109	18	127

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Chhattisgarh	Mungeli	825692	753	634	84%	119	16%	712	95%	41	5%	389	52%	364	48%	25	3%	89	11%	842	91	11	102
Chhattisgarh	Narayanpur	153454	267	226	85%	41	15%	254	95%	13	5%	141	53%	126	47%	17	6%		0%	267	174	0	174
Chhattisgarh	Raigarh-CG	1633271	2106	1991	95%	115	5%	1969	93%	137	7%	1006	48%	1100	52%	74	4%	569	21%	2675	129	35	164
Chhattisgarh	Raipur	2559851	2232	1823	82%	409	18%	1891	85%	341	15%	1284	58%	948	42%	96	4%	1638	42%	3870	87	64	151
Chhattisgarh	Rajnandgaon	1694747	2000	1674	84%	326	16%	1701	85%	299	15%	920	46%	1080	54%	86	4%	330	14%	2330	118	19	137
Chhattisgarh	Sarguja	908081	873	790	90%	83	10%	775	89%	98	11%	274	31%	599	69%	55	6%	185	17%	1058	96	20	117
Chhattisgarh	South Bastar Dantewada	297389	474	403	85%	71	15%	423	89%	51	11%	225	47%	249	53%	34	7%		0%	474	159	0	159
Chhattisgarh	Sukma	262431	417	388	93%	29	7%	352	84%	65	16%	225	54%	192	46%	13	3%	14	3%	431	159	5	164
Chhattisgarh	Surajpur	869402	878	829	94%	49	6%	804	92%	74	8%	321	37%	557	63%	55	6%	14	2%	892	101	2	103
Chhattisgarh	Uttar Bastar Kanker	806891	1045	934	89%	111	11%	934	89%	111	11%	527	50%	518	50%	32	3%	109	9%	1154	130	14	143
Dadra and Nagar Haveli	Dadra & Nagar Haveli	413618	510	359	70%	151	30%	406	80%	104	20%	257	50%	253	50%	32	6%	42	8%	552	123	10	133
Daman and Diu	Daman	230247	325	249	77%	76	23%	239	74%	86	26%	139	43%	186	57%	9	3%	119	27%	444	141	52	193
Daman and Diu	Diu	62800	43	38	88%	5	12%	36	84%	7	16%	30	70%	13	30%	6	14%		0%	43	68	0	68
Delhi	Bijwasan	959667	1620	957	59%	663	41%	1247	77%	373	23%	677	42%	943	58%	150	9%		0%	1620	169	0	169
Delhi	BJRM CHEST CLINIC	529384	1685	1023	61%	662	39%	1313	78%	372	22%	680	40%	1005	60%	177	11%	122	7%	1807	318	23	341
Delhi	BSA CHEST CLINIC	572938	2477	1418	57%	1059	43%	2059	83%	418	17%	809	33%	1668	67%	278	11%	10	0%	2487	432	2	434
Delhi	CD CHEST CLINIC	572938	1584	965	61%	619	39%	1271	80%	313	20%	586	37%	998	63%	232	15%	1135	42%	2719	276	198	475
Delhi	DDU CHEST CLINIC	1145039	3564	1943	55%	1621	45%	2873	81%	691	19%	1273	36%	2291	64%	445	12%	80	2%	3644	311	7	318

State	District	Population	TB patients notified from public sector	Pulmo-nary	% Pul-monary TB	Extra pulmo-nary	% Extra Pulmo-nary TB	New	% of New TB	Previ-ously treated	% Pre-viously treated TB	Micro-biologi-callycon-firmed	% of Micro-biologi-callycon-firmed	Clin-ically diag-nosed	% of Clin-ically diag-nosed	Pediat-ric TB	% of Pediat-ric TB	TB patients notified from private sector	% TB notifi-cation from private sector	Total patients notified	Annual TB noti-fication rate (public sector)	Annual TB noti-fication rate (private sector)	Annual TB noti-fication rate (public sector)
Delhi	GTB CHEST CLINIC	594471	2213	1247	56%	966	44%	1733	78%	480	22%	818	37%	1395	63%	272	12%	29	1%	2242	372	5	377
Delhi	GULABI BAGH	984467	703	383	54%	320	46%	573	82%	130	18%	253	36%	450	64%	88	13%	49	7%	752	71	5	76
Delhi	HEDGEWAR CHEST CLINIC	509137	717	365	51%	352	49%	575	80%	142	20%	274	38%	443	62%	87	12%	43	6%	760	141	8	149
Delhi	JHANDE-WALAN	586992	1290	748	58%	542	42%	913	71%	377	29%	494	38%	796	62%	172	13%	88	6%	1378	220	15	235
Delhi	KARAWAL NAGAR	823590	3804	2042	54%	1762	46%	3027	80%	777	20%	1240	33%	2564	67%	491	13%		0%	3804	462	0	462
Delhi	KINGSWAY	792791	1690	1021	60%	669	40%	1337	79%	353	21%	655	39%	1035	61%	155	9%	56	3%	1746	213	7	220
Delhi	LN CHEST CLINIC	525607	863	448	52%	415	48%	674	78%	189	22%	267	31%	596	69%	135	16%	231	21%	1094	164	44	208
Delhi	LRS	1001393	1959	1241	63%	718	37%	1608	82%	351	18%	871	44%	1088	56%	188	10%	1416	42%	3375	196	141	337
Delhi	MNCH CHEST CLINIC	529182	2682	1644	61%	1038	39%	2168	81%	514	19%	1136	42%	1546	58%	310	12%	381	12%	3063	507	72	579
Delhi	MOTI NAGAR	635245	4049	2339	58%	1710	42%	3125	77%	924	23%	1426	35%	2623	65%	467	12%	784	16%	4833	637	123	761
Delhi	NARELA	635245	2423	1566	65%	857	35%	1826	75%	597	25%	992	41%	1431	59%	233	10%	35	1%	2458	381	6	387
Delhi	NDMC	703930	2736	1626	59%	1110	41%	2139	78%	597	22%	1086	40%	1650	60%	271	10%	510	16%	3246	389	72	461
Delhi	NEHRU NAGAR	1140237	5045	3018	60%	2027	40%	3959	78%	1086	22%	1905	38%	3140	62%	539	11%	266	5%	5311	442	23	466
Delhi	PATPAR-GANJ	808897	3518	2036	58%	1482	42%	2859	81%	659	19%	904	26%	2614	74%	466	13%	144	4%	3662	435	18	453
Delhi	RK MISSION	847682	494	322	65%	172	35%	371	75%	123	25%	235	48%	259	52%	67	14%	1052	68%	1546	58	124	182
Delhi	RTRM CHEST CLINIC	549497	1714	1073	63%	641	37%	1352	79%	362	21%	842	49%	872	51%	144	8%	201	10%	1915	312	37	349
Delhi	SGM CHEST CLINIC	729295	2180	1245	57%	935	43%	1780	82%	400	18%	592	27%	1588	73%	278	13%	32	1%	2212	299	4	303
Delhi	SHAHADRA	629100	2162	1173	54%	989	46%	1592	74%	570	26%	697	32%	1465	68%	304	14%	79	4%	2241	344	13	356
Delhi	SPM MARG	645135	951	536	56%	415	44%	679	71%	272	29%	350	37%	601	63%	122	13%	97	9%	1048	147	15	162
Delhi	SPMH CHEST CLINIC	572939	3534	1645	47%	1889	53%	2687	76%	847	24%	838	24%	2696	76%	606	17%	209	6%	3743	617	36	653
Goa	North Goa	843859	979	747	76%	232	24%	838	86%	141	14%	488	50%	491	50%	42	4%	227	19%	1206	116	27	143

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Goa	South Goa	660386	597	436	73%	161	27%	502	84%	95	16%	290	49%	307	51%	29	5%	163	21%	760	90	25	115
Gujarat	Ahmadabad	1595813	2088	1731	83%	357	17%	1491	71%	597	29%	1265	61%	823	39%	88	4%	731	26%	2819	131	46	177
Gujarat	Ahmadabad MC	6061127	9972	6843	69%	3129	31%	7158	72%	2814	28%	4851	49%	5121	51%	541	5%	3500	26%	13472	165	58	222
Gujarat	Amreli	1632853	1723	1511	88%	212	12%	1341	78%	382	22%	1307	76%	416	24%	59	3%	491	22%	2214	106	30	136
Gujarat	Anand	2270939	3443	3082	90%	361	10%	2393	70%	1050	30%	2225	65%	1218	35%	106	3%	1506	30%	4949	152	66	218
Gujarat	Arvalli	1107580	2053	1921	94%	132	6%	1278	62%	775	38%	1082	53%	971	47%	35	2%	880	30%	2933	185	79	265
Gujarat	Banaskantha	3386212	4186	3805	91%	381	9%	2788	67%	1398	33%	2869	69%	1317	31%	143	3%	1420	25%	5606	124	42	166
Gujarat	Bharuch	1683086	2366	2002	85%	364	15%	1812	77%	554	23%	1570	66%	796	34%	83	4%	425	15%	2791	141	25	166
Gujarat	Bhavnagar	2617563	3064	2592	85%	472	15%	2209	72%	855	28%	2174	71%	890	29%	127	4%	1553	34%	4617	117	59	176
Gujarat	Botad	700133	686	613	89%	73	11%	495	72%	191	28%	496	72%	190	28%	25	4%	200	23%	886	98	29	127
Gujarat	Chhota Udepur	1163096	1660	1542	93%	118	7%	1215	73%	445	27%	1304	79%	356	21%	28	2%	192	10%	1852	143	17	159
Gujarat	Dahod	2308204	3937	3644	93%	293	7%	2700	69%	1237	31%	2898	74%	1039	26%	256	7%	1721	30%	5658	171	75	245
Gujarat	Devbhumi dwarka	816557	739	647	88%	92	12%	491	66%	248	34%	495	67%	244	33%	21	3%	99	12%	838	91	12	103
Gujarat	Gandhinagar	1500880	2106	1658	79%	448	21%	1542	73%	564	27%	1189	56%	917	44%	121	6%	1173	36%	3279	140	78	218
Gujarat	Gir Somnath	1313842	1509	1380	91%	129	9%	1094	72%	415	28%	1023	68%	486	32%	51	3%	462	23%	1971	115	35	150
Gujarat	Jamnagar	1504252	1788	1394	78%	394	22%	1306	73%	482	27%	1195	67%	593	33%	93	5%	370	17%	2158	119	25	143
Gujarat	Junagadh	1653378	1615	1384	86%	231	14%	1216	75%	399	25%	1193	74%	422	26%	48	3%	680	30%	2295	98	41	139
Gujarat	Kachchh	2270533	2537	2171	86%	366	14%	1871	74%	666	26%	1680	66%	857	34%	91	4%	903	26%	3440	112	40	152
Gujarat	Kheda	2228644	3271	2995	92%	276	8%	2338	71%	933	29%	2065	63%	1206	37%	78	2%	1379	30%	4650	147	62	209
Gujarat	Mahesana	2217726	2538	2302	91%	236	9%	1839	72%	699	28%	1767	70%	771	30%	78	3%	3644	59%	6182	114	164	279
Gujarat	Mahisagar	1079315	2024	1923	95%	101	5%	1275	63%	749	37%	1417	70%	607	30%	42	2%	673	25%	2697	188	62	250
Gujarat	Morbi	1047470	962	787	82%	175	18%	701	73%	261	27%	648	67%	314	33%	37	4%	1382	59%	2344	92	132	224
Gujarat	Narmada	640560	837	759	91%	78	9%	612	73%	225	27%	600	72%	237	28%	14	2%	657	44%	1494	131	103	233
Gujarat	Navsari	1442892	1782	1415	79%	367	21%	1392	78%	390	22%	1132	64%	650	36%	62	3%	280	14%	2062	124	19	143
Gujarat	Panch Mahals	1782105	3497	3210	92%	287	8%	2281	65%	1216	35%	2514	72%	983	28%	155	4%	1102	24%	4599	196	62	258
Gujarat	Patan	1458151	1853	1662	90%	191	10%	1181	64%	672	36%	1349	73%	504	27%	61	3%	1428	44%	3281	127	98	225
Gujarat	Porbandar	634491	826	696	84%	130	16%	640	77%	186	23%	475	58%	351	42%	53	6%	235	22%	1061	130	37	167
Gujarat	Rajkot	3284684	3829	3216	84%	613	16%	2888	75%	941	25%	2580	67%	1249	33%	175	5%	2217	37%	6046	117	67	184

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Gujarat	Sabarkantha	1527800	2099	1884	90%	215	10%	1445	69%	654	31%	1220	58%	879	42%	68	3%	1475	41%	3574	137	97	234
Gujarat	Surat	1750914	2986	2607	87%	379	13%	2279	76%	707	24%	1889	63%	1097	37%	92	3%	873	23%	3859	171	50	220
Gujarat	SURAT MUNICIPAL CORP	4848223	6536	4669	71%	1867	29%	4851	74%	1685	26%	3870	59%	2666	41%	340	5%	2803	30%	9339	135	58	193
Gujarat	Surendranagar	1725409	2092	1882	90%	210	10%	1475	71%	617	29%	1513	72%	579	28%	62	3%	865	29%	2957	121	50	171
Gujarat	The Dangs	247730	328	302	92%	26	8%	254	77%	74	23%	195	59%	133	41%	17	5%		0%	328	132	0	132
Gujarat	Vadodara	1455644	2505	2223	89%	282	11%	1846	74%	659	26%	1625	65%	880	35%	73	3%	73	3%	2578	172	5	177
Gujarat	Vadodara Corp	1901583	2326	1857	80%	469	20%	1737	75%	589	25%	1528	66%	798	34%	113	5%	1300	36%	3626	122	68	191
Gujarat	Valsad	1850914	2123	1770	83%	353	17%	1623	76%	500	24%	1382	65%	741	35%	75	4%	619	23%	2742	115	33	148
Gujarat	Vyara (Surat)	875739	1407	1194	85%	213	15%	1077	77%	330	23%	883	63%	524	37%	50	4%	61	4%	1468	161	7	168
Haryana	AMBALA	1240744	1870	1370	73%	500	27%	1446	77%	424	23%	980	52%	890	48%	79	4%	129	6%	1999	151	10	161
Haryana	BHIWANI	1778092	2529	2235	88%	294	12%	1881	74%	648	26%	1535	61%	994	39%	82	3%	719	22%	3248	142	40	183
Haryana	FARIDABAD	1963469	4488	2770	62%	1718	38%	3637	81%	851	19%	1578	35%	2910	65%	386	9%	822	15%	5310	229	42	270
Haryana	FATEHABAD	1027625	1250	1180	94%	70	6%	925	74%	325	26%	780	62%	470	38%	34	3%	62	5%	1312	122	6	128
Haryana	GURGAON	1652549	2387	1737	73%	650	27%	1934	81%	453	19%	876	37%	1511	63%	189	8%	1075	31%	3462	144	65	209
Haryana	HISAR	1902196	2377	2109	89%	268	11%	1751	74%	626	26%	1444	61%	933	39%	86	4%	525	18%	2902	125	28	153
Haryana	JHAJJAR	1044417	1560	1270	81%	290	19%	1173	75%	387	25%	869	56%	691	44%	63	4%	7	0%	1567	149	1	150
Haryana	JIND	1453858	1937	1639	85%	298	15%	1409	73%	528	27%	1200	62%	737	38%	59	3%	280	13%	2217	133	19	152
Haryana	KAITHAL	1170975	1494	1291	86%	203	14%	1129	76%	365	24%	931	62%	563	38%	34	2%	236	14%	1730	128	20	148
Haryana	KARNAL	1644077	2646	2143	81%	503	19%	2079	79%	567	21%	1516	57%	1130	43%	107	4%	321	11%	2967	161	20	180
Haryana	KURUKSHETRA	1052410	1372	1151	84%	221	16%	1014	74%	358	26%	839	61%	533	39%	48	3%	202	13%	1574	130	19	150
Haryana	MAHENDRAGARH	1005968	1243	1038	84%	205	16%	920	74%	323	26%	621	50%	622	50%	46	4%	308	20%	1551	124	31	154
Haryana	MEWAT	1189033	1749	1329	76%	420	24%	1281	73%	468	27%	901	52%	848	48%	127	7%		0%	1749	147	0	147
Haryana	PALWAL	1135647	1694	1444	85%	250	15%	1236	73%	458	27%	897	53%	797	47%	98	6%	103	6%	1797	149	9	158
Haryana	PANCHKULA	610001	1175	830	71%	345	29%	1009	86%	166	14%	347	30%	828	70%	73	6%	19	2%	1194	193	3	196
Haryana	PANIPAT	1312809	2181	1770	81%	411	19%	1728	79%	453	21%	976	45%	1205	55%	129	6%	187	8%	2368	166	14	180
Haryana	REWARI	978081	1338	1002	75%	336	25%	1037	78%	301	22%	588	44%	750	56%	77	6%	245	15%	1583	137	25	162
Haryana	ROHTAK	1155500	1768	1441	82%	327	18%	1393	79%	375	21%	978	55%	790	45%	78	4%	137	7%	1905	153	12	165

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Haryana	SIRSA	1413553	1792	1553	87%	239	13%	1309	73%	483	27%	1079	60%	713	40%	54	3%	485	21%	2277	127	34	161
Haryana	SONIPAT	1615434	2831	2205	78%	626	22%	2307	81%	524	19%	1260	45%	1571	55%	158	6%	136	5%	2967	175	8	184
Haryana	YAMUNANAGAR	1325198	1708	1329	78%	379	22%	1324	78%	384	22%	1006	59%	702	41%	59	3%	158	8%	1866	129	12	141
Himachal Pradesh	Bilaspur-HP	401891	627	504	80%	123	20%	491	78%	136	22%	382	61%	245	39%	18	3%		0%	627	156	0	156
Himachal Pradesh	Chamba	545781	1209	964	80%	245	20%	907	75%	302	25%	740	61%	469	39%	69	6%		0%	1209	222	0	222
Himachal Pradesh	Hamirpur-HP	477879	773	628	81%	145	19%	599	77%	174	23%	499	65%	274	35%	16	2%	24	3%	797	162	5	167
Himachal Pradesh	Kangra	1585474	2640	2035	77%	605	23%	2147	81%	493	19%	1493	57%	1147	43%	169	6%	298	10%	2938	167	19	185
Himachal Pradesh	Kinnaur	88675	219	161	74%	58	26%	172	79%	47	21%	119	54%	100	46%	7	3%		0%	219	247	0	247
Himachal Pradesh	Kullu	460186	1385	945	68%	440	32%	1147	83%	238	17%	511	37%	874	63%	92	7%	159	10%	1544	301	35	336
Himachal Pradesh	Lahul & Spiti	33165	60	38	63%	22	37%	53	88%	7	12%	25	42%	35	58%		0%		0%	60	181	0	181
Himachal Pradesh	Mandi	1051410	2222	1579	71%	643	29%	1695	76%	527	24%	1150	52%	1072	48%	74	3%	197	8%	2419	211	19	230
Himachal Pradesh	Shimla	855613	1629	1075	66%	554	34%	1317	81%	312	19%	783	48%	846	52%	60	4%	82	5%	1711	190	10	200
Himachal Pradesh	Sirmaur	557689	1118	904	81%	214	19%	869	78%	249	22%	602	54%	516	46%	38	3%	6	1%	1124	200	1	202
Himachal Pradesh	Solan	606609	1496	1114	74%	382	26%	1225	82%	271	18%	734	49%	762	51%	43	3%	125	8%	1621	247	21	267
Himachal Pradesh	Una	548109	692	598	86%	94	14%	558	81%	134	19%	442	64%	250	36%	24	3%		0%	692	126	0	126
Jammu and Kashmir	Anantnag	1644612	581	406	70%	175	30%	504	87%	77	13%	291	50%	290	50%	74	13%	27	4%	608	35	2	37
Jammu and Kashmir	Badgam	810506	249	180	72%	69	28%	188	76%	61	24%	114	46%	135	54%	27	11%	14	5%	263	31	2	32
Jammu and Kashmir	Baramula	1542903	484	344	71%	140	29%	423	87%	61	13%	283	58%	201	42%	37	8%	3	1%	487	31	0	32
Jammu and Kashmir	Doda	1017797	645	441	68%	204	32%	516	80%	129	20%	274	42%	371	58%	47	7%		0%	645	63	0	63
Jammu and Kashmir	Jammu	2032471	2250	1725	77%	525	23%	1583	70%	667	30%	1129	50%	1121	50%	81	4%	81	3%	2331	111	4	115

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Jammu and Kashmir	Kargil	157956	134	91	68%	43	32%	99	74%	35	26%	32	24%	102	76%	28	21%		0%	134	85	0	85
Jammu and Kashmir	Kathua	678267	902	790	88%	112	12%	729	81%	173	19%	387	43%	515	57%	12	1%	66	7%	968	133	10	143
Jammu and Kashmir	Kupwara	964521	513	353	69%	160	31%	360	70%	153	30%	293	57%	220	43%	47	9%	33	6%	546	53	3	57
Jammu and Kashmir	Leh	162050	158	80	51%	78	49%	140	89%	18	11%	64	41%	94	59%	3	2%	1	1%	159	98	1	98
Jammu and Kashmir	Poonch	525265	416	271	65%	145	35%	365	88%	51	12%	220	53%	196	47%	30	7%	4	1%	420	79	1	80
Jammu and Kashmir	Pulwama	920960	428	342	80%	86	20%	302	71%	126	29%	256	60%	172	40%	41	10%	59	12%	487	46	6	53
Jammu and Kashmir	Rajouri	682183	432	281	65%	151	35%	360	83%	72	17%	242	56%	190	44%	22	5%		0%	432	63	0	63
Jammu and Kashmir	Srinagar	1725936	874	472	54%	402	46%	789	90%	85	10%	296	34%	578	66%	110	13%	401	31%	1275	51	23	74
Jammu and Kashmir	Udhampur	958470	1178	815	69%	363	31%	879	75%	299	25%	625	53%	553	47%	42	4%	4	0%	1182	123	0	123
Jharkhand	Bokaro	2287918	2058	1763	86%	295	14%	1646	80%	412	20%	1039	50%	1019	50%	76	4%	931	31%	2989	90	41	131
Jharkhand	Chatra	1156547	887	879	99%	8	1%	729	82%	158	18%	519	59%	368	41%	27	3%	96	10%	983	77	8	85
Jharkhand	Deoghar	1655399	1176	1106	94%	70	6%	1071	91%	105	9%	831	71%	345	29%	45	4%	3	0%	1179	71	0	71
Jharkhand	Dhanbad	2976700	2251	2061	92%	190	8%	1784	79%	467	21%	1045	46%	1206	54%	110	5%	301	12%	2552	76	10	86
Jharkhand	Dumka	1465897	2153	2104	98%	49	2%	1784	83%	369	17%	1072	50%	1081	50%	54	3%	570	21%	2723	147	39	186
Jharkhand	Garhwa	1467329	1414	1191	84%	223	16%	1145	81%	269	19%	629	44%	785	56%	60	4%	5	0%	1419	96	0	97
Jharkhand	Giridih	2713214	1727	1607	93%	120	7%	1454	84%	273	16%	1224	71%	503	29%	72	4%	6	0%	1733	64	0	64
Jharkhand	Godda	1455118	1374	1331	97%	43	3%	1122	82%	252	18%	677	49%	697	51%	50	4%	66	5%	1440	94	5	99
Jharkhand	Gumla	1138075	897	845	94%	52	6%	760	85%	137	15%	544	61%	353	39%	24	3%	3	0%	900	79	0	79
Jharkhand	Hazaribagh	1924064	1161	1092	94%	69	6%	1002	86%	159	14%	717	62%	444	38%	51	4%	141	11%	1302	60	7	68
Jharkhand	Jamtara	876819	890	868	98%	22	2%	657	74%	233	26%	556	62%	334	38%	11	1%	1	0%	891	102	0	102
Jharkhand	Khunti	588423	560	515	92%	45	8%	490	88%	70	13%	292	52%	268	48%	14	3%		0%	560	95	0	95
Jharkhand	Kodarma	795776	314	302	96%	12	4%	246	78%	68	22%	170	54%	144	46%	8	3%	3	1%	317	39	0	40
Jharkhand	Lathehar	805212	825	791	96%	34	4%	736	89%	89	11%	493	60%	332	40%	46	6%		0%	825	102	0	102
Jharkhand	Lohardaga	512348	434	371	85%	63	15%	369	85%	65	15%	246	57%	188	43%	12	3%	4	1%	438	85	1	85
Jharkhand	Pakur	997758	1636	1586	97%	50	3%	1380	84%	256	16%	972	59%	664	41%	46	3%		0%	1636	164	0	164
Jharkhand	Palamu	2148553	2601	2506	96%	95	4%	2359	91%	242	9%	1380	53%	1221	47%	192	7%	10	0%	2611	121	0	122

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Jharkhand	Pashchimi Singhbhum	1666206	3010	2832	94%	178	6%	2700	90%	310	10%	1384	46%	1626	54%	77	3%		0%	3010	181	0	181
Jharkhand	Purbi Singhbhum	2542144	3124	2874	92%	250	8%	2637	84%	487	16%	1509	48%	1615	52%	100	3%	282	8%	3406	123	11	134
Jharkhand	Ramgarh	1053193	760	700	92%	60	8%	605	80%	155	20%	484	64%	276	36%	35	5%	1	0%	761	72	0	72
Jharkhand	Ranchi	3231199	1824	1588	87%	236	13%	1561	86%	263	14%	964	53%	860	47%	71	4%	1778	49%	3602	56	55	111
Jharkhand	Sahibganj	1276090	1792	1676	94%	116	6%	1582	88%	210	12%	688	38%	1104	62%	102	6%	127	7%	1919	140	10	150
Jharkhand	Saraikela - Kharsawan	1180020	1660	1622	98%	38	2%	1500	90%	160	10%	806	49%	854	51%	44	3%	51	3%	1711	141	4	145
Jharkhand	Simdega	665557	602	572	95%	30	5%	546	91%	56	9%	413	69%	189	31%	15	2%	6	1%	608	90	1	91
Karnataka	BAGALKOT	2017490	1724	1543	90%	181	10%	1429	83%	295	17%	737	43%	987	57%	81	5%	55	3%	1779	85	3	88
Karnataka	BANGALORE CITY	7878070	5898	4222	72%	1676	28%	4561	77%	1337	23%	3428	58%	2470	42%	321	5%	3526	37%	9424	75	45	120
Karnataka	BANGALORE RURAL	1053392	996	839	84%	157	16%	791	79%	205	21%	646	65%	350	35%	38	4%	44	4%	1040	95	4	99
Karnataka	Bangalore Urban	2353191	4178	3244	78%	934	22%	3179	76%	999	24%	2384	57%	1794	43%	229	5%	260	6%	4438	178	11	189
Karnataka	BELGAUM	5098542	4655	4219	91%	436	9%	3894	84%	761	16%	2819	61%	1836	39%	459	10%	631	12%	5286	91	12	104
Karnataka	BELLARY	2702025	2369	1992	84%	377	16%	1834	77%	535	23%	1414	60%	955	40%	90	4%	307	11%	2676	88	11	99
Karnataka	BIDAR	1813900	2028	1773	87%	255	13%	1543	76%	485	24%	987	49%	1041	51%	56	3%	77	4%	2105	112	4	116
Karnataka	BIJAPUR	2320810	1548	1418	92%	130	8%	1276	82%	272	18%	791	51%	757	49%	107	7%	30	2%	1578	67	1	68
Karnataka	CHAMARAJANAGAR	1089355	1082	904	84%	178	16%	836	77%	246	23%	720	67%	362	33%	71	7%	7	1%	1089	99	1	100
Karnataka	CHIKKABALLAPUR	1338406	1690	1382	82%	308	18%	1385	82%	305	18%	1018	60%	672	40%	57	3%	5	0%	1695	126	0	127
Karnataka	CHIKMAGALUR	1213970	940	727	77%	213	23%	749	80%	191	20%	523	56%	417	44%	67	7%	12	1%	952	77	1	78
Karnataka	CHITRADURGA	1771605	2140	1903	89%	237	11%	1695	79%	445	21%	1316	61%	824	39%	86	4%	164	7%	2304	121	9	130
Karnataka	DAKSHINA KANNADA	2223205	1632	1431	88%	201	12%	1298	80%	334	20%	1001	61%	631	39%	60	4%	235	13%	1867	73	11	84
Karnataka	DAVANAGERE	2077326	1813	1517	84%	296	16%	1382	76%	431	24%	1022	56%	791	44%	67	4%	125	6%	1938	87	6	93
Karnataka	DHARWAD	1970721	1484	1154	78%	330	22%	1172	79%	312	21%	940	63%	544	37%	98	7%	175	11%	1659	75	9	84
Karnataka	GADAG	1136594	1164	1022	88%	142	12%	935	80%	229	20%	743	64%	421	36%	102	9%	248	18%	1412	102	22	124
Karnataka	GULBARGA	2736711	2261	1899	84%	362	16%	1637	72%	624	28%	1270	56%	991	44%	109	5%	132	6%	2393	83	5	87

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Karnataka	HASSAN	1895208	1301	1094	84%	207	16%	1051	81%	250	19%	857	66%	444	34%	42	3%	29	2%	1330	69	2	70
Karnataka	HAVERI	1705588	1641	1416	86%	225	14%	1340	82%	301	18%	880	54%	761	46%	213	13%	21	1%	1662	96	1	97
Karnataka	KODAGU	591925	399	325	81%	74	19%	338	85%	61	15%	234	59%	165	41%	26	7%	7	2%	406	67	1	69
Karnataka	KOLAR	1643409	1587	1275	80%	312	20%	1318	83%	269	17%	1016	64%	571	36%	51	3%	19	1%	1606	97	1	98
Karnataka	KOPPAL	1484493	1853	1704	92%	149	8%	1402	76%	451	24%	1021	55%	832	45%	93	5%	26	1%	1879	125	2	127
Karnataka	MANDYA	1929842	1629	1319	81%	310	19%	1273	78%	356	22%	1064	65%	565	35%	45	3%	344	17%	1973	84	18	102
Karnataka	MYSORE	3195359	2626	2170	83%	456	17%	2045	78%	581	22%	1593	61%	1033	39%	151	6%	113	4%	2739	82	4	86
Karnataka	RAICHUR	2053711	2555	2378	93%	177	7%	1951	76%	604	24%	1505	59%	1050	41%	100	4%	461	15%	3016	124	22	147
Karnataka	RAMANAGARA	1155271	1027	819	80%	208	20%	807	79%	220	21%	660	64%	367	36%	33	3%	59	5%	1086	89	5	94
Karnataka	SHIMOGA	1873112	1529	1240	81%	289	19%	1302	85%	227	15%	947	62%	582	38%	65	4%	310	17%	1839	82	17	98
Karnataka	TUMKUR	2861076	2988	2321	78%	667	22%	2403	80%	585	20%	1741	58%	1247	42%	122	4%	124	4%	3112	104	4	109
Karnataka	UDUPI	1256815	922	744	81%	178	19%	737	80%	185	20%	604	66%	318	34%	33	4%	667	42%	1589	73	53	126
Karnataka	UTTARA KANNADA	1533100	945	785	83%	160	17%	770	81%	175	19%	519	55%	426	45%	59	6%	117	11%	1062	62	8	69
Karnataka	YADGIRI	1251562	1128	1035	92%	93	8%	812	72%	316	28%	641	57%	487	43%	60	5%	400	26%	1528	90	32	122
Kerala	Alappuzha	2159181	1450	1191	82%	259	18%	1242	86%	208	14%	794	55%	656	45%	91	6%	1879	56%	3329	67	87	154
Kerala	Ernakulam	3337418	2145	1898	88%	247	12%	1786	83%	359	17%	1286	60%	859	40%	133	6%	4022	65%	6167	64	121	185
Kerala	Idukki	1126888	486	386	79%	100	21%	433	89%	53	11%	245	50%	241	50%	26	5%	413	46%	899	43	37	80
Kerala	Kannur	2569959	1501	1107	74%	394	26%	1349	90%	152	10%	760	51%	741	49%	96	6%	2226	60%	3727	58	87	145
Kerala	Kasaragod	1325459	880	647	74%	233	26%	784	89%	96	11%	466	53%	414	47%	95	11%	890	50%	1770	66	67	134
Kerala	Kollam	2675852	1918	1607	84%	311	16%	1748	91%	170	9%	1079	56%	839	44%	104	5%	3933	67%	5851	72	147	219
Kerala	Kottayam	2014120	1470	1205	82%	265	18%	1296	88%	174	12%	905	62%	565	38%	67	5%	838	36%	2308	73	42	115
Kerala	Kozhikode	3143761	1181	838	71%	343	29%	1050	89%	131	11%	586	50%	595	50%	91	8%	658	36%	1839	38	21	58
Kerala	Malappuram	4183099	1920	1352	70%	568	30%	1697	88%	223	12%	936	49%	984	51%	220	11%	886	32%	2806	46	21	67
Kerala	Palakkad	2860220	2192	1740	79%	452	21%	1947	89%	245	11%	1246	57%	946	43%	105	5%	1540	41%	3732	77	54	130
Kerala	Pathanamthitta	1216517	843	696	83%	147	17%	748	89%	95	11%	488	58%	355	42%	46	5%	860	50%	1703	69	71	140
Kerala	Thiruvananthapuram	3365324	2213	1783	81%	430	19%	1884	85%	329	15%	1279	58%	934	42%	77	3%	3577	62%	5790	66	106	172
Kerala	Thrissur	3164910	2158	1736	80%	422	20%	1885	87%	273	13%	1137	53%	1021	47%	140	6%	3732	63%	5890	68	118	186
Kerala	Wayanad	830888	612	504	82%	108	18%	558	91%	54	9%	287	47%	325	53%	108	18%	870	59%	1482	74	105	178

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Lakshadweep	Lakshadweep	65454	23	23	100%		0%	23	100%		0%	10	43%	13	57%	16	70%		0%	23	35	0	35
Madhya Pradesh	Agar Malwa	549428	859	794	92%	65	8%	725	84%	134	16%	578	67%	281	33%	32	4%		0%	859	156	0	156
Madhya Pradesh	Alirajpur	794170	717	669	93%	48	7%	616	86%	101	14%	545	76%	172	24%	29	4%		0%	717	90	0	90
Madhya Pradesh	Anuppur	816888	1008	968	96%	40	4%	912	90%	96	10%	643	64%	365	36%	27	3%		0%	1008	123	0	123
Madhya Pradesh	Ashoknagar	920926	1419	1419	100%		0%	1378	97%	41	3%	602	42%	817	58%	76	5%		0%	1419	154	0	154
Madhya Pradesh	Balaghat	1854056	1942	1860	96%	82	4%	1740	90%	202	10%	715	37%	1227	63%	93	5%	390	17%	2332	105	21	126
Madhya Pradesh	Barwani	1510202	1681	1481	88%	200	12%	1494	89%	187	11%	1008	60%	673	40%	100	6%	410	20%	2091	111	27	138
Madhya Pradesh	Betul	1716830	3046	2700	89%	346	11%	2742	90%	304	10%	1162	38%	1884	62%	180	6%	530	15%	3576	177	31	208
Madhya Pradesh	Bhind	1856678	2031	1798	89%	233	11%	1740	86%	291	14%	847	42%	1184	58%	241	12%	27	1%	2058	109	1	111
Madhya Pradesh	Bhopal	2580994	5404	3965	73%	1439	27%	4331	80%	1073	20%	2091	39%	3313	61%	567	10%	1678	24%	7082	209	65	274
Madhya Pradesh	Burhanpur	825031	1428	1306	91%	122	9%	1341	94%	87	6%	752	53%	676	47%	125	9%	126	8%	1554	173	15	188
Madhya Pradesh	Chhatarpur	1921302	2879	2704	94%	175	6%	2474	86%	405	14%	1555	54%	1324	46%	233	8%	1066	27%	3945	150	55	205
Madhya Pradesh	Chhindwara	2278183	3151	2884	92%	267	8%	2617	83%	534	17%	1799	57%	1352	43%	99	3%	170	5%	3321	138	7	146
Madhya Pradesh	Damoh	1377285	2395	2085	87%	310	13%	2028	85%	367	15%	1594	67%	801	33%	141	6%	44	2%	2439	174	3	177
Madhya Pradesh	Datia	857054	1681	1500	89%	181	11%	1314	78%	367	22%	694	41%	987	59%	284	17%		0%	1681	196	0	196
Madhya Pradesh	Dewas	1703599	2184	1851	85%	333	15%	1982	91%	202	9%	1060	49%	1124	51%	215	10%	525	19%	2709	128	31	159
Madhya Pradesh	Dhar	2381030	3875	3302	85%	573	15%	3607	93%	268	7%	1645	42%	2230	58%	380	10%	1469	27%	5344	163	62	224
Madhya Pradesh	Dindori	767513	1085	1005	93%	80	7%	988	91%	97	9%	478	44%	607	56%	121	11%		0%	1085	141	0	141
Madhya Pradesh	Guna	1352473	1721	1533	89%	188	11%	1556	90%	165	10%	621	36%	1100	64%	158	9%	337	16%	2058	127	25	152

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Madhya Pradesh	Gwalior	2213048	3973	3375	85%	598	15%	3154	79%	819	21%	1932	49%	2041	51%	353	9%	1070	21%	5043	180	48	228
Madhya Pradesh	Harda	621561	1046	973	93%	73	7%	944	90%	102	10%	411	39%	635	61%	172	16%	425	29%	1471	168	68	237
Madhya Pradesh	Hoshangabad	1352514	2345	2174	93%	171	7%	2210	94%	135	6%	973	41%	1372	59%	338	14%	184	7%	2529	173	14	187
Madhya Pradesh	Indore	3566452	6709	5003	75%	1706	25%	5506	82%	1203	18%	3066	46%	3643	54%	926	14%	1130	14%	7839	188	32	220
Madhya Pradesh	Jabalpur	2681883	3983	3299	83%	684	17%	3166	79%	817	21%	2010	50%	1973	50%	272	7%	1186	23%	5169	149	44	193
Madhya Pradesh	Jhabua	1116136	1773	1732	98%	41	2%	1655	93%	118	7%	753	42%	1020	58%	147	8%		0%	1773	159	0	159
Madhya Pradesh	Katni	1407780	1850	1773	96%	77	4%	1633	88%	217	12%	761	41%	1089	59%	161	9%		0%	1850	131	0	131
Madhya Pradesh	Khandwa	1427136	1584	1370	86%	214	14%	1486	94%	98	6%	828	52%	756	48%	158	10%	251	14%	1835	111	18	129
Madhya Pradesh	Khargone	2040705	3230	2713	84%	517	16%	2876	89%	354	11%	1939	60%	1291	40%	445	14%	450	12%	3680	158	22	180
Madhya Pradesh	Mandla	1148212	2097	1824	87%	273	13%	1945	93%	152	7%	901	43%	1196	57%	206	10%	6	0%	2103	183	1	183
Madhya Pradesh	Mandsaur	1460256	2211	1942	88%	269	12%	1664	75%	547	25%	1087	49%	1124	51%	203	9%	968	30%	3179	151	66	218
Madhya Pradesh	Morena	2141763	2439	2192	90%	247	10%	1978	81%	461	19%	1545	63%	894	37%	104	4%	1174	32%	3613	114	55	169
Madhya Pradesh	Narsinghpur	1190303	1364	1181	87%	183	13%	1050	77%	314	23%	854	63%	510	37%	67	5%	263	16%	1627	115	22	137
Madhya Pradesh	Neemuch	900195	1242	1150	93%	92	7%	1019	82%	223	18%	642	52%	600	48%	65	5%	706	36%	1948	138	78	216
Madhya Pradesh	Panna	1107349	1375	1263	92%	112	8%	1108	81%	267	19%	922	67%	453	33%	207	15%		0%	1375	124	0	124
Madhya Pradesh	Raisen	1451392	1864	1682	90%	182	10%	1515	81%	349	19%	1027	55%	837	45%	93	5%		0%	1864	128	0	128
Madhya Pradesh	Rajgarh	1685544	2137	1977	93%	160	7%	1775	83%	362	17%	1005	47%	1132	53%	164	8%	82	4%	2219	127	5	132
Madhya Pradesh	Ratlam	1585212	2226	1956	88%	270	12%	1687	76%	539	24%	1122	50%	1104	50%	155	7%	293	12%	2519	140	18	159
Madhya Pradesh	Rewa	2576197	3547	2947	83%	600	17%	2847	80%	700	20%	1707	48%	1840	52%	284	8%		0%	3547	138	0	138

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Madhya Pradesh	Sagar	2592056	3410	3011	88%	399	12%	3074	90%	336	10%	1706	50%	1704	50%	295	9%	130	4%	3540	132	5	137
Madhya Pradesh	Satna	2428927	4333	3634	84%	699	16%	4124	95%	209	5%	1517	35%	2816	65%	313	7%	431	9%	4764	178	18	196
Madhya Pradesh	Sehore	1428841	1922	1783	93%	139	7%	1701	89%	221	11%	1086	57%	836	43%	113	6%	43	2%	1965	135	3	138
Madhya Pradesh	Seoni	1502809	1795	1655	92%	140	8%	1516	84%	279	16%	1078	60%	717	40%	67	4%		0%	1795	119	0	119
Madhya Pradesh	Shahdol	1160710	1301	1267	97%	34	3%	1092	84%	209	16%	635	49%	666	51%	53	4%	33	2%	1334	112	3	115
Madhya Pradesh	Shajapur	1098855	1609	1329	83%	280	17%	1433	89%	176	11%	857	53%	752	47%	277	17%	104	6%	1713	146	9	156
Madhya Pradesh	Sheopur	749785	1557	1454	93%	103	7%	1240	80%	317	20%	1087	70%	470	30%	174	11%	1	0%	1558	208	0	208
Madhya Pradesh	Shivpuri	1880934	1760	1696	96%	64	4%	1417	81%	343	19%	1075	61%	685	39%	71	4%	136	7%	1896	94	7	101
Madhya Pradesh	Sidhi	1227766	1400	1304	93%	96	7%	1130	81%	270	19%	751	54%	649	46%	81	6%		0%	1400	114	0	114
Madhya Pradesh	Singrauli	1284022	1085	927	85%	158	15%	902	83%	183	17%	531	49%	554	51%	69	6%	274	20%	1359	85	21	106
Madhya Pradesh	Tikamgarh	1574789	1686	1433	85%	253	15%	1417	84%	269	16%	781	46%	905	54%	161	10%		0%	1686	107	0	107
Madhya Pradesh	Ujjain	2165156	2695	2226	83%	469	17%	2181	81%	514	19%	1258	47%	1437	53%	367	14%	300	10%	2995	124	14	138
Madhya Pradesh	Umaria	701424	891	837	94%	54	6%	758	85%	133	15%	474	53%	417	47%	51	6%	1	0%	892	127	0	127
Madhya Pradesh	Vidisha	1589276	2227	1957	88%	270	12%	1892	85%	335	15%	1069	48%	1158	52%	142	6%	330	13%	2557	140	21	161
Maharashtra	Ahmadnagar	4468917	4448	3715	84%	733	16%	3877	87%	571	13%	2264	51%	2184	49%	149	3%	71	2%	4519	100	2	101
Maharashtra	Ahmednagar MC	374069	298	210	70%	88	30%	246	83%	52	17%	100	34%	198	66%	18	6%	240	45%	538	80	64	144
Maharashtra	Akola	1483326	1102	927	84%	175	16%	874	79%	228	21%	638	58%	464	42%	33	3%	103	9%	1205	74	7	81
Maharashtra	Akola MC	455343	425	288	68%	137	32%	318	75%	107	25%	214	50%	211	50%	24	6%	551	56%	976	93	121	214
Maharashtra	Amravati	2388962	2184	1918	88%	266	12%	1717	79%	467	21%	1279	59%	905	41%	82	4%	374	15%	2558	91	16	107

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Maharashtra	Amravati MC	689498	630	482	77%	148	23%	475	75%	155	25%	328	52%	302	48%	26	4%	366	37%	996	91	53	144
Maharashtra	Andheri East	900285	1141	731	64%	411	36%	890	78%	251	22%	383	34%	758	66%	68	6%	1944	63%	3085	127	216	343
Maharashtra	Andheri West	775006	1044	654	63%	390	37%	778	75%	266	25%	390	37%	654	63%	95	9%	2267	68%	3311	135	293	427
Maharashtra	Aurangabad MC	1248653	1147	833	73%	314	27%	966	84%	181	16%	569	50%	578	50%	80	7%	558	33%	1705	92	45	137
Maharashtra	Aurangab-ad-MH	2691255	1780	1551	87%	229	13%	1467	82%	313	18%	1179	66%	601	34%	67	4%	285	14%	2065	66	11	77
Maharashtra	Bail Bazar Road	506147	965	704	73%	261	27%	741	77%	224	23%	286	30%	679	70%	78	8%	2900	75%	3865	191	573	764
Maharashtra	Bandra East	646579	1186	827	70%	359	30%	832	70%	354	30%	371	31%	815	69%	117	10%	496	29%	1682	183	77	260
Maharashtra	Bandra West	375194	466	319	68%	147	32%	303	65%	163	35%	198	42%	268	58%	24	5%	739	61%	1205	124	197	321
Maharashtra	Bhandara	1277947	1157	941	81%	216	19%	912	79%	245	21%	618	53%	539	47%	60	5%	241	17%	1398	91	19	109
Maharashtra	Bhiwandi Nizampur	758286	1872	1422	76%	450	24%	1261	67%	611	33%	499	27%	1373	73%	166	9%	3	0%	1875	247	0	247
Maharashtra	Bid	2756669	1567	1186	76%	381	24%	1215	78%	352	22%	594	38%	973	62%	77	5%	589	27%	2156	57	21	78
Maharashtra	Borivali	570612	530	420	79%	110	21%	365	69%	165	31%	204	38%	326	62%	26	5%	595	53%	1125	93	104	197
Maharashtra	Buldana	2758884	1872	1543	82%	329	18%	1456	78%	416	22%	1103	59%	769	41%	56	3%	1356	42%	3228	68	49	117
Maharashtra	Byculla	490574	679	438	65%	241	35%	448	66%	231	34%	288	42%	391	58%	39	6%	1699	71%	2378	138	346	485
Maharashtra	Centenary	311242	1240	822	66%	418	34%	854	69%	386	31%	430	35%	810	65%	137	11%	822	40%	2062	398	264	663
Maharashtra	Chandrapur	2339112	2138	1743	82%	395	18%	1747	82%	391	18%	1269	59%	869	41%	67	3%	548	20%	2686	91	23	115
Maharashtra	Chembur	455610	855	572	67%	283	33%	605	71%	250	29%	386	45%	469	55%	76	9%	2597	75%	3452	188	570	758
Maharashtra	Colaba	442432	716	562	78%	154	22%	467	65%	249	35%	246	34%	470	66%	25	3%	875	55%	1591	162	198	360
Maharashtra	Dadar	651215	1281	779	61%	502	39%	871	68%	410	32%	377	29%	904	71%	136	11%	7789	86%	9070	197	1196	1393

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Maharashtra	Dahisar	404627	514	385	75%	129	25%	366	71%	148	29%	215	42%	299	58%	29	6%	1184	70%	1698	127	293	420
Maharashtra	Dhule	1783107	1583	1483	94%	100	6%	1421	90%	162	10%	1240	78%	343	22%	58	4%	231	13%	1814	89	13	102
Maharashtra	Dhule MC	400920	516	455	88%	61	12%	436	84%	80	16%	315	61%	201	39%	28	5%	404	44%	920	129	101	229
Maharashtra	Gadchiroli	1142548	1265	1107	88%	158	12%	999	79%	266	21%	766	61%	499	39%	28	2%	170	12%	1435	111	15	126
Maharashtra	Ghatkopar	686574	877	610	70%	267	30%	646	74%	231	26%	309	35%	568	65%	74	8%	4490	84%	5367	128	654	782
Maharashtra	Gondiya	1409622	1278	1117	87%	161	13%	1065	83%	213	17%	772	60%	506	40%	31	2%	706	36%	1984	91	50	141
Maharashtra	Goregaon	487798	805	613	76%	192	24%	580	72%	225	28%	284	35%	521	65%	54	7%	877	52%	1682	165	180	345
Maharashtra	Govandi	439890	1391	828	60%	563	40%	1042	75%	349	25%	364	26%	1027	74%	215	15%	3251	70%	4642	316	739	1055
Maharashtra	Grant Road	422707	351	253	72%	98	28%	266	76%	85	24%	140	40%	211	60%	9	3%	1291	79%	1642	83	305	388
Maharashtra	Hingoli	1256801	982	805	82%	177	18%	785	80%	197	20%	591	60%	391	40%	22	2%	121	11%	1103	78	10	88
Maharashtra	Jalgaon	4012446	3498	3046	87%	452	13%	2922	84%	576	16%	1707	49%	1791	51%	116	3%	1095	24%	4593	87	27	114
Maharashtra	Jalgaon MC	490865	411	322	78%	89	22%	332	81%	79	19%	223	54%	188	46%	23	6%	348	46%	759	84	71	155
Maharashtra	Jalna	2087769	1351	1132	84%	219	16%	1014	75%	337	25%	744	55%	607	45%	56	4%	439	25%	1790	65	21	86
Maharashtra	Kalyan Dombivli MC	1328659	1552	1180	76%	372	24%	1035	67%	517	33%	594	38%	958	62%	61	4%	124	7%	1676	117	9	126
Maharashtra	Kandivali	639467	989	636	64%	353	36%	889	90%	100	10%	376	38%	613	62%	70	7%	957	49%	1946	155	150	304
Maharashtra	Kolhapur	3544208	2474	2143	87%	331	13%	2050	83%	424	17%	1520	61%	954	39%	70	3%	346	12%	2820	70	10	80
Maharashtra	Kolhapur MC	585543	447	303	68%	144	32%	353	79%	94	21%	224	50%	223	50%	26	6%	1206	73%	1653	76	206	282
Maharashtra	Kurla	346025	537	347	65%	190	35%	402	75%	135	25%	175	33%	362	67%	40	7%	1764	77%	2301	155	510	665
Maharashtra	Latur	2617641	1970	1519	77%	451	23%	1566	79%	404	21%	1047	53%	923	47%	100	5%	931	32%	2901	75	36	111

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Maharashtra	Malad	881623	1801	1180	66%	621	34%	1354	75%	447	25%	693	38%	1108	62%	141	8%	1958	52%	3759	204	222	426
Maharashtra	Malegoan Corporation	502099	776	519	67%	257	33%	678	87%	98	13%	299	39%	477	61%	63	8%	447	37%	1223	155	89	244
Maharashtra	Mira Bhayander	868433	997	726	73%	271	27%	706	71%	291	29%	549	55%	448	45%	34	3%	246	20%	1243	115	28	143
Maharashtra	Mulund	36409	409	296	72%	113	28%	302	74%	108	26%	129	32%	281	69%	23	6%	961	70%	1370	1123	2639	3763
Maharashtra	Nagpur	2396131	1993	1640	82%	353	18%	1644	82%	349	18%	1279	64%	714	36%	63	3%	488	20%	2481	83	20	104
Maharashtra	Nagpur MC	2564210	2367	1724	73%	643	27%	1835	78%	532	22%	1309	55%	1058	45%	115	5%	1612	41%	3979	92	63	155
Maharashtra	Nanded	2991235	2444	2037	83%	407	17%	2052	84%	392	16%	994	41%	1450	59%	72	3%	324	12%	2768	82	11	93
Maharashtra	Nanded Waghela MC	586908	246	157	64%	89	36%	203	83%	43	17%	93	38%	153	62%	17	7%	646	72%	892	42	110	152
Maharashtra	Nandurbar	1754846	2015	1750	87%	265	13%	1603	80%	412	20%	1222	61%	793	39%	110	5%	948	32%	2963	115	54	169
Maharashtra	Nashik	4425098	3299	2857	87%	442	13%	2935	89%	364	11%	2059	62%	1240	38%	154	5%	173	5%	3472	75	4	78
Maharashtra	Nashik Corp	1585133	1558	1348	87%	210	13%	1372	88%	186	12%	708	45%	850	55%	135	9%	706	31%	2264	98	45	143
Maharashtra	Navi Mumbai	1193377	2406	1749	73%	657	27%	1791	74%	615	26%	1005	42%	1401	58%	257	11%	698	22%	3104	202	58	260
Maharashtra	Osmanabad	1769913	1019	834	82%	185	18%	845	83%	174	17%	603	59%	416	41%	51	5%	182	15%	1201	58	10	68
Maharashtra	Parbhani	1957181	1434	1162	81%	272	19%	1062	74%	372	26%	743	52%	691	48%	58	4%	426	23%	1860	73	22	95
Maharashtra	Parel	461950	1767	1405	80%	362	20%	870	49%	897	51%	590	33%	1177	67%	54	3%	699	28%	2466	383	151	534
Maharashtra	Pimpri Chinchwad	1843519	1656	1154	70%	502	30%	1335	81%	321	19%	739	45%	917	55%	101	6%	683	29%	2339	90	37	127
Maharashtra	Prabhadevi	414038	637	414	65%	223	35%	434	68%	203	32%	241	38%	396	62%	37	6%	263	29%	900	154	64	217
Maharashtra	Pune	3321090	3515	2648	75%	867	25%	2737	78%	778	22%	1984	56%	1531	44%	138	4%	1418	29%	4933	106	43	149
Maharashtra	Pune Rural	4884652	5717	4704	82%	1013	18%	4920	86%	797	14%	3081	54%	2636	46%	267	5%	2037	26%	7754	117	42	159

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Maharashtra	Raigarh-MH	2809365	3569	2876	81%	693	19%	2706	76%	863	24%	1874	53%	1695	47%	142	4%	458	11%	4027	127	16	143
Maharashtra	Ratnagiri	1719130	1899	1743	92%	156	8%	1514	80%	385	20%	1058	56%	841	44%	38	2%	247	12%	2146	110	14	125
Maharashtra	Sangli	2470888	1803	1459	81%	344	19%	1467	81%	336	19%	899	50%	904	50%	81	4%	919	34%	2722	73	37	110
Maharashtra	Sangli MC	535882	344	267	78%	77	22%	280	81%	64	19%	149	43%	195	57%	10	3%	319	48%	663	64	60	124
Maharashtra	Satara	3202220	2282	1767	77%	515	23%	1913	84%	369	16%	1231	54%	1051	46%	86	4%	2015	47%	4297	71	63	134
Maharashtra	Sindhudurg	904904	881	757	86%	124	14%	734	83%	147	17%	445	51%	436	49%	33	4%	90	9%	971	97	10	107
Maharashtra	Sion	588205	1228	700	57%	528	43%	928	76%	300	24%	331	27%	897	73%	112	9%	1566	56%	2794	209	266	475
Maharashtra	Solapur	3586504	1985	1675	84%	310	16%	1622	82%	363	18%	1101	55%	884	45%	77	4%	1224	38%	3209	55	34	89
Maharashtra	Solapur MC	1013904	869	655	75%	214	25%	655	75%	214	25%	437	50%	432	50%	46	5%	145	14%	1014	86	14	100
Maharashtra	Thane	3936859	5254	4340	83%	914	17%	4095	78%	1159	22%	2625	50%	2629	50%	251	5%	177	3%	5431	133	4	138
Maharashtra	Thane MC	1938941	3443	2283	66%	1160	34%	2639	77%	804	23%	1236	36%	2207	64%	335	10%	302	8%	3745	178	16	193
Maharashtra	Ulhasnagar MC	540402	1004	800	80%	204	20%	717	71%	287	29%	437	44%	567	56%	53	5%	154	13%	1158	186	28	214
Maharashtra	Vasai Virar	1295985	2199	1479	67%	720	33%	1632	74%	567	26%	718	33%	1481	67%	135	6%		0%	2199	170	0	170
Maharashtra	Vikhroli	752445	867	595	69%	272	31%	649	75%	218	25%	323	37%	544	63%	75	9%	1587	65%	2454	115	211	326
Maharashtra	Wardha	1381720	1260	1035	82%	225	18%	995	79%	265	21%	714	57%	546	43%	33	3%	324	20%	1584	91	23	115
Maharashtra	Washim	1275713	950	809	85%	141	15%	748	79%	202	21%	518	55%	432	45%	33	3%	296	24%	1246	74	23	98
Maharashtra	Yavatmal	2958674	2764	2278	82%	486	18%	2242	81%	522	19%	1214	44%	1550	56%	128	5%	286	9%	3050	93	10	103
Manipur	Bishnupur	260059	160	124	78%	36	23%	135	84%	25	16%	76	48%	84	53%	5	3%		0%	160	62	0	62
Manipur	Chandel	155830	77	64	83%	13	17%	64	83%	13	17%	36	47%	41	53%	6	8%		0%	77	49	0	49
Manipur	Churachandpur	293503	173	137	79%	36	21%	139	80%	34	20%	94	54%	79	46%	15	9%	179	51%	352	59	61	120

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Manipur	Imphal East	489754	368	271	74%	97	26%	322	88%	46	13%	151	41%	217	59%	16	4%	223	38%	591	75	46	121
Manipur	Imphal West	556858	348	280	80%	68	20%	277	80%	71	20%	166	48%	182	52%	10	3%	213	38%	561	62	38	101
Manipur	Senapati	384060	214	148	69%	66	31%	156	73%	58	27%	111	52%	103	48%	4	2%		0%	214	56	0	56
Manipur	Tamenglong	151627	58	51	88%	7	12%	49	84%	9	16%	39	67%	19	33%	1	2%		0%	58	38	0	38
Manipur	Thoubal	454976	261	175	67%	86	33%	231	89%	30	11%	121	46%	140	54%	6	2%		0%	261	57	0	57
Manipur	Ukhrul	198120	109	86	79%	23	21%	80	73%	29	27%	68	62%	41	38%	6	6%	10	8%	119	55	5	60
Meghalaya	East Garo Hills	358972	127	111	87%	16	13%	113	89%	14	11%	71	56%	56	44%	1	1%		0%	127	35	0	35
Meghalaya	East Khasi Hills	931351	1598	836	52%	762	48%	1326	83%	272	17%	383	24%	1215	76%	108	7%	234	13%	1832	172	25	197
Meghalaya	Jaintia Hills	444001	689	453	66%	236	34%	535	78%	154	22%	316	46%	373	54%	61	9%	348	34%	1037	155	78	234
Meghalaya	Ri Bhoi	292021	273	180	66%	93	34%	227	83%	46	17%	154	56%	119	44%	22	8%		0%	273	93	0	93
Meghalaya	South Garo Hills	161137	91	86	95%	5	5%	79	87%	12	13%	67	74%	24	26%	3	3%		0%	91	56	0	56
Meghalaya	West Garo Hills	726631	644	551	86%	93	14%	576	89%	68	11%	447	69%	197	31%	21	3%	18	3%	662	89	2	91
Meghalaya	West Khasi Hills	435806	512	296	58%	216	42%	434	85%	78	15%	220	43%	292	57%	44	9%	52	9%	564	117	12	129
Mizoram	Aizawl	439044	1275	714	56%	561	44%	1089	85%	186	15%	332	26%	943	74%	194	15%	43	3%	1318	290	10	300
Mizoram	Champhai	136227	145	99	68%	46	32%	137	94%	8	6%	71	49%	74	51%	29	20%		0%	145	106	0	106
Mizoram	Kolasib	90246	147	96	65%	51	35%	126	86%	21	14%	78	53%	69	47%	13	9%		0%	147	163	0	163
Mizoram	Lawngtlai	127614	104	73	70%	31	30%	89	86%	15	14%	48	46%	56	54%	5	5%		0%	104	81	0	81
Mizoram	Lunglei	167438	222	128	58%	94	42%	182	82%	40	18%	79	36%	143	64%	22	10%		0%	222	133	0	133
Mizoram	Mamit	93183	81	49	60%	32	40%	71	88%	10	12%	35	43%	46	57%	7	9%		0%	81	87	0	87
Mizoram	Saiha	61247	119	76	64%	43	36%	96	81%	23	19%	34	29%	85	71%	14	12%		0%	119	194	0	194
Mizoram	Serchhip	70493	69	39	57%	30	43%	60	87%	9	13%	22	32%	47	68%	11	16%		0%	69	98	0	98
Nagaland	MON	256963	508	373	73%	135	27%	425	84%	83	16%	197	39%	311	61%	91	18%		0%	508	198	0	198
Nagaland	DIMAPUR	389301	618	490	79%	128	21%	483	78%	135	22%	312	50%	306	50%	31	5%	393	39%	1011	159	101	260
Nagaland	KIPHIRE	75891	108	89	82%	19	18%	85	79%	23	21%	59	55%	49	45%	12	11%		0%	108	142	0	142
Nagaland	KOHIMA	276842	409	267	65%	142	35%	320	78%	89	22%	199	49%	210	51%	10	2%	154	27%	563	148	56	203
Nagaland	LONGLENG	51863	80	66	83%	14	18%	63	79%	17	21%	50	63%	30	38%	8	10%		0%	80	154	0	154
Nagaland	MOKOK-CHUNG	198020	144	105	73%	39	27%	112	78%	32	22%	64	44%	80	56%	9	6%		0%	144	73	0	73
Nagaland	PEREN	97337	93	88	95%	5	5%	76	82%	17	18%	45	48%	48	52%	3	3%		0%	93	96	0	96

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Nagaland	PHEK	167393	97	62	64%	35	36%	80	82%	17	18%	55	57%	42	43%	8	8%		0%	97	58	0	58
Nagaland	TUENSANG	201741	0				#DIV/0!		#DIV/0!		#DIV/0!				#DIV/0!				#DIV/0!	0	0	0	0
Nagaland	WOKHA	170412	124	117	94%	7	6%	105	85%	19	15%	87	70%	37	30%	9	7%		0%	124	73	0	73
Nagaland	ZUNHEBOTO	144553	93	79	85%	14	15%	88	95%	5	5%	44	47%	49	53%	4	4%		0%	93	64	0	64
Odisha	ANUGUL	1345321	1216	1047	86%	169	14%	1011	83%	205	17%	647	53%	569	47%	45	4%	9	1%	1225	90	1	91
Odisha	BALANGIR	1744009	1430	1115	78%	315	22%	1299	91%	131	9%	640	45%	790	55%	69	5%		0%	1430	82	0	82
Odisha	BALESHWAR	2451573	1542	1249	81%	293	19%	1281	83%	261	17%	975	63%	567	37%	53	3%	223	13%	1765	63	9	72
Odisha	BARGARH	1564441	1505	1057	70%	448	30%	1331	88%	174	12%	709	47%	796	53%	62	4%	31	2%	1536	96	2	98
Odisha	BAUDH	465383	375	298	79%	77	21%	314	84%	61	16%	220	59%	155	41%	10	3%		0%	375	81	0	81
Odisha	BHADRAK	1593733	857	602	70%	255	30%	733	86%	124	14%	468	55%	389	45%	34	4%	138	14%	995	54	9	62
Odisha	Bhubaneshwar MC	886233	934	583	62%	351	38%	791	85%	143	15%	436	47%	498	53%	113	12%	185	17%	1119	105	21	126
Odisha	CUTTACK	2770303	1718	1173	68%	545	32%	1470	86%	248	14%	737	43%	981	57%	80	5%	11	1%	1729	62	0	62
Odisha	DEBAGARH	330235	318	293	92%	25	8%	293	92%	25	8%	191	60%	127	40%	20	6%		0%	318	96	0	96
Odisha	DHENKANAL	1262007	1234	965	78%	269	22%	1039	84%	195	16%	803	65%	431	35%	62	5%	1	0%	1235	98	0	98
Odisha	GAJAPATI	609217	1226	1006	82%	220	18%	1079	88%	147	12%	658	54%	568	46%	140	11%	72	6%	1298	201	12	213
Odisha	GANJAM	3723930	4339	3294	76%	1045	24%	3778	87%	561	13%	1834	42%	2505	58%	217	5%	396	8%	4735	117	11	127
Odisha	JAGATSINGHAPUR	1202401	509	361	71%	148	29%	455	89%	54	11%	263	52%	246	48%	20	4%	22	4%	531	42	2	44
Odisha	JAJAPUR	1931997	1429	1107	77%	322	23%	1245	87%	184	13%	711	50%	718	50%	47	3%	121	8%	1550	74	6	80
Odisha	JHARSUGUDA	613046	712	575	81%	137	19%	584	82%	128	18%	316	44%	396	56%	22	3%		0%	712	116	0	116
Odisha	KALAHANDI	1664117	1337	1170	88%	167	12%	1108	83%	229	17%	834	62%	503	38%	41	3%	76	5%	1413	80	5	85
Odisha	KANDHAMAL	774324	889	727	82%	162	18%	819	92%	70	8%	560	63%	329	37%	42	5%		0%	889	115	0	115
Odisha	KENDRAPARA	1523245	761	610	80%	151	20%	642	84%	119	16%	475	62%	286	38%	39	5%		0%	761	50	0	50
Odisha	KENDUJHAR	1907138	2637	2286	87%	351	13%	2190	83%	447	17%	1464	56%	1173	44%	101	4%		0%	2637	138	0	138
Odisha	KHORDHA	1490147	992	824	83%	168	17%	797	80%	195	20%	556	56%	436	44%	34	3%	38	4%	1030	67	3	69
Odisha	KORAPUT	1456644	1845	1544	84%	301	16%	1647	89%	198	11%	1069	58%	776	42%	131	7%		0%	1845	127	0	127
Odisha	MALKANGIRI	648197	1066	1058	99%	8	1%	966	91%	100	9%	746	70%	320	30%	50	5%		0%	1066	164	0	164
Odisha	MAYURBHANJ	2659422	3412	3053	89%	359	11%	3082	90%	330	10%	1834	54%	1578	46%	82	2%	49	1%	3461	128	2	130

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Odisha	NABARANGAPUR	1289315	1123	1019	91%	104	9%	1016	90%	107	10%	677	60%	446	40%	66	6%	113	9%	1236	87	9	96
Odisha	NAYAGARH	1017917	947	806	85%	141	15%	712	75%	235	25%	621	66%	326	34%	34	4%		0%	947	93	0	93
Odisha	NUAPADA	641599	773	693	90%	80	10%	695	90%	78	10%	431	56%	342	44%	27	3%		0%	773	120	0	120
Odisha	PURI	1796278	945	750	79%	195	21%	762	81%	183	19%	491	52%	454	48%	65	7%	160	14%	1105	53	9	62
Odisha	RAYAGADA	1017646	1558	1376	88%	182	12%	1397	90%	161	10%	986	63%	572	37%	102	7%		0%	1558	153	0	153
Odisha	SAMBALPUR	1104870	816	622	76%	194	24%	702	86%	114	14%	402	49%	414	51%	27	3%	251	24%	1067	74	23	97
Odisha	Sonapur	689857	488	377	77%	111	23%	429	88%	59	12%	257	53%	231	47%	17	3%	2	0%	490	71	0	71
Odisha	SUNDARGARH	2201112	2874	2453	85%	421	15%	2398	83%	476	17%	1464	51%	1410	49%	70	2%	146	5%	3020	131	7	137
Puducherry	Puducherry	1384136	1415	1048	74%	367	26%	1199	85%	216	15%	836	59%	579	41%	64	5%	6	0%	1421	102	0	103
Punjab	Amritsar	2638629	3772	2542	67%	1230	33%	3211	85%	561	15%	1593	42%	2179	58%	251	7%	589	14%	4361	143	22	165
Punjab	Barnala	631661	719	532	74%	187	26%	596	83%	123	17%	436	61%	283	39%	62	9%	28	4%	747	114	4	118
Punjab	Bathinda	1471234	1790	1449	81%	341	19%	1441	81%	349	19%	942	53%	848	47%	79	4%	307	15%	2097	122	21	143
Punjab	Faridkot	654663	1203	969	81%	234	19%	1065	89%	138	11%	548	46%	655	54%	67	6%	32	3%	1235	184	5	189
Punjab	Fatehgarh Sahib	635390	631	441	70%	190	30%	510	81%	121	19%	364	58%	267	42%	30	5%		0%	631	99	0	99
Punjab	Fazilka	1088796	1395	1215	87%	180	13%	1091	78%	304	22%	814	58%	581	42%	45	3%		0%	1395	128	0	128
Punjab	Firozpur	1058249	1299	1080	83%	219	17%	1018	78%	281	22%	834	64%	465	36%	70	5%		0%	1299	123	0	123
Punjab	Gurdaspur	1759139	1910	1597	84%	313	16%	1557	82%	353	18%	1267	66%	643	34%	74	4%	159	8%	2069	109	9	118
Punjab	Hoshiarpur	1676671	1771	1515	86%	256	14%	1401	79%	370	21%	1027	58%	744	42%	57	3%	514	22%	2285	106	31	136
Punjab	Jalandhar	2311156	3393	2491	73%	902	27%	2793	82%	600	18%	1593	47%	1800	53%	218	6%	374	10%	3767	147	16	163
Punjab	Kapurthala	866165	788	626	79%	162	21%	648	82%	140	18%	447	57%	341	43%	44	6%		0%	788	91	0	91
Punjab	Ludhiana	3694753	5729	4083	71%	1646	29%	4646	81%	1083	19%	2613	46%	3116	54%	425	7%	173	3%	5902	155	5	160
Punjab	Mansa-PN	814407	935	721	77%	214	23%	719	77%	216	23%	480	51%	455	49%	29	3%	80	8%	1015	115	10	125
Punjab	Moga	1051143	1147	959	84%	188	16%	920	80%	227	20%	635	55%	512	45%	57	5%	7	1%	1154	109	1	110
Punjab	Mohali	1044637	1904	1323	69%	581	31%	1542	81%	362	19%	920	48%	984	52%	119	6%	274	13%	2178	182	26	208
Punjab	Muktsar	956243	1232	1005	82%	227	18%	1015	82%	217	18%	645	52%	587	48%	62	5%		0%	1232	129	0	129
Punjab	Nawanshahr	650801	701	530	76%	171	24%	572	82%	129	18%	423	60%	278	40%	37	5%	53	7%	754	108	8	116
Punjab	Pathankot	676245	488	391	80%	97	20%	376	77%	112	23%	270	55%	218	45%	20	4%		0%	488	72	0	72
Punjab	Patiala	2004516	2144	1560	73%	584	27%	1812	85%	332	15%	1105	52%	1039	48%	119	6%	153	7%	2297	107	8	115
Punjab	Rupnagar	723879	988	825	84%	163	16%	771	78%	217	22%	600	61%	388	39%	26	3%		0%	988	136	0	136

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Punjab	Sangrur	1752533	2163	1661	77%	502	23%	1752	81%	411	19%	869	40%	1294	60%	94	4%		0%	2163	123	0	123
Punjab	Tarn Taran	1186503	991	828	84%	163	16%	768	77%	223	23%	610	62%	381	38%	46	5%		0%	991	84	0	84
Rajasthan	Ajmer	2820905	3958	2925	74%	1033	26%	2946	74%	1012	26%	1614	41%	2344	59%	247	6%	180	4%	4138	140	6	147
Rajasthan	Alwar	4007238	5310	4183	79%	1127	21%	4813	91%	497	9%	2364	45%	2946	55%	212	4%	2192	29%	7502	133	55	187
Rajasthan	Banswara	2121133	3732	3517	94%	215	6%	3232	87%	500	13%	2555	68%	1177	32%	149	4%	165	4%	3897	176	8	184
Rajasthan	Baran	1335660	2073	1812	87%	261	13%	1554	75%	519	25%	1277	62%	796	38%	78	4%	185	8%	2258	155	14	169
Rajasthan	Barmer	2842229	1973	1746	88%	227	12%	1653	84%	320	16%	1076	55%	897	45%	54	3%	51	3%	2024	69	2	71
Rajasthan	Bharatpur	2781846	3156	2808	89%	348	11%	2604	83%	552	17%	1309	41%	1847	59%	149	5%	493	14%	3649	113	18	131
Rajasthan	Bhilwara	2630524	4273	3562	83%	711	17%	3100	73%	1173	27%	2590	61%	1683	39%	133	3%	1992	32%	6265	162	76	238
Rajasthan	Bikaner	2583911	2184	1597	73%	587	27%	1669	76%	515	24%	1063	49%	1121	51%	141	6%	503	19%	2687	85	19	104
Rajasthan	Bundi	1215404	1622	1391	86%	231	14%	1288	79%	334	21%	702	43%	920	57%	52	3%	697	30%	2319	133	57	191
Rajasthan	Chittaurgarh	2269476	2578	2192	85%	386	15%	1864	72%	714	28%	1705	66%	873	34%	62	2%	213	8%	2791	114	9	123
Rajasthan	Churu	2227523	2084	1846	89%	238	11%	1530	73%	554	27%	1338	64%	746	36%	100	5%	108	5%	2192	94	5	98
Rajasthan	Dausa	1786698	1478	1258	85%	220	15%	1182	80%	296	20%	590	40%	888	60%	62	4%	48	3%	1526	83	3	85
Rajasthan	Dhaulpur	1317514	2060	1918	93%	142	7%	1470	71%	590	29%	1281	62%	779	38%	78	4%	611	23%	2671	156	46	203
Rajasthan	Dungarpur	1515708	3029	2831	93%	198	7%	2593	86%	436	14%	1786	59%	1243	41%	94	3%	53	2%	3082	200	3	203
Rajasthan	Ganganagar	2149329	2488	2119	85%	369	15%	1955	79%	533	21%	1454	58%	1034	42%	78	3%	255	9%	2743	116	12	128
Rajasthan	Hanumangarh	1942125	2914	2573	88%	341	12%	2280	78%	634	22%	1708	59%	1206	41%	149	5%	46	2%	2960	150	2	152
Rajasthan	Jaipur	3918430	4349	3228	74%	1121	26%	3384	78%	965	22%	1999	46%	2350	54%	305	7%	1467	25%	5816	111	37	148
Rajasthan	Jaipur DTC II	3353935	4318	3403	79%	915	21%	3325	77%	993	23%	2119	49%	2199	51%	269	6%	520	11%	4838	129	16	144
Rajasthan	Jaisalmer	733360	445	373	84%	72	16%	328	74%	117	26%	291	65%	154	35%	16	4%	21	5%	466	61	3	64
Rajasthan	Jalore	1997236	2634	2487	94%	147	6%	1973	75%	661	25%	1243	47%	1391	53%	75	3%	973	27%	3607	132	49	181
Rajasthan	Jhalawar	1540176	1843	1645	89%	198	11%	1357	74%	486	26%	994	54%	849	46%	47	3%	60	3%	1903	120	4	124
Rajasthan	Jhunjhunun	2335000	1865	1617	87%	248	13%	1360	73%	505	27%	965	52%	900	48%	67	4%	345	16%	2210	80	15	95
Rajasthan	Jodhpur	4022169	3518	2795	79%	723	21%	2570	73%	948	27%	1346	38%	2172	62%	137	4%	510	13%	4028	87	13	100
Rajasthan	Karauli	1591610	2017	1801	89%	216	11%	1462	72%	555	28%	925	46%	1092	54%	58	3%	66	3%	2083	127	4	131
Rajasthan	Kota	2128563	2708	2077	77%	631	23%	2064	76%	644	24%	1261	47%	1447	53%	147	5%	780	22%	3488	127	37	164
Rajasthan	Nagaur	3611354	2578	2168	84%	410	16%	1878	73%	700	27%	1102	43%	1476	57%	109	4%	738	22%	3316	71	20	92
Rajasthan	Pali	2224643	1690	1415	84%	275	16%	1323	78%	367	22%	784	46%	906	54%	53	3%	33	2%	1723	76	1	77
Rajasthan	Pratapgarh	0	1693	1596	94%	97	6%	1418	84%	275	16%	1161	69%	532	31%	38	2%		0%	1693			#DIV/0!

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Rajasthan	Rajsamand	1264030	1558	1314	84%	244	16%	1219	78%	339	22%	981	63%	577	37%	41	3%	717	32%	2275	123	57	180
Rajasthan	Sawai Madhopur	1460278	2129	1761	83%	368	17%	1617	76%	512	24%	1157	54%	972	46%	72	3%	72	3%	2201	146	5	151
Rajasthan	Sikar	2922204	2339	2009	86%	330	14%	1691	72%	648	28%	1293	55%	1046	45%	77	3%	1471	39%	3810	80	50	130
Rajasthan	Sirohi	1131876	1326	1184	89%	142	11%	963	73%	363	27%	842	63%	484	37%	52	4%	441	25%	1767	117	39	156
Rajasthan	Tonk	1551508	2371	2024	85%	347	15%	1809	76%	562	24%	1231	52%	1140	48%	129	5%	195	8%	2566	153	13	165
Rajasthan	Udaipur	3552243	5739	5006	87%	733	13%	4850	85%	889	15%	3136	55%	2603	45%	201	4%	523	8%	6262	162	15	176
Sikkim	East District	199950	572	374	65%	198	35%	460	80%	112	20%	204	36%	368	64%	31	5%	65	10%	637	286	33	319
Sikkim	North District	45501	105	69	66%	36	34%	85	81%	20	19%	45	43%	60	57%	8	8%		0%	105	231	0	231
Sikkim	Singtam	95272	232	167	72%	65	28%	186	80%	46	20%	111	48%	121	52%	13	6%		0%	232	244	0	244
Sikkim	South District	154009	337	241	72%	96	28%	263	78%	74	22%	144	43%	193	57%	34	10%	11	3%	348	219	7	226
Sikkim	West District	143049	217	137	63%	80	37%	175	81%	42	19%	89	41%	128	59%	14	6%		0%	217	152	0	152
Tamil Nadu	Centeral Chennai	3420180	3707	2861	77%	846	23%	2960	80%	747	20%	2023	55%	1684	45%	138	4%	311	8%	4018	108	9	117
Tamil Nadu	Coimbatore	3670324	3406	2773	81%	633	19%	2736	80%	670	20%	2034	60%	1372	40%	67	2%	1936	36%	5342	93	53	146
Tamil Nadu	Cuddalore	2786143	2865	2321	81%	544	19%	2356	82%	509	18%	1470	51%	1395	49%	148	5%	87	3%	2952	103	3	106
Tamil Nadu	Dharmapuri	1609953	1331	1114	84%	217	16%	1016	76%	315	24%	777	58%	554	42%	47	4%	160	11%	1491	83	10	93
Tamil Nadu	Dindigul	2315323	2916	2509	86%	407	14%	2527	87%	389	13%	1768	61%	1148	39%	151	5%	226	7%	3142	126	10	136
Tamil Nadu	Erode	2420562	2644	2356	89%	288	11%	2115	80%	529	20%	1571	59%	1073	41%	26	1%	226	8%	2870	109	9	119
Tamil Nadu	Kancheepuram	3635161	3974	3060	77%	914	23%	3209	81%	765	19%	2297	58%	1677	42%	114	3%	351	8%	4325	109	10	119
Tamil Nadu	Kanniyakumari	1995889	1423	1234	87%	189	13%	1183	83%	240	17%	937	66%	486	34%	39	3%	358	20%	1781	71	18	89
Tamil Nadu	Karur	1153274	1131	960	85%	171	15%	913	81%	218	19%	651	58%	480	42%	19	2%	133	11%	1264	98	12	110
Tamil Nadu	Krishnagiri	2008734	1610	1292	80%	318	20%	1282	80%	328	20%	841	52%	769	48%	57	4%	67	4%	1677	80	3	83
Tamil Nadu	Madurai	3257654	3734	3196	86%	538	14%	2885	77%	849	23%	2446	66%	1288	34%	124	3%	1935	34%	5669	115	59	174
Tamil Nadu	Nagapattinam	1729041	1620	1440	89%	180	11%	1352	83%	268	17%	1085	67%	535	33%	101	6%	140	8%	1760	94	8	102
Tamil Nadu	Namakkal	1843780	1782	1521	85%	261	15%	1431	80%	351	20%	1191	67%	591	33%	49	3%	97	5%	1879	97	5	102
Tamil Nadu	North Chennai	1809383	2677	2015	75%	662	25%	2148	80%	529	20%	1361	51%	1316	49%	124	5%	35	1%	2712	148	2	150
Tamil Nadu	Perambalur	1391988	1512	1140	75%	372	25%	1247	82%	265	18%	890	59%	622	41%	64	4%		0%	1512	109	0	109

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Tamil Nadu	Pudukkottai	1734028	1608	1424	89%	184	11%	1421	88%	187	12%	997	62%	611	38%	64	4%	11	1%	1619	93	1	93
Tamil Nadu	Ramanathapuram	1432836	1489	1296	87%	193	13%	1247	84%	242	16%	1037	70%	452	30%	91	6%	302	17%	1791	104	21	125
Tamil Nadu	Salem	3727892	3388	2804	83%	584	17%	2771	82%	617	18%	2098	62%	1290	38%	157	5%	637	16%	4025	91	17	108
Tamil Nadu	Sivaganga	1436788	1381	1198	87%	183	13%	1183	86%	198	14%	807	58%	574	42%	41	3%	161	10%	1542	96	11	107
Tamil Nadu	South Chennai	1966952	1516	1170	77%	346	23%	1234	81%	282	19%	825	54%	691	46%	43	3%	279	16%	1795	77	14	91
Tamil Nadu	Thanjavur	2573933	2725	2281	84%	444	16%	2126	78%	599	22%	1673	61%	1052	39%	96	4%	13	0%	2738	106	1	106
Tamil Nadu	The Nilgiris	787431	537	418	78%	119	22%	475	88%	62	12%	309	58%	228	42%	45	8%	3	1%	540	68	0	69
Tamil Nadu	Theni	1314991	1659	1357	82%	302	18%	1400	84%	259	16%	1026	62%	633	38%	43	3%	126	7%	1785	126	10	136
Tamil Nadu	Thiruvallur	2449103	3472	2820	81%	652	19%	2841	82%	631	18%	2177	63%	1295	37%	92	3%	16	0%	3488	142	1	142
Tamil Nadu	Thiruvarur	1358421	1837	1686	92%	151	8%	1461	80%	376	20%	1310	71%	527	29%	44	2%	112	6%	1949	135	8	143
Tamil Nadu	Thoothukudi	1862202	1812	1572	87%	240	13%	1531	84%	281	16%	1214	67%	598	33%	95	5%	702	28%	2514	97	38	135
Tamil Nadu	Tiruchirappalli	2907168	3190	2545	80%	645	20%	2818	88%	372	12%	1814	57%	1376	43%	109	3%	839	21%	4029	110	29	139
Tamil Nadu	Tirunelveli	3291764	3022	2601	86%	421	14%	2532	84%	490	16%	1957	65%	1065	35%	142	5%	486	14%	3508	92	15	107
Tamil Nadu	Tiruppur	2647250	2650	2276	86%	374	14%	2089	79%	561	21%	1536	58%	1114	42%	49	2%	242	8%	2892	100	9	109
Tamil Nadu	Tiruvannamalai	2644831	2663	2072	78%	591	22%	2191	82%	472	18%	1655	62%	1008	38%	94	4%	50	2%	2713	101	2	103
Tamil Nadu	Vellore	4151792	5221	3760	72%	1461	28%	4552	87%	669	13%	2508	48%	2713	52%	280	5%	3193	38%	8414	126	77	203
Tamil Nadu	Viluppuram	3709977	4698	3746	80%	952	20%	3874	82%	824	18%	2277	48%	2421	52%	202	4%	203	4%	4901	127	5	132
Tamil Nadu	Virudhunagar	2081733	2907	2609	90%	298	10%	2479	85%	428	15%	1886	65%	1021	35%	221	8%	535	16%	3442	140	26	165
Telangana	Adilabad	2834993	3073	2739	89%	334	11%	2486	81%	587	19%	1766	57%	1307	43%	104	3%	29	1%	3102	108	1	109
Telangana	Bhadrachalam	869284.9232	1165	1068	92%	97	8%	876	75%	289	25%	873	75%	292	25%	23	2%	212	15%	1377	134	24	158
Telangana	Hyderabad	4152697	6328	4334	68%	1994	32%	5207	82%	1121	18%	2885	46%	3443	54%	605	10%	843	12%	7171	152	20	173
Telangana	Karimnagar	3947145	3756	3442	92%	314	8%	2848	76%	908	24%	2355	63%	1401	37%	64	2%	688	15%	4444	95	17	113
Telangana	Khammam	2028332.178	2285	2106	92%	179	8%	1700	74%	585	26%	1547	68%	738	32%	39	2%	1208	35%	3493	113	60	172
Telangana	Mahbubnagar	4185786	4133	3733	90%	400	10%	3380	82%	753	18%	2448	59%	1685	41%	145	4%	8	0%	4141	99	0	99
Telangana	Medak	3139581	2474	2071	84%	403	16%	1955	79%	519	21%	1555	63%	919	37%	108	4%	63	2%	2537	79	2	81
Telangana	Nalgonda	3607400	3601	3223	90%	378	10%	2853	79%	748	21%	2354	65%	1247	35%	106	3%	911	20%	4512	100	25	125
Telangana	Nizamabad	2642732	2653	2403	91%	250	9%	2331	88%	322	12%	1778	67%	875	33%	63	2%	999	27%	3652	100	38	138

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Telangana	Rangareddi	5484540	5415	4079	75%	1336	25%	4357	80%	1058	20%	3044	56%	2371	44%	303	6%	419	7%	5834	99	8	106
Telangana	Warangal	3647781.583	3946	3615	92%	331	8%	2719	69%	1227	31%	2469	63%	1477	37%	64	2%	794	17%	4740	108	22	130
Tripura	Dhalai	394326	217	198	91%	19	9%	189	87%	28	13%	148	68%	69	32%	6	3%		0%	217	55	0	55
Tripura	Gomati	457472	250	205	82%	45	18%	207	83%	43	17%	190	76%	60	24%	3	1%		0%	250	55	0	55
Tripura	Khowai	339963	251	211	84%	40	16%	224	89%	27	11%	161	64%	90	36%	3	1%		0%	251	74	0	74
Tripura	North Tripura	469031	274	239	87%	35	13%	237	86%	37	14%	122	45%	152	55%	3	1%		0%	274	58	0	58
Tripura	Sepahijala	503619	281	240	85%	41	15%	227	81%	54	19%	184	65%	97	35%	8	3%		0%	281	56	0	56
Tripura	South Tripura	457472	193	160	83%	33	17%	173	90%	20	10%	132	68%	61	32%	3	2%	5	3%	198	42	1	43
Tripura	Unakoti	288819	194	168	87%	26	13%	162	84%	32	16%	115	59%	79	41%	1	1%		0%	194	67	0	67
Tripura	West Tripura	955713	684	527	77%	157	23%	568	83%	116	17%	421	62%	263	38%	12	2%	25	4%	709	72	3	74
Uttar Pradesh	Agra	4780741.878	6229	5325	85%	904	15%	3623	58%	2606	42%	3609	58%	2620	42%	375	6%	434	7%	6663	130	9	139
Uttar Pradesh	Aligarh	4009256.718	5952	5105	86%	847	14%	5008	84%	944	16%	3325	56%	2627	44%	351	6%	719	11%	6671	148	18	166
Uttar Pradesh	Allahabad	6503903.718	8755	7814	89%	941	11%	6735	77%	2020	23%	5517	63%	3238	37%	358	4%	163	2%	8918	135	3	137
Uttar Pradesh	Ambedkar Nagar	2617701.537	1832	1644	90%	188	10%	1598	87%	234	13%	1263	69%	569	31%	83	5%	100	5%	1932	70	4	74
Uttar Pradesh	Amethi	2010912	1723	1593	92%	130	8%	1400	81%	323	19%	1006	58%	717	42%	58	3%	13	1%	1736	86	1	86
Uttar Pradesh	Auraiya	1497571.314	1691	1553	92%	138	8%	1374	81%	317	19%	1365	81%	326	19%	61	4%	346	17%	2037	113	23	136
Uttar Pradesh	Azamgarh	5037977.806	4024	3765	94%	259	6%	3406	85%	618	15%	1339	33%	2685	67%	167	4%	46	1%	4070	80	1	81
Uttar Pradesh	Baghpat	1421037.634	2051	1619	79%	432	21%	1567	76%	484	24%	1245	61%	806	39%	103	5%	111	5%	2162	144	8	152
Uttar Pradesh	Bahraich	3795807.951	4038	3668	91%	370	9%	3689	91%	349	9%	2284	57%	1754	43%	148	4%	234	5%	4272	106	6	113
Uttar Pradesh	Ballia	3517947.62	2983	2690	90%	293	10%	2644	89%	339	11%	1351	45%	1632	55%	115	4%	86	3%	3069	85	2	87
Uttar Pradesh	Balrampur	2345267.13	2598	2431	94%	167	6%	2331	90%	267	10%	1053	41%	1545	59%	116	4%	233	8%	2831	111	10	121
Uttar Pradesh	Banda	1963831.895	1854	1620	87%	234	13%	1364	74%	490	26%	1376	74%	478	26%	95	5%	373	17%	2227	94	19	113

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Uttar Pradesh	Barabanki	3555423.816	4877	4178	86%	699	14%	4158	85%	719	15%	2975	61%	1902	39%	273	6%	36	1%	4913	137	1	138
Uttar Pradesh	Bareilly	4873012.046	5762	5204	90%	558	10%	4854	84%	908	16%	4071	71%	1691	29%	229	4%	2120	27%	7882	118	44	162
Uttar Pradesh	Basti	2685740.569	3272	2791	85%	481	15%	2875	88%	397	12%	1324	40%	1948	60%	160	5%	260	7%	3532	122	10	132
Uttar Pradesh	Bijnor	4020220.969	5524	4276	77%	1248	23%	4513	82%	1011	18%	2670	48%	2854	52%	465	8%	1339	20%	6863	137	33	171
Uttar Pradesh	Budaun	4051696.128	4730	4542	96%	188	4%	3873	82%	857	18%	3153	67%	1577	33%	172	4%	93	2%	4823	117	2	119
Uttar Pradesh	Bulandshahar	3817906.695	6689	5671	85%	1018	15%	5726	86%	963	14%	2798	42%	3891	58%	429	6%	1202	15%	7891	175	31	207
Uttar Pradesh	Chandauli	2130987.886	1702	1529	90%	173	10%	1412	83%	290	17%	1036	61%	666	39%	74	4%	79	4%	1781	80	4	84
Uttar Pradesh	Chitrakoot	1081066.191	1179	1112	94%	67	6%	974	83%	205	17%	736	62%	443	38%	51	4%	62	5%	1241	109	6	115
Uttar Pradesh	Deoria	3381530.164	2657	2425	91%	232	9%	2155	81%	502	19%	1584	60%	1073	40%	142	5%	135	5%	2792	79	4	83
Uttar Pradesh	Etah	1921938.133	2467	2087	85%	380	15%	2038	83%	429	17%	1603	65%	864	35%	186	8%	304	11%	2771	128	16	144
Uttar Pradesh	Etawah	1723330.991	2760	2287	83%	473	17%	2238	81%	522	19%	1879	68%	881	32%	146	5%	287	9%	3047	160	17	177
Uttar Pradesh	Faizabad	2693723.399	2826	2539	90%	287	10%	2508	89%	318	11%	1188	42%	1638	58%	200	7%	138	5%	2964	105	5	110
Uttar Pradesh	Farrukhabad	2059905.23	2071	1829	88%	242	12%	1809	87%	262	13%	1173	57%	898	43%	103	5%	726	26%	2797	101	35	136
Uttar Pradesh	Fatehpur	2873037.518	3213	2751	86%	462	14%	2616	81%	597	19%	1925	60%	1288	40%	134	4%	395	11%	3608	112	14	126
Uttar Pradesh	Firozabad	2724705.292	3708	2924	79%	784	21%	2705	73%	1003	27%	1810	49%	1898	51%	600	16%	932	20%	4640	136	34	170
Uttar Pradesh	Gautam Budh Nagar	1827608.689	4150	3068	74%	1082	26%	3337	80%	813	20%	2070	50%	2080	50%	428	10%	191	4%	4341	227	10	238
Uttar Pradesh	Ghaziabad	3626024	9427	6130	65%	3297	35%	7734	82%	1693	18%	3428	36%	5999	64%	1009	11%	584	6%	10011	260	16	276
Uttar Pradesh	Ghazipur	3953467.484	2413	2256	93%	157	7%	2189	91%	224	9%	1151	48%	1262	52%	69	3%	33	1%	2446	61	1	62
Uttar Pradesh	Gonda	3744657.816	4494	3950	88%	544	12%	4036	90%	458	10%	2119	47%	2375	53%	330	7%	407	8%	4901	120	11	131

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Uttar Pradesh	Gorakhpur	4841289.162	4970	4196	84%	774	16%	4096	82%	874	18%	2823	57%	2147	43%	212	4%	2510	34%	7480	103	52	155
Uttar Pradesh	Hamirpur-UP	1204813.701	1241	1120	90%	121	10%	1054	85%	187	15%	749	60%	492	40%	50	4%	127	9%	1368	103	11	114
Uttar Pradesh	Hapur	1461000	2363	1911	81%	452	19%	2133	90%	230	10%	1220	52%	1143	48%	159	7%	372	14%	2735	162	25	187
Uttar Pradesh	Hardoi	4464906.628	6283	5964	95%	319	5%	5591	89%	692	11%	3912	62%	2371	38%	217	3%	39	1%	6322	141	1	142
Uttar Pradesh	Hathras	1708618.139	1894	1681	89%	213	11%	1360	72%	534	28%	1119	59%	775	41%	73	4%	466	20%	2360	111	27	138
Uttar Pradesh	Jalaun	1823247.871	2265	2125	94%	140	6%	1840	81%	425	19%	1059	47%	1206	53%	84	4%	712	24%	2977	124	39	163
Uttar Pradesh	Jaunpur	4884719.469	4917	4399	89%	518	11%	4395	89%	522	11%	2186	44%	2731	56%	153	3%	34	1%	4951	101	1	101
Uttar Pradesh	Jhansi	2183415.928	2650	2533	96%	117	4%	2103	79%	547	21%	1669	63%	981	37%	117	4%	1424	35%	4074	121	65	187
Uttar Pradesh	Jyotiba Phule Nagar	2006643.437	1989	1817	91%	172	9%	1773	89%	216	11%	1241	62%	748	38%	47	2%	308	13%	2297	99	15	114
Uttar Pradesh	Kannauj	1809374.224	1964	1739	89%	225	11%	1669	85%	295	15%	1133	58%	831	42%	95	5%	53	3%	2017	109	3	111
Uttar Pradesh	Kanpur Dehat	1958976.719	1995	1845	92%	150	8%	1481	74%	514	26%	1555	78%	440	22%	72	4%	196	9%	2191	102	10	112
Uttar Pradesh	Kanpur Nagar	4990443.134	6784	5443	80%	1341	20%	5213	77%	1571	23%	3920	58%	2864	42%	377	6%	2767	29%	9551	136	55	191
Uttar Pradesh	Kanshiram Nagar	1569453.89	1652	1486	90%	166	10%	1464	89%	188	11%	987	60%	665	40%	68	4%	259	14%	1911	105	17	122
Uttar Pradesh	Kaushambi	1742700.404	2083	1916	92%	167	8%	1786	86%	297	14%	1236	59%	847	41%	91	4%	1	0%	2084	120	0	120
Uttar Pradesh	Kheri	4380062.73	5498	5253	96%	245	4%	5043	92%	455	8%	3026	55%	2472	45%	183	3%	167	3%	5665	126	4	129
Uttar Pradesh	Kushinagar	3885919.536	2792	2566	92%	226	8%	2505	90%	287	10%	1117	40%	1675	60%	121	4%	441	14%	3233	72	11	83
Uttar Pradesh	Lalitpur	1329200.711	1571	1486	95%	85	5%	1322	84%	249	16%	1274	81%	297	19%	44	3%	537	25%	2108	118	40	159
Uttar Pradesh	Lucknow	5007362.588	7841	6344	81%	1497	19%	5936	76%	1905	24%	4808	61%	3033	39%	486	6%	1376	15%	9217	157	27	184
Uttar Pradesh	Maharajganj	2908622.498	1884	1743	93%	141	7%	1617	86%	267	14%	1247	66%	637	34%	80	4%	87	4%	1971	65	3	68

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Uttar Pradesh	Mahoba	956035.3173	833	781	94%	52	6%	679	82%	154	18%	689	83%	144	17%	19	2%	38	4%	871	87	4	91
Uttar Pradesh	Mainpuri	2015835.423	2160	1927	89%	233	11%	1596	74%	564	26%	1536	71%	624	29%	65	3%	105	5%	2265	107	5	112
Uttar Pradesh	Mathura	2773958.755	3896	3423	88%	473	12%	3417	88%	479	12%	2139	55%	1757	45%	251	6%	2254	37%	6150	140	81	222
Uttar Pradesh	Mau	2406493.2	1678	1576	94%	102	6%	1440	86%	238	14%	766	46%	912	54%	76	5%	337	17%	2015	70	14	84
Uttar Pradesh	Meerut	3762139.287	6692	5528	83%	1164	17%	5442	81%	1250	19%	3852	58%	2840	42%	367	5%	971	13%	7663	178	26	204
Uttar Pradesh	Mirzapur	2722273.885	3112	2977	96%	135	4%	2838	91%	274	9%	1542	50%	1570	50%	119	4%	86	3%	3198	114	3	117
Uttar Pradesh	Moradabad	2940906	5026	4147	83%	879	17%	4231	84%	795	16%	2365	47%	2661	53%	291	6%	2024	29%	7050	171	69	240
Uttar Pradesh	Muzaffarnagar	3165443	4073	2944	72%	1129	28%	3413	84%	660	16%	2333	57%	1740	43%	268	7%	437	10%	4510	129	14	142
Uttar Pradesh	Pilibhit	2223215.494	2252	2138	95%	114	5%	1804	80%	448	20%	1508	67%	744	33%	78	3%	477	17%	2729	101	21	123
Uttar Pradesh	Pratapgarh	3463502.863	3521	3102	88%	419	12%	2658	75%	863	25%	1906	54%	1615	46%	146	4%	58	2%	3579	102	2	103
Uttar Pradesh	Rae Bareli	3240718	3427	3161	92%	266	8%	3004	88%	423	12%	2020	59%	1407	41%	156	5%	129	4%	3556	106	4	110
Uttar Pradesh	Rampur	2548610.496	3770	3369	89%	401	11%	3289	87%	481	13%	2225	59%	1545	41%	159	4%	330	8%	4100	148	13	161
Uttar Pradesh	Saharanpur	3780498.159	5662	4356	77%	1306	23%	4564	81%	1098	19%	3164	56%	2498	44%	348	6%	1019	15%	6681	150	27	177
Uttar Pradesh	Sambhal	2268000	2694	2453	91%	241	9%	2373	88%	321	12%	1806	67%	888	33%	99	4%	251	9%	2945	119	11	130
Uttar Pradesh	Sant Kabir Nagar	1870808.733	1386	1261	91%	125	9%	1182	85%	204	15%	545	39%	841	61%	62	4%	193	12%	1579	74	10	84
Uttar Pradesh	Sant Ravidas Nagar	1696095.517	1673	1537	92%	136	8%	1370	82%	303	18%	781	47%	892	53%	109	7%	274	14%	1947	99	16	115
Uttar Pradesh	Shahjahanpur	3276480.919	3853	3565	93%	288	7%	3363	87%	490	13%	2551	66%	1302	34%	166	4%	1569	29%	5422	118	48	165
Uttar Pradesh	Shamli	1351000	2059	1680	82%	379	18%	1770	86%	289	14%	1447	70%	612	30%	112	5%	208	9%	2267	152	15	168
Uttar Pradesh	Shravasti	1216374.891	1083	998	92%	85	8%	992	92%	91	8%	792	73%	291	27%	62	6%	7	1%	1090	89	1	90

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Uttar Pradesh	Siddharthnagar	2786652.71	1897	1762	93%	135	7%	1707	90%	190	10%	982	52%	915	48%	58	3%	161	8%	2058	68	6	74
Uttar Pradesh	Sitapur	4882945.022	7475	6981	93%	494	7%	6177	83%	1298	17%	3855	52%	3620	48%	344	5%	729	9%	8204	153	15	168
Uttar Pradesh	Sonbhadra	2032661.025	1835	1722	94%	113	6%	1554	85%	281	15%	1397	76%	438	24%	86	5%	98	5%	1933	90	5	95
Uttar Pradesh	Sultanpur	2600164	2210	2032	92%	178	8%	1847	84%	363	16%	1445	65%	765	35%	113	5%	195	8%	2405	85	7	92
Uttar Pradesh	Unnao	3394579.881	4109	3600	88%	509	12%	3272	80%	837	20%	2437	59%	1672	41%	158	4%	355	8%	4464	121	10	132
Uttar Pradesh	Varanasi	4018363.583	3909	3272	84%	637	16%	3189	82%	720	18%	1841	47%	2068	53%	270	7%	812	17%	4721	97	20	117
Uttarakhand	ALMORA	673616	494	383	78%	111	22%	408	83%	86	17%	274	55%	220	45%	25	5%		0%	494	73	0	73
Uttarakhand	BAGESHWAR	281436	313	227	73%	86	27%	245	78%	68	22%	169	54%	144	46%	11	4%		0%	313	111	0	111
Uttarakhand	CHAMOLI	423620	430	373	87%	57	13%	329	77%	101	23%	243	57%	187	43%	23	5%		0%	430	102	0	102
Uttarakhand	CHAMPAWAT	280867	255	214	84%	41	16%	230	90%	25	10%	158	62%	97	38%	12	5%		0%	255	91	0	91
Uttarakhand	DEHRADUN	1839729	2542	1912	75%	630	25%	2051	81%	491	19%	943	37%	1599	63%	160	6%	1065	30%	3607	138	58	196
Uttarakhand	GARHWAL	743585	921	739	80%	182	20%	749	81%	172	19%	558	61%	363	39%	55	6%		0%	921	124	0	124
Uttarakhand	HARDWAR	2087186	2895	2362	82%	533	18%	2345	81%	550	19%	1647	57%	1248	43%	161	6%	207	7%	3102	139	10	149
Uttarakhand	NAINITAL	1034510	1500	1156	77%	344	23%	1120	75%	380	25%	899	60%	601	40%	72	5%	518	26%	2018	145	50	195
Uttarakhand	PITHORAGARH	526384	515	453	88%	62	12%	375	73%	140	27%	374	73%	141	27%	14	3%	22	4%	537	98	4	102
Uttarakhand	RUDRAPRAYAG	256542	284	219	77%	65	23%	213	75%	71	25%	166	58%	118	42%	13	5%	14	5%	298	111	5	116
Uttarakhand	TEHRI GARHWAL	667639	732	557	76%	175	24%	524	72%	208	28%	458	63%	274	37%	26	4%		0%	732	110	0	110
Uttarakhand	UDHAMSINGH NAGAR	1785365	1981	1614	81%	367	19%	1549	78%	432	22%	846	43%	1135	57%	123	6%		0%	1981	111	0	111
Uttarakhand	UTTARKASHI	357087	393	280	71%	113	29%	312	79%	81	21%	196	50%	197	50%	25	6%		0%	393	110	0	110

State	District	Population	TB patients notified from public sector	Pulmonary	% Pulmonary TB	Extra pulmonary	% Extra Pulmonary TB	New	% of New TB	Previously treated	% Previously treated TB	Microbiologically confirmed	% of Microbiologically confirmed	Clinically diagnosed	% of Clinically diagnosed	Pediatric TB	% of Pediatric TB	TB patients notified from private sector	% TB notification from private sector	Total patients notified	Annual TB notification rate (public sector)	Annual TB notification rate (private sector)	Annual TB notification rate (public sector)
West bengal	Alipore	451981	383	251	66%	132	34%	300	78%	83	22%	206	54%	177	46%	19	5%	263	41%	646	85	58	143
West bengal	Bagbazar	517389	445	319	72%	126	28%	332	75%	113	25%	279	63%	166	37%	20	4%	41	8%	486	86	8	94
West Bengal	Bankura	3783418.457	3790	3140	83%	650	17%	3401	90%	389	10%	2206	58%	1584	42%	114	3%	80	2%	3870	100	2	102
West Bengal	Barddhaman	8125549.636	7459	6182	83%	1277	17%	6150	82%	1309	18%	4477	60%	2982	40%	253	3%	290	4%	7749	92	4	95
West bengal	Behala	524829	336	247	74%	89	26%	260	77%	76	23%	222	66%	114	34%	11	3%	2	1%	338	64	0	64
West Bengal	Birbhum	3684627.283	4007	3493	87%	514	13%	3407	85%	600	15%	2583	64%	1424	36%	109	3%	90	2%	4097	109	2	111
West Bengal	Dakshin Dinajpur	1757874.829	2461	2024	82%	437	18%	2171	88%	290	12%	1594	65%	867	35%	52	2%	132	5%	2593	140	8	148
West Bengal	Darjiling	1937880.86	3067	2296	75%	771	25%	2508	82%	559	18%	1605	52%	1462	48%	194	6%	197	6%	3264	158	10	168
West Bengal	Haora	5093563.752	4855	3618	75%	1238	25%	3872	80%	984	20%	2687	55%	2169	45%	305	6%	118	2%	4973	95	2	98
West bengal	Hazi	466499	536	298	56%	238	44%	431	80%	105	20%	207	39%	329	61%	40	7%	9	2%	545	115	2	117
West Bengal	Hugli	5807632.315	5098	4075	80%	1023	20%	4082	80%	1016	20%	2810	55%	2288	45%	153	3%	53	1%	5151	88	1	89
West Bengal	Jalpaiguri	4071026.44	6418	5109	80%	1309	20%	5425	85%	993	15%	3828	60%	2590	40%	253	4%	67	1%	6485	158	2	159
West Bengal	Koch Bihar	2969658.179	2524	1869	74%	655	26%	2243	89%	281	11%	1354	54%	1170	46%	57	2%	137	5%	2661	85	5	90
West Bengal	Maldah	4205997.035	4598	3754	82%	844	18%	3913	85%	685	15%	2740	60%	1858	40%	220	5%	323	7%	4921	109	8	117
West bengal	Maniktala	514920	586	395	67%	191	33%	449	77%	137	23%	335	57%	251	43%	46	8%	63	10%	649	114	12	126
West bengal	Manshatala	528316	475	329	69%	146	31%	355	75%	120	25%	240	51%	235	49%	43	9%		0%	475	90	0	90
West Bengal	Medinipur East	5359307.329	1938	1580	82%	358	18%	1606	83%	332	17%	1262	65%	676	35%	56	3%	235	11%	2173	36	4	41
West Bengal	Medinipur West	6252548.713	6261	5243	84%	1018	16%	5442	87%	819	13%	3752	60%	2509	40%	102	2%		0%	6261	100	0	100
West bengal	MTMTB	399548	474	344	73%	130	27%	421	89%	53	11%	267	56%	207	44%	16	3%	80	14%	554	119	20	139

State	District	Population	TB patients notified from public sector	Pulmonary	% Pulmonary TB	Extra pulmonary	% Extra Pulmonary TB	New	% of New TB	Previously treated	% Previously treated TB	Microbiologicallyconfirmed	% of Microbiologicallyconfirmed	Clinically diagnosed	% of Clinically diagnosed	Pediatric TB	% of Pediatric TB	TB patients notified from private sector	% TB notification from private sector	Total patients notified	Annual TB notification rate (public sector)	Annual TB notification rate (private sector)	Annual TB notification rate (public sector)
West Bengal	Murshidabad	7471991.916	6179	4865	79%	1314	21%	5382	87%	797	13%	4054	66%	2125	34%	237	4%	826	12%	7005	83	11	94
West Bengal	Nadia	5437420.792	3759	2828	75%	931	25%	3108	83%	651	17%	2253	60%	1506	40%	95	3%	363	9%	4122	69	7	76
West Bengal	North 24 Parganas	10607494.71	7039	5416	77%	1623	23%	5668	81%	1371	19%	4287	61%	2752	39%	216	3%	307	4%	7346	66	3	69
West Bengal	Puruliya	3080316.288	2759	2463	89%	296	11%	2304	84%	455	16%	1643	60%	1116	40%	68	2%	70	2%	2829	90	2	92
West Bengal	South 24 Parganas	8577411.557	5611	4411	79%	1200	21%	4772	85%	839	15%	3381	60%	2230	40%	173	3%	370	6%	5981	65	4	70
West bengal	Strand Bank	437149	298	201	67%	97	33%	230	77%	68	23%	167	56%	131	44%	21	7%		0%	298	68	0	68
West bengal	Tangra	528081	896	584	65%	312	35%	681	76%	215	24%	480	54%	416	46%	78	9%	204	19%	1100	170	39	208
West bengal	Tollygunge	466081	256	175	68%	81	32%	211	82%	45	18%	156	61%	100	39%	14	5%		0%	256	55	0	55
West Bengal	Uttar Dinajpur	3156992.673	2670	2147	80%	523	20%	2256	84%	414	16%	1620	61%	1050	39%	128	5%	157	6%	2827	85	5	90
Total		1302880739	1424769	1179484	83%	245287	17%	1158102	81%	266669	19%	772292	54%	652479	46%	76475	5%	330186	19%	1754955	109	25	135

...(भारत में) दुनिया की तुलना में TB के मरीजों की संख्या बहुत है। TB से अगर मुक्ति पानी है तो एक तो correct treatment चाहिये और complete treatment चाहिये। सही उपचार हो और पूरा उपचार हो। बीच में से छोड़ दिया तो वो मुसीबत नई पैदा कर देता है। ...आप एक बार जाँच तो करा लीजिए। और ये बीमारी जा सकती है। बस सही उपचार हो और बीमारी नष्ट होने तक उपचार जारी रहे। मैं आपसे आग्रह करूँगा कि चाहे TB हो या Diabetes हो हमें उसे परास्त करना है। भारत को हमें इन बीमारियों से मुक्ति दिलानी है।...

माननीय प्रधानमंत्री श्री नरेंद्र मोदी
'मन की बात', मार्च 2016

सत्यमेव जयते
Government of India

Central TB Division

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