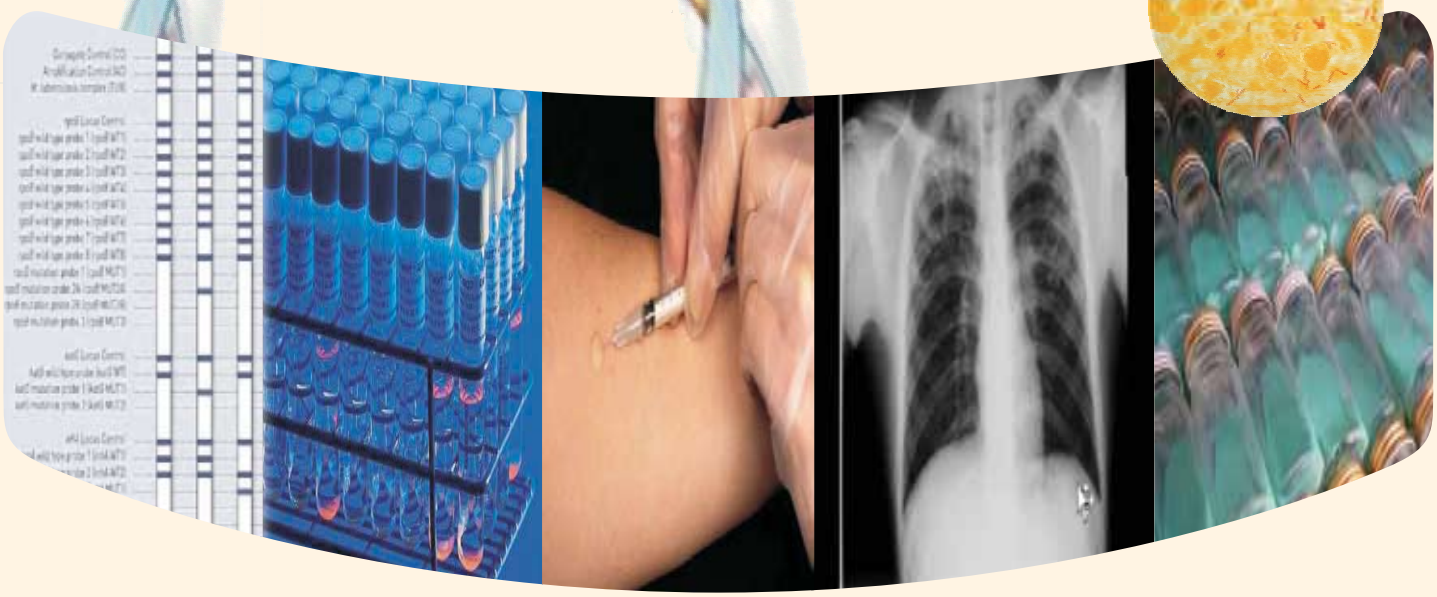
Zero TB Deaths
Stop TB
In my Lifetime

सत्यमेव जयते

Government of India

TB INDIA 2013

Revised National TB Control Programme
ANNUAL STATUS REPORT



Central TB Division

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

DOTS
Pure course | Pakka ilaaj

NATIONAL RURAL HEALTH MISSION
राष्ट्रीय ग्रामीण स्वास्थ्य मिशन

Honorable President of India

Rashtrapati Bhavan, New Delhi

18th March 2013

World TB Day 2013

STOP TB: In my lifetime

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 the 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. Koch's discovery opened the way toward diagnosing and curing tuberculosis, so this day is celebrated as World TB Day.

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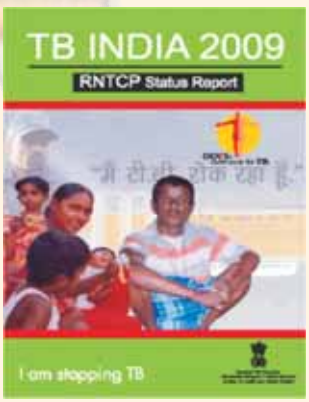
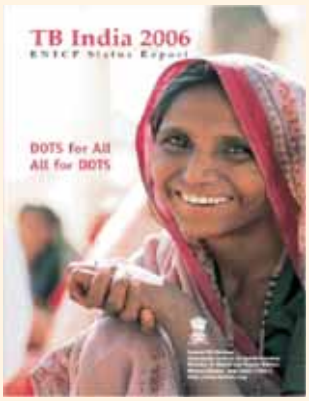
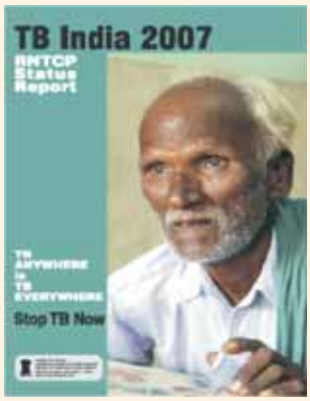
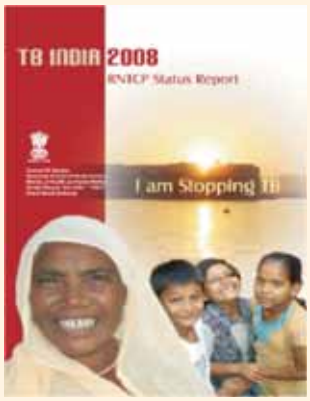
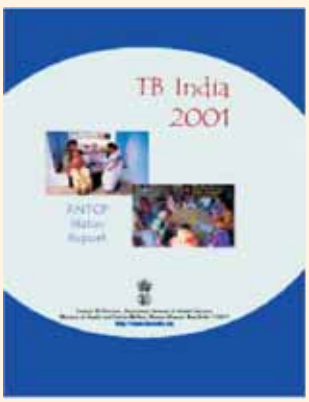
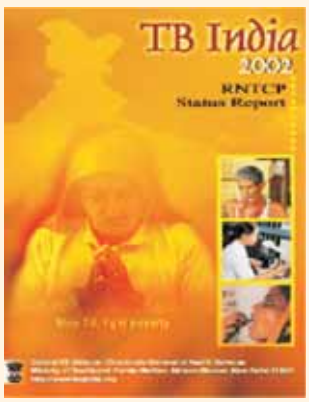


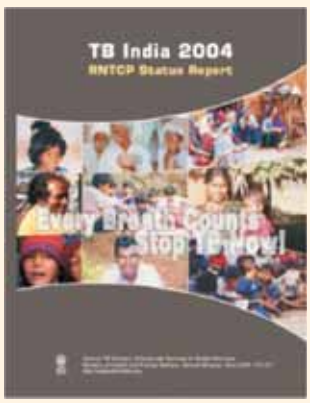








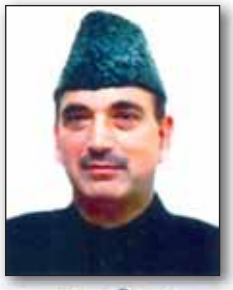




This Publication can be obtained from

Central TB Division
Directorate General of Health Services
Ministry of Health and Family Welfare
Nirman Bhawan, New Delhi - 110 018
http:// www.tbindia.nic.in
March 2013

Printed by I G Printers Pvt. Ltd., New Delhi email: igprinter@rediffmail.com



गुलाम नबी आज़ाद
GHULAM NABI AZAD

सत्यमेव जयते

स्वास्थ्य एवं परिवार कल्याण मंत्री
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निर्माण भवन, नई दिल्ली-110108
Minister for Health & Family Welfare
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FOREWORD

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

Since the Millennium Development Declaration by United Nations in the year 2000, it has been a decade of learning, expansion, and achievement for the Revised National Tuberculosis Control Programme.

It is a matter of satisfaction that with the advent of effective drugs, modern technology and programme management techniques under the "Revised National Tuberculosis Control Programme", recent decline of the disease prevalence and mortality is evident. Still there are many challenges due to complexity of transmission of disease and active disease progression together with factors such as air pollution, malnutrition, overcrowding and poor living conditions. There is also need to undertake collaborative activities to address co-morbidities like associated HIV, diabetes and smoking.

Another challenge of great concern is the development of resistance to anti TB Drugs due to irregular & incomplete treatment with irrational regimens. This is being dealt with effectively with appropriate expansion of diagnostic and treatment services for managing Drug Resistant TB (MDR/XDR TB) across the country.

Case Based Web Based IT system (Nikshay) for tracking of individual TB cases, ban on Commercial Serological test for diagnosis of active TB and notification of all TB cases are some of the recent initiatives of the programme. Steps are also being taken for effective engagement of all care providers through Technical Support Group and Private Provider Interface Agencies (PPIA).

Aware that more still needs to be done to build upon the significant achievements of the 11th Five Year Plan period, the Union Government is firmly committed to accomplish the ambitious plans for the 12th Five Year Plan Period and the vision of a "TB-free India".

(Ghulam Nabi Azad)

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MESSAGE

I am happy that Central TB Division is bringing out a comprehensive Annual Report on the Revised National Tuberculosis Control Programme in India highlighting the objectives, achievements, strategy, epidemiology and other aspects in relation to Tuberculosis. Given the high incidence and prevalence of Tuberculosis in the country, it is imperative that focused attention is given for prevention, control and treatment of the disease. All stakeholders including the Government, civil society and the private sector need to work together to achieve our common objectives.

In recent years, the issue of drug-resistance, co-morbidities, paediatric Tuberculosis, faster and more reliable diagnostics, etc., have gained importance. Our Programme has responded well to the emerging situation. In May, 2012, Tuberculosis was made a notifiable disease and the commercial serological tests for diagnosing Tuberculosis were banned. A new initiative of 'NIKSHAY', a case based web based reporting and monitoring system, was developed to ensure better surveillance and treatment of Tuberculosis cases. The 12th Five Year Plan (2012-2017) adequately supports the Revised National Tuberculosis Control Programme. The Government is committed to extend all support for achieving the objectives and targets.

I convey my best wishes to all stakeholders for success in their efforts to conquer Tuberculosis.

Place: New Delhi
Date: 20th March, 2013

Keshav Desiraju

Dr. Jagdish Prasad
M.S. M.Ch., FIACS
Director General of Health Services

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
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दिनांक/Dated.....

The Revised National Tuberculosis Control Programme has initiated early and firm steps to its declared objective of 'Universal Access to early quality diagnosis and quality TB care for all TB patients'. The year 2012 witnessed innumerable activities happening towards the same. Notification of TB; Case based web based recording & reporting system (NIKSHAY); Standards of TB Care in India; Composite Indicator for monitoring programme performance; Rapid scale up of the Programmatic Management Of Drug Resistant TB services are few of the worthwhile mentions in this regard. These initiatives while being exemplary also significantly highlight the fact that the programme has been continuously innovative and progressive in striving towards TB control in the country and embracing and adopting technology effectively to address issues in delivery of quality TB services.

Notification of TB has been rolled out since early 2012 and is the most important tool to not only supplement and strengthen TB surveillance but also offers an opportunity for every TB patient to access and receive a minimum basic quality of diagnostic and treatment services. This is a national responsibility and each health care provider in every nook and corner of the country needs to earnestly deliver on this call of national obligation. As responsible citizens of the country, I am completely confident that, all health care providers will abide by this national responsibility and contribute effectively and entirely to the march of the country towards a TB free nation.

Similarly 'Nikshay', the web based reporting for TB programme has been another notable achievement initiated in 2012 and has enabled capture and transfer of individual patient data from the remotest health institutions of the country and is poised now for further leaps for its use for betterment of services for TB patients.

The reach of the programme has always been appreciated and that quality assured diagnostic and treatment services under the programme are being delivered through the primary health care system in every part of the country is reflective of the enormous efforts put in by each of the TB functionary in the country.

Despite all this, due to reasons whether on providers end or due to the health seeking behaviour of patients, it is a matter of great concern that a large number of TB patients in the country continue to receive inappropriate and irrational treatment and bear the burden of huge costs for treatment for TB. To address this concern, it is a moment of pride and happiness for me to pronounce through this edition of the annual report of RNTCP for 2012 released on this day the 24th March 2013 the initiation of the services of quality assured TB drugs free of cost to all TB patients in near future.

I express my gratitude and congratulate the RNTCP on this major endeavour and initiative and wish all success in implementation of the programme.

Dr Jagdish Prasad

Dr. Ashok Kumar, M.D.
Deputy Director General
Head, Central TB Division
Project Director RNTCP

सत्यमेव जयते

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Preface

The publication of Annual Status Report on RNTCP is being regularly brought out, since 2001, providing an overview of the progress made in Tuberculosis control efforts in India. The programme consistently releases this annual report on 24th March, the World TB day, every year. In the year 2012, the country has made a rapid progress and undertook notable national initiatives towards TB control and the thirteenth edition of RNTCP status report "TB India 2013" contains a comprehensive and up-to-date narration of TB control activities in India as well as the progress made at district, State/ UT and the National levels. In this report, the performance indicators of the States/UTs and districts are based on various parameters that capture the efforts made by the health care providers for TB control from the grass root to national levels. The recent initiatives, advances and policy decisions under the programme have been summarised in this report.

The committed efforts made by the programme managers and functionaries in all the 35 States/UTs upto peripheral levels, all the RNTCP consultants as well as various experts towards ensuring the efficient implementation towards universal access to TB care is very much applaudable. The Central TB Division is also grateful for the invaluable contributions and collaboration of the multilateral & bilateral agencies and donors like The Global Fund, World Health Organization, World Bank, USAID, The UNION, World Vision, FIND, PATH to name a few of the many other agencies, organisations and institutions for their support and expertise in helping the RNTCP which is recognized as one of the best public health programmes not only in the country but also globally.

This Annual Status Report "TB India 2013" will serve as a National Reference Document on RNTCP. The information in this report will be deemed useful to policy makers, programme implementers, health administrators, researchers and academicians as well as to the TB community at large for improving the services towards universal quality TB care and control in our vast country.

The Central TB Division thanks the esteemed readers for popularizing this national document and solicits their valuable comments and suggestions for improvising the future editions.

We are grateful to all the authorities, officers and staff of the Ministry of Health and Family Welfare and Directorate General Health Services, Govt. of India for their continued support to RNTCP for its efficient and effective implementation.

The sincere heart-felt appreciations, to all those who dedicatedly contributed towards bringing out this edition of "TB India 2013" are placed on record

13/3/13

(Dr. Ashok Kumar)

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
CDC	Centre for Disease Control and Prevention
CDR	Case Detection Rate
CGHS	Central Government Health Scheme
CHAI	Catholic Health Association of India
CHC	Community Health Centre
CII	Confederation of Indian Industries
CMAI	Christian Medical Association of India
CTD	Central TB Division
DALYs	Disability Adjusted Life Years
DBS	Domestic Budgeting Source
DDG	Deputy Director General
DFID	Department for International Development
DGHS	Director General of Health Services
DMC	Designated Microscopy Centre
DOTS	Directly Observed Treatment Short Course
DRS	Drug Resistance Surveillance
DRTB	Drug Resistant Tuberculosis
DST	Drug Susceptibility Testing
DTC	District Tuberculosis Centre
DTCS	District TB Control Society
DTO	District Tuberculosis Officer
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	Izoniazid
HBCs	High Burden Countries
HIV	Human Immuno Deficiency Virus

HRD	Human Resource Development
IAC	IEC Advisory Committee
ICB	International Competitive Bidding
ICELT	International Centre for Excellence in Laboratory Training
ICMR	Indian Council of Medical Research
ICTC	Integrated Counselling and Testing Centre
IDSP	Integrated Disease Surveillance Project
IEC	Information, Education and Communication
IMA	Indian Medical Association
IPT	Isoniazid Preventive Therapy
IRL	Intermediate Reference Laboratory
ISTC	International Standards for Tuberculosis Care
IUALTD	International Union Against Tuberculosis and Lung Disease
JMM	Joint Monitoring Mission
KAP	Knowledge, Attitude and Practices
LT	Laboratory Technician
MDGs	Millennium Development Goals
MDP	Model Dots Project
MDRTB	Multi Drug Resistant TB
MIFA	Management of Information for Action
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
NJIMOD	National Jalma Institute of Mycobacterial and Other Diseases
NRHM	National Rural Health Mission
NRL	National Reference Laboratory
NSN	New Smear Negative
NSP	New Smear Positive

NTF	National Task Force
NTI	National Tuberculosis Institute
NTP	National Tuberculosis Programme
NUHM	National Urban Health Mission
OR	Operational Research
OSE	On-Site Evaluation
PHC	Primary Health Centre
PHI	Peripheral Health Institution
PI	Protease Inhibitor
PLHIV	People Living with HIV and AIDS
PP	Private Practitioner
PPM	Public-Private Mix
ProMIS	Procurement Management Information System Software
PSU	Public Sector Unit
PTB	Pulmonary Tuberculosis
PWB	Patient-Wise Box
QA	Quality Assurance
R	Rifampicin
RBRC	Random Blinded Re-Checking
RCH	Reproductive and Child Health
RNTCP	Revised National Tuberculosis Control Programme

S	Streptomycin
SDS	State Drug Store
SHGs	Self Help Groups
SOP	Standard Operating Procedure
SPR	Slide Positivity Rate
STC	State TB Cell
STDC	State Tuberculosis Training & Demonstration Centre
STF	State Task Force
STLS	Senior TB Laboratory Supervisor
STO	State TB Officer
STS	Senior Treatment Supervisor
TB	Tuberculosis
TU	Tuberculosis Unit
UHC	Urban Health Centre
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
WHO	World Health Organization
WVI	World Vision India
XDR-TB	Extensively Drug Resistant TB
Z	Pyrazinamide
ZTF	Zonal Task Force

Content

India Profile

North of the equator between 6° 44' and 35° 30' north latitude and
68° 7' and 97° 25' east longitude.
Seventh-largest country by geographical area of 3,287,240 sq km
Second most populous country in the world with 1.2 million people.
Population density of 382 per sq. km
51.5% males and 48.5% females
Sex ratio: 940 females for every 1000 males.
30 states and 5 Union Territories
640 districts,
5924 sub-districts & 7936 Towns
0.641 Million villages as per census 2011 data
Decadal growth of 17.64%in last decade
Literacy rate is 74%, in males 82% and in females 65%
No of Govt. hospitals 12760,
CHCs 4510, PHCs 23391, Sub-centers 145894
Beds in Government Sector, 576793;
Population per Government Hospital Bed 2012.
No of medical colleges 314; Blood banks - 2445, Eye Banks - 586,
Diverse socio-economic, cultural, political conditions
Large unregulated private sector in health care

Executive Summary

The "Revised National TB Control Programme" being implemented by Central TB Division (CTD), Directorate General of Health Services, Ministry of Health & Family Welfare Government of India, as a 100% Centrally Sponsored Scheme in the entire country has been publishing Annual Status report "TB India" every year and has brought out the twelfth issue RNTCP Status report "TB India – 2013". The report highlights various policy changes, strategic shifts and activity undertaken during the year 2012 in addition to the performance and achievement of the programme.

Fund absorption of the RNTCP was good and the programme could utilize Rs 1609 crore as against allocation of Rs. 1447 crore during 11th Five year plan. RNTCP has entered 12th Five year Plan (2012-17) with the theme of "Universal Access for quality diagnosis and treatment for all TB patients in the community" with a target of "reaching the unreached". These targets will include early detection & treatment of about 87 lakh Tuberculosis patients, 2 lakh MDR-TB patients with especial focus on marginalized and hard to reach populations and high risk and vulnerable groups. To achieve this, basic RNTCP sub-district management unit are proposed to be aligned with NRHM blocks with proportionate increase in infrastructure and manpower in addition to development of diagnostic and treatment services for Drug resistance and HIV co-infected TB patients.

The "Revised National TB Control Programme" being implemented under the umbrella of National Rural Health Mission. The services are provided through general Health system infrastructure across 692 districts, and 35 states and Union territories.

According to the changed scenario of the TB control, the RNTCP training modules have been updated with latest policy changes. Videos training modules have also been developed and used for training Data Entry Operators in Nikshay.

RNTCP has quality assured laboratory networkconsisting of National Reference Laboratory (NRL), Intermediate Reference laboratory (IRL) and Designated Microscopy Centre (DMC)for quality assured sputum examination. During 2012, RNTCP finalized protocol and guidelines for certification for second line Drug Susceptibility testing (DST). Diagnostic and treatment services for Drug resistant TB services are available in 35 States across 638 districts covering a population 1089 million (92%) and are being rapidly scaled up.

An uninterrupted supply of quality assured Anti TB Drugs is an essential component of DOTS strategy under RNTCP. The procurement of drugs for the entire country including The Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM) funded states is now proposed to be through Domestic Budgeting Source (DBS) mechanism following the General Financial Rules of Government of India to be made by RITES, the procurement agency of Ministry of Health and Family Welfare.

Provision is being made for whole blood (finger prick) HIV screening test to all DMCs and Provider Initiated HIV Testing and Counselling (PITC) among presumptive TB cases in all "high" HIV prevalent settings in India (A and B category districts). Isoniazid prophylaxis therapy (IPT) has also been accepted for prevention of TB among PLHIV.

Based on the recent evidence,the National guidelines on Paediatric TB diagnosis and management were updated and six weight bands along with three generic patient wise boxes will be used in combination to treat patients in the six weight bands. In 2012, the policy decision was taken to screen all TB patients for DM in the 100 districts where National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) activities are being implemented.

Realizing the necessity of Universal Access, school awareness programme started and carried out by the RNTCP field personnel to generate awareness among students and teachers of all school and colleges in all the States/UTs. Specific guidelines & timeline were framed and disseminated to all the States/UTs to carry out the activity in time bound manner during 2012-2013 FY. In this year more than 3.5 lakh schools were visited all over the States covering more than 4.5 lakh teachers and over 9 lakh students.

At present RNTCP has established partnerships with 2325 NGOs and 13997 private practitioners. The programme is having successful partnership with Indian Medial Association (IMA), Catholic Bishops' Conference of India (CBCI), Foundation for Innovative New Diagnostics (FIND), Project AKSHAY-World Vision, Project AKSHAY-UNION and PATH. The Public Private Mix advocacy kit (flipbooks, stickers, display boards, posters etc.) has been developed for facilitating interaction with

Private Practitioners for community involvement. A training module for the Medical Practitioners has been especially designed to update them on the technical and operational aspects of the programme

In this year, a National Core Committee for RNTCP Pharmacists Partnership has been formed for coordination and oversight of partnership. A training module is under development for pharmacist's involvement under RNTCP which would be utilised for capacity building of pharmacists by associations under this partnership.

There are 314 Medical Colleges implementing RNTCP and six Zonal Task Force (ZTF) meeting were held in each zone (East, West, North, North east, South I, South II) under RNTCP.

Supervision, Monitoring and Evaluation are essential components of the Revised National Tuberculosis Control Programme. 2012 would stand as the year which witnessed a strategic shift in the way the RNTCP has implemented its supervision, monitoring and evaluation activities. An Independent Evaluation of RNTCP, India through the Fifth Joint Monitoring Mission (JMM) was conducted by WHO in collaboration with the Central TB Division, DGHS/MOHFW/GOI and involving all concerned stakeholders, partners & donors from 21-31st August, 2012 with the objectives "to review the country's progress towards the TB-related Millennium Development Goals (MDGs), challenges and plans for TB control efforts, and to advise GOI and partners on the pathway towards achieving Universal Access to TB care". The Composite Indicator was rolled out in March 2012 with the aim of diverging the focus of supervision & monitoring on merely the 'outputs' to a more comprehensive focus on all areas of the programme and also on each of the inputs and the processes. Strengthened Central Internal Evaluation was another achievement witnessed in 2012. Central Internal Evaluation of Nine States and eighteen districts therein were undertaken in 2012. The strategy for Focused Action Plan for Under-performing districts was formulated and rolled out in March 2012.

In 2012, Central TB Division (CTD) in collaboration with National Informatics Centre (NIC) has undertaken the initiative to develop a Case Based Web Based application named Nikshay to improve TB surveillance in the country. The Government of India declared Tuberculosis a notifiable disease on 7th May 2012. For the purpose of notification, the contact details of the nodal officer at district level and the reporting formats are available on the website www.tbcindia.nic.in.

The revision of the OR agenda was undertaken by RNTCP in 2012, wherein research needs within each of the thematic area under the RNTCP were identified based on the perception of the Consultants in the field across the country. At National Level, the two National Standing Operational Research Committee meeting were held on 8th February 2012 and 7th September 2012. The "National Standing Committee" was renamed as "National Research Committee". The six OR proposals were received, of which one was approved by the National Research Committee. More than nineteen research papers were published under RNTCP during the year 2012 in various Journals that led to impact on Programme policy and practice. The estimated prevalence and mortality due to TB in India is showing declining trend since the RNTCP services have been expanded across the country. "Technical Expert Group for estimation of TB Burden in India" has been constituted by Ministry of Health & Family Welfare, Govt. of India to lead different studies for TB burden.

In 2012, total of 78, 67,194 TB suspects were examined for sputum smear microscopy. A total of 14, 67,585 cases were initiated on treatment. Case detection rate of New Smear Positive TB cases was 68% with a treatment success rate of 88%. 81,482 paediatric TB cases were notified accounting for 7% of all cases. 8, 21,807 (56%) TB patients were tested for HIV and 44,063 (5%) were found to be HIV positive. About 92% HIV infected TB patients were initiated on CPT and 74% were initiated on ART.

Central TB Division: Activities in 2012

January-2012

1. The National Steering Committee meeting on CB-Nucleic Acid Amplification Test evaluation project was held on 4th January 2012. This is a newer diagnostic method for TB which would reduce the turn-around time for diagnosing TB and Rifampicin resistance. The evaluation project would demonstrate the efficacy of the method in the field.
2. National Coordination Committee of Round 9 Global Fund TB project was held in Kolkata from 23rd to 24th January 2012 with the objective of reviewing the performance of the Civil Society principal recipients of Round 9 Global Fund.
3. A 'National Consultation on diagnosis and treatment of Pediatric TB' was held on 30th -31st January 2012 with the objectives of a consensus for updating the RNTCP guidelines on Pediatric TB diagnosis and management.

February-2012

4. Regional review meetings for review of Programmatic Management of Drug Resistant Tuberculosis (PMDT) services was held at Patna from 2nd to 3rd February 2012 for the states of Bihar, Jharkhand, West Bengal, Orissa, Assam, Arunachal Pradesh, Manipur, Mizoram, Meghalaya, Nagaland and Sikkim.
5. Monitoring and Evaluation Group for monitoring the activities under the Project Akshaya, a Round 9 Global Fund TB project, was held on 6th February 2012.
6. The meeting of the National Operational Research Committee under RNTCP was held on 8th February 2012 in New Delhi for review and approval of proposals for operational research under the programme.
7. National level Workshop for Involvement of Pharmacists in RNTCP was held in Mumbai from 9th – 10th February 2012.
8. The National DOTS-Plus Committee meeting for review of activities for Programmatic Management of Drug Resistant Tuberculosis services was held on 10th February 2012 in New Delhi.
9. National Review Workshop for the 'Indian Medical Association-GFATM-RNTCP-Public Private Mix-RCC' project was held in Hyderabad on 10th& 11th March 2012.
10. The Central Internal Evaluation of state of Karnataka with two districts Dhwarwad and Tumkurwas held from 13th to 18th February 2012.
11. Regional review meetings for review of Programmatic Management of Drug Resistant Tuberculosis (PMDT) services was held at Srinagar from 21st to 22nd February 2012 for the states of Jammu & Kashmir, Punjab, Himachal Pradesh, Chandigarh, Haryana, New Delhi, Uttarakhand, Uttar Pradesh, Chhattisgarh and Tripura;
12. Regional review meetings for review of Programmatic Management of Drug Resistant Tuberculosis (PMDT) services was held at Chennai from 27th to 28th February 2012 for the states of Karnataka, Tamil Nadu, Andhra Pradesh, Kerala, Gujarat, Maharashtra, Madhya Pradesh, Rajasthan, Goa, Lakshadweep, Puducherry, Andaman & Nicobar Islands, Daman-Diu and Dadra Nagar Haveli.
13. Central level appraisals for rolling out PMDT services was carried out for 5 districts in Punjab from 13th-18th February 2012; for 9 districts of Madhya Pradesh from 22nd-25th February 2012; for 5 districts of Jammu & Kashmir from 23rd-25th February 2012 and for 7 districts of Orissa from 21st-24th February 2012.

March-2012

14. The Composite Indicators for monitoring of programme performance of the Revised National Tuberculosis Control Programme was developed and rolled out in March 2012.
15. The first workshop under the Second round of '1 year TB OR training course' was held at Bangalore from 26th to 31st March 2012 at NTI, Bangalore in collaboration with The Union, WHO & CDC.

April-2012

16. Central Internal Evaluation of Andhra Pradesh was undertaken from 9th to 13th April 2012 to evaluate

the programme performance and implementation in the State. Two districts Hyderabad and Nellore were evaluated along with the various state level institutions.

17. The National Reference Laboratory Coordination Committee meeting for review of the status of scale up plan of Culture & Drug Susceptibility Testing Laboratories and review of status of progress made on CB-Nucleic Acid Amplification Test study sites was held on 9th April 2012 at New Delhi.

18. Sensitization Workshop for CB-Nucleic Acid Amplification Test for eighteen TB Unit Study sites and 10 Expand TB Pilot Site States was held from 10th to 11th April 2012 at New Delhi for the respective State Officials, District Officials and RNTCP Consultants. The participants were imparted training on the CB-Nucleic Acid Amplification Test.

19. The Central Internal Evaluation of Uttar Pradesh was undertaken from 16th to 20th April to evaluate the programme performance and implementation in the State. Two districts Kanpur Nagar & Gorakhpur were evaluated along with the State level institutions.

20. The First meeting of the 'Technical Expert Group on TB Burden Estimation in India' was held on 23rd April 2012 at LRS Institute, New Delhi with the objective of providing recommendation on the most feasible, appropriate strategy for estimation of Incidence, Prevalence and Mortality due to Tuberculosis in India and developing the protocol and methodology for estimation of Incidence, Prevalence and Mortality due to Tuberculosis in India.

21. The First Meeting of the National Task Force for involvement of Corporate Hospitals and Institutions offering DNB (Diplomate National Board) under RNTCP was held on 24th April 2012 in Nirman Bhawan, New Delhi.

22. A MoU between CTD/Dte GHS/MOHFW/GOI and Indian Pharmaceutical Associations (IPA), All India Organisation of Chemist and Druggists (AIOCD), Pharmacy Council of India (PCI) and SEAR Pharm Forum for engaging retail pharmacies (community pharmacies) in RNTCP was signed in April 2012.

May-2012

23. The Executive Order for 'Notification of TB cases' wherein the healthcare providers shall notify every TB case to local authorities i.e. District Health Officers, Chief Medical Officers of a district or Municipal health Officer of a Municipal Corporation / Municipality every month in a given format to ensure proper TB diagnosis and case management, reduce TB transmission and address the problems of emergence of spread of Drug Resistant-TB, was issued on 7th May 2012 by the Ministry of Health & Family Welfare, Government of India*(Annexure-A)*.

24. Meeting of officials of the Culture & Drug Susceptibility Testing Laboratories and the Departments of Medicine, Microbiology & Laboratory Medicine of All India Institute of Medical Sciences to discuss the modalities for supporting the Programmatic Management of Drug Resistant TB (PMDT) scale up plan of RNTCP was held on 7th May 2012 at Nirman Bhawan, New Delhi.

25. A training course on "Scientific basis of Tuberculosis control" was held from 7th – 18th May, 2012 at LRS Institute, New Delhi. This is an advanced course on Scientific basis of Tuberculosis Control and rationale behind the STOP-TB strategy for the RNTCP programme managers and was held in coordination with The Union under the Project Akshaye (Global Fund Round 9).

26. National Consultation Workshop for "Developing Guidelines for Central Evaluation of Culture & Drug Susceptibility Testing Laboratories was held from 11th & 12th May 2012 at New Delhi.

27. The Central Internal Evaluation of Manipur was held from 14th to 18th May to evaluate the programme performance and implementation in the State. Two districts (Thoubal and West Imphal) in the state were evaluated along with the State level institutions. Brief details of the same enclosed as in Point No.1.

28. The First Meeting of National Technical Working Group on Private-Public-Mix in RNTCP was held on 14th May 2012 in New Delhi with the objective of 'To suggest Approaches & Strategizes for PPM to address the challenge towards Universal Access for TB care in India'.

29. The Case based web based entry of individual patient-wise data has been initiated as a pilot on the 15th May 2012 in Karnataka, Odisha and Delhi. The software was developed by NIC, India and has been hosted on the NIC servers itself.

30. Regional review meetings for review of Programmatic Management of Drug Resistant Tuberculosis (PMDT) services was held at

Chandigarh from 17th to 18th May 2012 for the states of Jammu & Kashmir, Himachal Pradesh, Haryana, Punjab, Chandigarh, Delhi, Uttar Pradesh and Uttarakhand.

31. The meeting of National Coordination Committee of Round 9 Global Fund TB project is being held in Manipur from 23rd to 25th May 2012 with the objective of reviewing the performance of the Civil Society principal recipients of Round 9 Global Fund.

32. The nationwide scale up of the Intensified TB-HIV package under the TB-HIV Collaborative Activities under RNTCP was achieved in June 2012.

33. A National Consultation Workshop for the Revision of NGO/PP Schemes under RNTCP is being held from 30th May to 1st June 2012 at LRS Institute, New Delhi.

June-2012

34. Regional review meeting for review of Programmatic Management of Drug Resistant Tuberculosis (PMDT) services was held at Shillong, Meghalaya from 4th to 5th June 2012 for the states of Bihar, West Bengal, Orissa, Meghalaya and all North-Eastern States. The objectives of the meetings were to review the progress and challenges in scaling up of laboratory capacity and PMDT services as per the plan submitted by states to Central TB Division in Nov 2010; to deliberate upon the preparations required by states to scale up the Multi Drug Resistant-TB (MDR-TB) suspect's criteria 'B' i.e. all Smear Positive Re-treatment cases at diagnosis and any Smear Positive follow up case in the implementing districts using LPA and to deliberate on best possible solutions to address the challenges faced by the state in implementing PMDT services and actions required from the state and from CTD.

35. Ban imposed on **manufacture, sale, distribution, use and import of the Sero-diagnostic test kits** for diagnosis of TB as per Government of India Gazette Notification **Nos. G.S.R. 432 (E) and G.S.R. 433 (E)** dated 7th June 2012*(Annexure-B)*.

36. The National Review Meeting of RNTCP was held on 9th& 10th June 2012 at National Tuberculosis Institute, Bangalore. The State TB Officers of all States/UTs along with the Civil Society Partners and State (Hq.) RNTCP Consultants participated in the meeting.The meeting was held with the underlying theme of 'Process indicators in RNTCP implementation' and with the objectives of reviewing overall performance and quality of RNTCP services; reviewing progress on Focused Action Plan for underperforming areas and updating the STOs and Consultants on newer initiatives, policy changes etc. The programme performance of each State/UT was reviewed in the meeting.

37. Regional review meetings for review of Programmatic Management of Drug Resistant Tuberculosis (PMDT) services was held at NTI, Bangalore from 11th to 12th June 2012 for the states of Tamil Nadu, Karanataka, Kerala, Andhra Pradesh, A&N Islands, Puducherry, Lakshadweep, Gujarat, Maharashtra, Rajsathan, Madhya Pradesh, Goa, Chattisgarh and Jharkhand. The objectives of the meetings were to review the progress and challenges in scaling up of laboratory capacity and PMDT services as per the plan submitted by states to Central TB Division in Nov 2010; to deliberate upon the preparations required by states to scale up the Multi Drug Resistant-TB (MDR-TB) suspect's criteria 'B' i.e. all Smear Positive Re-treatment cases at diagnosis and any Smear Positive follow up case in the implementing districts using LPA and to deliberate on best possible solutions to address the challenges faced by the state in implementing PMDT services and actions required from the state and from CTD.

38. The Central Internal Evaluation of Rajasthan was held from 18th to 23rd June 2012 to evaluate the programme performance and implementation in the State. Two districts (Kota and Jodhpur) in the state were evaluated along with the State level institutions.

39. Environment assessment under the RNTCP was done in 5 states of Andhra Pradesh, Jharkhand, Delhi, Jammu & Kashmir and Rajasthan in June-July 2012 with the objective of understanding the basic infection control and Biomedical waste management practices at different levels in RNTCP and assess the current situation. The study also covered the Knowledge, Attitude and Practice of the RNTCP on infection control and waste management.

July-2012

40. The Central Internal Evaluation of Madhya Pradesh was held from 9th-13th July 2012 to evaluate the programme performance and implementation in the State. Two districts (Bhopal and Ujjain) in the state were evaluated along with the State level institutions.

41. National Technical Working Group (NTWG) on TB/HIV collaborative activities was held on 19th

July 2012 under the Chairmanship of DDG (TB) at NACO with the objective of reviewing, optimizing and planning for future TB/HIV coordination activities; facilitation of the operational research to improve the implementation and impact for TB/HIV collaborative activities in the country.

42. First Technical Working Group (TWG) under the Chairmanship of Dr. Ira Ray, Former Addl.DG, for developing laboratory scale up plan under the RNTCP was held on 24th July 2012 at NDTB Centre, New Delhi.

43. Meeting of Committee for selection of two additional National Reference Laboratories for RNTCP and for identification of laboratories for performing the second line Drug Sensitivity Testing (DST) was held on 24th July 2012 at NDTB Centre, New Delhi. As the laboratory network is expanding with around 100 laboratories across the country additional NRLs will be required for mentoring for certification, training of the laboratory staff and quality assurance. Identification of laboratories for performing second line DST is required to increase the capacity for service provision for diagnosis of XDR-TB under the RNTCP.

44. The Central Internal Evaluation of Bihar was held from 23rd to 27th July 2012 to evaluate the programme performance and implementation in the State. Two districts (West Champaran and Kishanganj) in the state were evaluated along with the State level institutions.

45. State Level Workshop for NGOs involvement in RNTCP at Manali, Himachal Pradesh on 28th July 2012 with objective of sensitization of NGOs and increasing the NGO involvement in RNTCP in Himachal Pradesh.

46. The School Awareness Generation Program amongst students and teachers of all the schools and colleges all across the country on the issues related to the tuberculosis and free availability of diagnosis and treatment services under RNTCP has been initiated in a systematic manner. Under the activity visit to the schools and colleges in two phases (Aug/Sep and Nov/Dec – 2012) and awareness generation through simple messages, quiz, drawing and painting, slogan, essay writing, games etc. by the staff of the health and education departments has been planned. The first round of activities has been completed.

47. Global Fund Single Stream Funding grant for the Revised National Tuberculosis programme was signed in July 2012 for the period October 2011-March 2013 between the Department of Economic Affairs, Ministry of Finance and the Global Fund.

August-2012

48. National Consultative Workshop on Partnerships was held at Jaipur, Rajasthan on 8th August 2012 for reviewing the status of implementation of partnerships and to identify mechanisms for further increasing the role of partners in the RNTCP.

49. Global Health Advocates India – IMPACT Consultative Meeting on TB Care and Control in India at IMA Hall, New Delhi on 19th August 2012 for involvement of Professional Associations in the RNTCP.

50. Joint Monitoring Mission for RNTCP/India undertaken by WHO/World Bank/Global Fund and other partners from 21st to 31st August 2012.

    a. An Independent Evaluation of RNTCP, India through the Fifth Joint Monitoring Mission (JMM) was conducted by WHO in collaboration with the Central TB Division, DGHS/MOHFW/GOI and involving all concerned stakeholders, partners & donors from 21-31st August, 2012 with the objectives "to review the country's progress towards the TB-related Millennium Development Goals (MDGs), challenges and plans for TB control efforts, and to advise GOI and partners on the pathway towards achieving Universal Access to TB care". The JMM also provided inputs on strategic approaches and innovative mechanisms for achieving the key targets of the 12th five year plan. The JMM is held every three years as a part of the RNTCP Independent Evaluation strategy and the last JMM was held in April 2009. The recently concluded mission (2012) comprised of 92 experts of which 39 were International Experts and 53 were National Experts on TB Control. The International Experts were from various International Organizations such as the WHO, Global Fund, World Bank, DFID Bill & Melinda Gates Foundation etc.

51. For the first time, the High Level Meeting on "Prevention and Management of Drug Resistant TB in India" under the Chairmanship of the Hon'ble Union Minister of HFW was held in New Delhi on 30th August 2012 with the objectives to

    a. Articulate India's commitment to address the challenge of Drug Resistant Tuberculosis

    b. Identify the challenges and strategies towards prevention and management of drug resistant

tuberculosis in India

c. Explore the national and international cooperation to meet the objective of universal access to quality TB care.

d. This meeting was attended by 80 experts of which 20 were international experts and 60 were national experts in TB control.

September-2012

52. National Consultative Workshop on Partnerships was held at New Delhi on 4 September, 2012 for reviewing the status of implementation of partnerships and to identify mechanisms for further increasing the role of partners in the RNTCP.

53. The meeting of National Operation Research Standing Committee of RNTCP was held on 7th September 2012 at LRS Institute of TB and Respiratory Diseases, Mehrauli, New Delhi for approval of research proposals submitted for operational research under the RNTCP and also deciding on guidelines for conducting operational research in the programme.

54. Review of TB Partnership at Bhubaneswar, Odisha on 20th-21st September 2012 to review the Partnership mechanism and sensitization of NGOs from the Eastern part of India.

55. A policy decision of screening all TB patients for Diabetes was taken in the month of September 2012 based on the mid-term review of TB-DM pilot project at 13 different sites of the country and has been initiated in the 100 districts where National Programme for Prevention & Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke is being implemented. The same would be scaled up as the NPCDCS programme is scaled up.

56. A National workshop to review and strengthen the existing State TB Demonstration Centres, the technical wing of the TB control programme in each state, was held on 26th to 27th September 2012 at NTI Bangalore.

October-2012

57. First Meeting of the National Core Committee for RNTCP Pharmacists Partnership was held at Nirman Bhawan, New Delhi on 1st October 2012. The meeting was held to formalize the Terms of Reference for the Core Committee as well as the mechanism of partnership and reporting from community pharmacists.

58. The meeting of Empowered Program Committee (EPC) of NRHM was held on 4th October 2012 for the approval of the National Strategic Plan of RNTCP for the 12th FYP.

59. Zonal Task Force Workshop cum CME for the involvement of Medical Colleges in RNTCP for the West Zone was held at NKP Salve Medical College and Lata Mangeshkar Hospital, Nagpur, Maharashtra on 4th-5th October 2012. The main objectives of the workshop were to provide updates in RNTCP for Medical Colleges, review the progress made by the Zonal Task Force (ZTF) West Zone on the recommendations of the NTF 2011 workshop; to Share experiences, identify bottlenecks and provide suggestions for future course of action & develop an action plan for the ZTF and STFs for the next 1 year. The Workshop was attended by about 150 participants from Medical Colleges in the 5 States in the West Zone.

60. The Central Internal Evaluation of Orissa was held from 8th to 13th October 2012 to evaluate the programme performance and implementation in the State. Two districts (Sambalpur and Koraput) in the state were evaluated along with the State level institutions.

61. Zonal Task Force Workshop cum CME for the involvement of Medical Colleges in RNTCP for the South 2 Zone was held at IMA Hall, Kochi, Kerala on 11th-12th October 2012. The main objectives of the workshop were to provide updates in RNTCP for Medical Colleges, to review the progress made by the Zonal Task Force (ZTF) South 2 Zone on the recommendations of the NTF 2011 workshop; to Share experiences, identify bottlenecks and provide suggestions for future course of action & develop an action plan for the ZTF and STFs for the next 1 year. The Workshop was attended by about 130 participants from Medical Colleges in the 3 States/ UT in the South 2 Zone.

62. The Annual Review Meeting of Laboratories under RNTCP was held on 15th to 17th October 2012 at Kolkata with the objectives of 'To review the performance of laboratories'.

63. Zonal Task Force Workshop cum CME for the involvement of Medical Colleges in RNTCP for the North Zone was held at PGIMS, Rohtak, Haryana on 18th-19th October 2012. The main objectives of the workshop were to provide updates in RNTCP for Medical Colleges the workshop, to review the progress made by the Zonal Task Force (ZTF) North Zone on the recommendations of the NTF 2011 workshop; to Share experiences, identify

bottlenecks and provide suggestions for future course of action & develop an action plan for the ZTF and STFs for the next 1 year. The Workshop was attended by about 80 participants from Medical Colleges in the 8 States/ UT in the North Zone.

64. The meeting of meeting of Mission Steering Groups was held on 23rd October 2012 for the approval of the National Strategic Plan of RNTCP for the 12th FYP where it was decided that EPC minutes will be approved by Union Minister H&FW.

November-2012

65. Tuberculosis and Diabetes Mellitus bi-directional screening project data analysis and scientific writing workshop was held from 29th October to 1st November 2012 in collaboration with the Union and World Diabetes foundation at New Delhi.

66. The Zonal Task Force Workshops cum CME for involvement of medical college in RNTCP for North East Zone was organised in Shillong on 1st -2nd November 2012. The main objectives of the workshop were to provide updates in RNTCP for Medical Colleges, to review the progress made by the Zonal Task Force (ZTF) North East Zone on the recommendations of the NTF 2011 workshop; to Share experiences, identify bottlenecks and provide suggestions for future course of action & develop an action plan for the ZTF and STFs for the next 1 year. The Workshop was attended by about 50 participants from Medical Colleges all the States in the North-east Zone.

67. Capacity building workshop for State TB/HIV coordinators was held at NTI, Bangalore on 5th and 6th November 2012.

68. Meeting of the 'Technical Expert Group on TB Burden Estimation in India' was held on 21st November 2012 to recommend on the most feasible, appropriate strategy for estimation of Incidence, Prevalence and Mortality due to Tuberculosis in India and to develop the protocol and methodology for estimation of Incidence, Prevalence and Mortality due to Tuberculosis in India.

69. The Central Internal Evaluation of Jharkhand was held from 19th to 24th November 2012 to evaluate the programme performance and implementation in the State. Two districts (Dumka and East Sighbhum) in the state were evaluated along with the State level institutions.

70. The Zonal Task Force Workshops cum CME for involvement of medical college in RNTCP for South 1 Zone will be organised in Manipal on 26th -27th November 2012. The main objectives of the workshop were to provide updates in RNTCP for Medical Colleges, to review the progress made by the Zonal Task Force (ZTF) South Zone I on the recommendations of the NTF 2011 workshop; to Share experiences, identify bottlenecks and provide suggestions for future course of action & develop an action plan for the ZTF and STFs for the next 1 year. The Workshop was attended by about 160 participants from Medical Colleges in the 2 States/ UT in the South Zone I.

December-2012

71. The Zonal Task Force Workshops cum CME for involvement of medical college in RNTCP for East Zone will be organised in Patna on 6th & 7th December 2012. The main objectives of the workshop were to provide updates in RNTCP for Medical Colleges, to review the progress made by the Zonal Task Force (ZTF) East Zone on the recommendations of the NTF 2011 workshop; to Share experiences, identify bottlenecks and provide suggestions for future course of action & develop an action plan for the ZTF and STFs for the next 1 year. The Workshop was attended by about 50 participants from Medical Colleges in the 5 States/ UT in the East Zone.

72. Meeting for involvement of Other Public Sectors for TB Control in India under RNTCP was held on 18th December 2012 at Nirman Bhawan, New Delhi. Representatives from Defence, Railways, ESI, CGHS, PSUs had participated.

73. National Workshop with all stakeholders on 'Standards for Tuberculosis Care in India' was held from 12th to 14th December 2012 in New Delhi with the objective of 'To develop Standards of Tuberculosis Care to the Indian context that is acceptable to the providers in public, private and other settings as Standards for TB Care in India (STCI)'. More than 80 experts from various organizations participated in the meeting.

74. Approvals were issued from Central TB Division to roll out services for Programmatic Management of Drug Resistant TB in 139 districts during October – December 2012.

75. The meeting of the National Technical Working Group for TB-HIV collaborative activities was held on 17th December 2012. Following important decisions were taken:-

    a. Adoption of Operational plan for

implementation of Isoniazid Preventive Treatment at ART centres

b. Endorsement of National Framework for collaborative TB_HIV activities –December 2012

c. Endorsement of whole blood finger prick test-operational module

d. Decision on dosing of Rifabutin to be used in adult HIV infected patients on PI based ARV regimens

e. Endorsement of priority areas for operational research pertaining to DR-TB/HIV, detection, linkages and management

f. Decision on the OR findings of PITC among presumptive TB cases on low prevalent districts

76. The TB proposal for the phase 2 under Single Stream Funding of Global fund has been endorsed by India Country Coordination Mechanism (CCM) on 28th December 2012.

Supervision from CTD in 2012:

- **>120 visits were made to States/UTs**
- **>80 districts were visited upto most peripheral level including patient's homes.**

1. Introduction

The Revised National TB Control Programme (RNTCP) is being implemented as a 100% Centrally Sponsored Scheme in the entire country, with DOTS strategy which is WHO recommended. Under the programme, diagnosis and treatment facilities including a supply of anti TB drugs are provided free of cost to all TB patients. For quality diagnosis, designated microscopy centers have been established for every one lakh population in the general areas and for every 50,000 population in the tribal, hilly and difficult areas. Sputum microscopy instead of X-ray avoids over diagnosis and identifies infectious cases. More than 13000 microscopy centers have been established in the country. Drugs are provided to the TB patients in patient wise boxes to ensure that all drugs for full course of treatment are earmarked on the day one, a patient is registered for treatment under the programme. More than 4,00,000 Treatment centers (DOT centers) have been established near to residence of patients to the extent possible. All government hospitals, Community Health Centers (CHC), Primary Health Centers (PHCs), Sub-centers are DOT Centers, in addition, NGOs, Private Practitioners (PPs) involved under the RNTCP, Community Volunteers, Anganwadi workers, Women Self Groups etc. also function as Community DOT Providers/DOT Centers. Drugs are provided under direct observation and the patients are monitored so that they complete their treatment.

The programme has launched "DOTS Plus" for management of drug resistance tuberculosis (DR-TB) in 2007 and has expanded these services to all states and UTs across the country in 2012. The programme is presently in the process of decentralizing DOTS Plus services and aims to make these services available in all districts by end of Feb 2013.

TB-HIV collaborative activities are being implemented in collaboration with (National AIDS Control Programme) to provide TB treatment and care and support for TB-HIV patients.

To further extend reach of programme and involve non-programme providers and community, the programme has already revised its guidelines for involvement of Non-Government Organizations and private practitioners with enhanced outlays. The programme has also enhanced provisions for contractual staff to prevent staff turnover. To further enhance the capacity of the programme staff in effective implementation of the programme and increase their capacity the programme continuously reviews the training needs of programme personnel and undertakes regular capacity building programmes. The programme is also actively advocating with Drug Controller General of India to consider enforcing appropriate legislation to stop misuse of anti-TB drugs in private sector. A consensus statement to promote rational use of anti-TB drugs is being widely disseminated in association of professional associations like Indian Medical Association, Indian Pediatrics Association, Association of Family Physicians and Indian Public Health Association.

Programme management is notable for decentralized financial control, management, and supervision to State and District health systems, supported by a small number of supervisory staffs. RNTCP diagnostic and treatment services are wholly integrated within the general health system and medical colleges. Now RNTCP is an integral part of the National Rural Health Mission (NRHM). The Central level serves only for organizing and distributing financing for TB control activities within the NRHM, centralized drug procurement and distribution to States, development of comprehensive normative guidance, capacity building, and monitoring and evaluation of States and Districts programme management units.

Experience has shown that DOTS strategy can be well implemented for TB control in an integrated manner by the general health system under the umbrella of NRHM if additional support is given by RNTCP

The year 2012 witnessed innumerable newer initiatives and activities like Notification of TB; Case based web based recording & reporting system (NIKSHAY); Standards of TB Care in India; Composite Indicator for monitoring programme performance; Rapid scale up of the Programmatic Management of Drug Resistant TB services and ban on commercial sero- diagnostics. In order to improve the quality of TB care in the private sector availability of free quality assured anti TB drugs through local chemist is being considered which will result in better outcomes and better epidemiological control of TB further preventing emergence of Drug resistant TB.

Achievements of RNTCP:

1. Since inception, RNTCP has evaluated over 55 million persons for TB and initiated treatment for over 15.8 million TB patients.
2. Prevention of mortality has been biggest achievement of RNTCP saving more than 2.8 million lives.
3. Having achieved national coverage, with special emphasis to areas classified as Tribal and/or Backward, RNTCP is well on track to achieve the Millennium Development Goal (MDG) of halting and beginning to reverse the spread of the disease.
4. The RNTCP and National AIDS Control Programme have significantly expanded joint TB/HIV services, which are currently available in 18 states with the aim to cover all states by 2012.
5. A national lab scale-up plan with secured funding to establish a network of culture and DST laboratories is in place. By 2010, MDR-TB services were available in 132 districts in 12 states and the programme had diagnosed and provided treatment to almost 4217 MDR-TB patients till quarter ending March 2011, with a vision for nationwide coverage by 2012.
6. Medical college involvement has been largely successful. Efforts to engage the private sector have revolved around outreach, directly via public-private mix (PPM) schemes and through intermediary groups such as the Indian Medical Association (professional organization) and Catholic Bishop Conference of India (CBCI, a faith based organization).
7. A major initiative to expand the role of civil society and affected communities in TB care and control is currently underway for 2010 – 2014, supported by a grant from the Global Fund directly to civil society partners.
8. Repeat ARTI surveys suggests the Annual Risk of TB Infection in the country has reduced from the national average of 1.5% to 1.1% since 2002-03 to 2007-10 showing a decline of 3.5% annually. With successful implementation of RNTCP the decline in ARTI is indicative of reduction in incidence of TB in India. If we apply this ARTI for incidence estimation, it suggests that the incidence of New Smear Positive TB cases has reduced from 75 per lakh population to 55 per lakh population. While the incidence of all types of TB cases is then estimated to be around 121 per lakh population.
9. While the indirect estimate of prevalence of the disease by WHO suggest that around 3 millineum TB cases are prevalent in India currently. The trend in estimated prevalence of TB suggest >50% reduction from its 1990 level of 583 per lakh population to around 250 per lakh population.

Key achievements during 11th Five Year Plan are:

Indicator	11th FYP	
	Planned *	Achieved *
No of TB suspects examined (millions)	23.72	27.5
Total number of patients to be put on treatment **(millions)**	5.04	6.4
New Smear Positive patients to be put on treatment **(millions)**	2.34	2.46
No of MDR TB patients to be put on treatment **(000)**	5	4.2
Success Rate in New Smear Positive patients in RNTCP (%)	≥85%	87%
Estimated Annual Prevalence per lakh population	Reduced from 299 to 250	
Annual Risk of TB Infection (%)	Reduced from 1.5% to 1.1%	

Economic impact of RNTCP:

A study on the economic impact of scaling up of RNTCP in India in 2009 shows that on an average each TB case incurs an economic burden of around US$ 12,235 and a health burden of around 4.1 Disability adjusted life years (DALYs). Similarly, a death from TB in India incurs an average burden of around US$ 67,305 and around 21.3 DALYs.

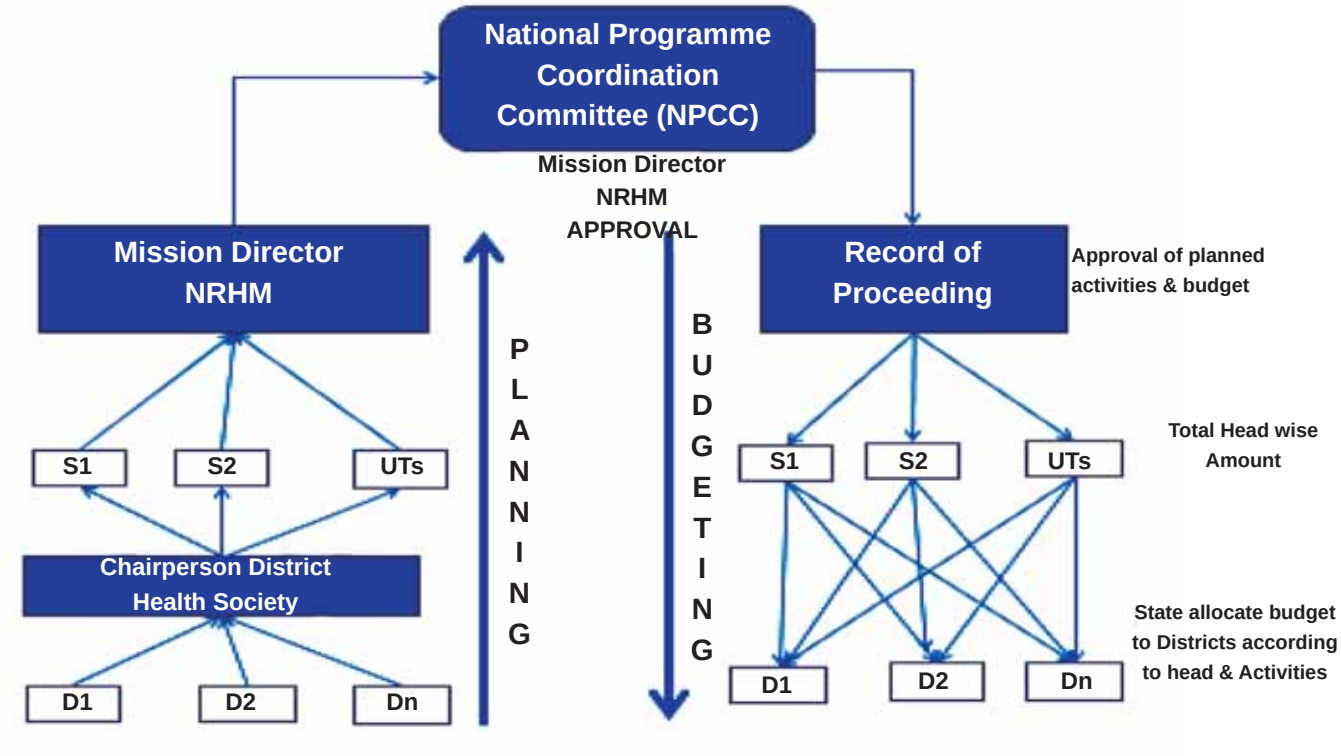
A total of 6.3 million patients have been treated under the RNTCP from 1997-2006. This has led to a total health benefit of 29.2 million DALYs gained including a total of 1.3 million deaths averted. In 2006, the health burden of TB in India would have risen to around 14.4 million DALYs or have been 1.8 times higher in the absence of the programme. The RNTCP has also led to a gain of US$ 88.1 billion in economic wellbeing over the scale-up period. In 2006, the gain in economic wellbeing is estimated at US$ 19.7 billion per annum – equivalent on a population basis to US$ 17.1 per capita. In terms of TB patients, each case treated under DOTS in India results in an average gain to patients of 4.6 DALYs and US$ 13,935 in economic well being.

2. Planning and Budgeting

This is a centrally sponsored scheme implemented through NRHM with the State, District & Municipal Corporation Health Societies having a separate sub-account for TB Control Activities through which the funds from the Ministry of Health and Family Welfare are disbursed for implementation of the project activities within the concerned State/ District/ Municipal Corporation. All State Governments who have agreed to implement the project as per RNTCP Guidelines have signed Memorandum of Understanding.

The planning and budgeting process of RNTCP is decentralised and starts with the Planning of activitiesfor the next financial year (April-March) at the district which is submitted to state through District Health Societies under NRHM.States Health Societies under NRHM submit this to Ministry of Health and Family Welfare for approval. The CTD oversees the planning and budgeting of TB control activities for the entire country and determines a maximum possible budget for each State based on a review of the Annual Action Plan, previous trends in state expenditure and utilization of available funds.

Figure 1: Budgeting and Planning process under RNTCP



D1, D2----District1-,District 2----------; S1,S2----State 1, State 2----------;NRHM-National Rural Health Mission

Budgeting and Flow of funds

The time for budgetary process starts in the October-November of each year for the planning of next each financial year (FY). CTD releases the funds through MoHFW; these funds are released to the accounts of State Health Society (SHS) and from SHS accounts this goes to the account of State TB cell. For the release of funds from state to districts the same process is followed.

The project is being audited by empaneled auditor at State/ District Health society and at central level audit is being done by CAGI, a division of Department of Economic Affairs (DEA), Ministry of Finance, and Government of India.

The project at the central level has a Finance Unit (staffed by Finance consultants, Finance Manager, Accountants, Assistant Accountants, Accounts Officer, and Data Entry Operator) at the Central TB Division. At the State level, there is an Accounts Officer, Accountant (Two accountants in larger states) and the districts to have a full time accountant. The CTD continue to make efforts to enhance the capacity for financial management at state and district level.

Achievement of RNTCP under 11th Five Year Plan

RNTCP has achieved 100% coverage in the country in 2005-06 only. Based on this success of program, Rs 1447 crore under 11th Five year plan was allocated and Rs 1609 crore was utilised.

Table 1 : RNTCP Financial performance during 11th Five Year Plan (all amount in Rs crore)

Year	Budget (in Rs crores)	Allocation (in Rs crores)	Expenditure (in Rs crores)
2007-08	267.00	267.00	262.12
2008-09	275.00	280.00	279.90
2009-10	285.00	312.25	312.02
2010-11	300.00	350.00	349.95
2011-12	320.00	400.00	384.34
Total	**1447.00**	**1609.25**	**1588.33**

There is no Audit Observation pending with Central TB Division

12th Five Year Plan (2012-17)

RNTCP has entered in an ambitious National Strategic Plan (NSP) 2012-17 as part of the country's 12th Five year Plan. The theme of the NSP 2012-17 is "Universal Access for quality diagnosis and treatment for all TB patients in the community" with a target of "reaching the unreached". The major focus is early and complete detection of all TB cases in the community, including drug resistant TB and HIV-associated TB, with greater engagement of private sector for improving care to all TB patients. The NSP is backed up by GoI's commitment for substantial increase in the investment for TB control, with a four-fold increase in budgetary allocation.

This time there is higher commitment from Government of India for RNTCP and this is clear from the tables mention below which shows the contribution of GOI funds for RNTCP during five year plans.

Vision:

The vision of the Government of India is a "TB-free India - through achieving Universal Access by provision of quality diagnosis and treatment for all TB patients in the community".

Goal:

The goal of TB Control Programme is to decrease the morbidity and mortality by early diagnosis and early treatment to all TB cases thereby cutting the chain of transmission

Objectives:

- Early detection and treatment of at least 90% of estimated all type of TB cases in the community, including Drug resistant and HIV associated TB.
- Successful treatment of at least 90% of new TB patients, and at least 85% of previously-treated TB patients
- Reduction in default rate of new TB cases to less than 5% and re-treatment TB cases to less than 10%
- Initial screening of all re-treatment smear-positive till 2015 and all Smear positive TB patients by year 2017 for drug-resistant TB and provision of treatment services for MDR-TB patients;
- Offer of HIV Counselling and testing for all TB patients and linking HIV-infected TB patients to HIV care and support;
- Extend RNTCP services to patients diagnosed and treated in the private sector.

Targets:

- Detection & treatment of about 87 lakh Tuberculosis patients during 12th FYP
- Detection & treatment of at least 2 lakh MDR-TB patients during 12th FYP
- Reduction in delay in diagnosis and treatment of all types of TB cases
- Increase in access to services to marginalized and hard to reach populations and high risk and vulnerable groups

These ambitious goals are achievable because the TB programme has established a robust programme management infrastructure, focused on effective implementation, decentralizing patient-friendly services to impoverished and vulnerable populations, and improving quality of care for all.

To reach Universal Access, the RNTCP will pursue the following approaches:

Ensuring early and improved diagnosis of all TB patients, through improving outreach, vigorously expanding case-finding efforts among vulnerable populations, deploying better diagnostics, and by extending services to patients diagnosed and treated in the private sector.

Improving patient-friendly access to high-quality

treatment for all diagnosed cases of TB, including scaling-up treatment for MDR-TB nationwide.

Re-engineering programme systems for optimal alignment with NRHM at block level and human resource development for all health staffs.

Enhancing supervision, monitoring, surveillance, and programme operations for continuous quality improvement and accountability for each TB case, with programme-based research for development and incorporation of innovations into effective programme practice.

If the RNTCP is successful at achieving it's objectives by the end of 5 years, modeling has indicated over the next 15 years that TB incidence may decline by around 30%, and MDR TB will be reduced by 50% as compared to 2010 This translates to 750,000 lives saved, 1.7 million TB cases and 100,000 MDR TB cases averted and over 15 years.

Finding more cases earlier

Rather than waiting for patients to present at public health facilities with symptoms, general health and field staff will be better utilized, to detect and mobilize symptomatics earlier, supported by outreach, communication, and social mobilization. Active screening for TB among socially and clinically-vulnerable populations—e.g. slum-dwellers, contacts of TB cases, diabetics—will detect patients earlier and reduce transmission. As patients seeking care usually first visit private providers, effective engagement of private providers will capture TB cases at their initial point of care, reducing delay and transmission. Widespread deployment of new higher-sensitivity TB diagnostic tests will detect more patients earlier - especially among persons living with HIV/AIDS who rapidly die when TB and MDR TB are not quickly and accurately diagnosed and treated. Those patients who are diagnosed will be counted to enable better programme monitoring and continually improve case management.

During the 5 year period of 2012–2017, the RNTCP intends to evaluate 4.8 crore people for TB, with reduced time for diagnosis. The RNTCP also aims that >90% of TB patients have known HIV status, that improved high-sensitivity rapid diagnostic tests for TB and drug-resistant TB are deployed in all districts and medical colleges nationwide, and all confirmed TB cases are s at the outset or early in their course of treatment. Better case-finding is central to achieving RNTCP's goals, and hence Rs. 2,226 crore or 37% of the 5-year budget is proposed for these activities.

Making treatment more patient-friendly

Early diagnosis must lead to high quality patient-friendly treatment. Universal Access requires that treatment be improved for patients treated in both the public and private sectors. Testing patients at the onset for drug susceptibility will detect MDR TB earlier and place patients on the right treatment from the beginning, improving treatment outcomes, reducing transmission, and reducing death – especially among HIV-infected TB patients, who die quickly if not promptly and appropriately treated for MDR TB. Flexible treatment options will extend the provision of these services to patients treated in the private sector, seeking to improve the quality of TB treatment than provided today, reducing the ongoing generation of drug-resistant TB. Special support will be provided for the socially vulnerable.

Over 2012–2017, RNTCP proposes to treat 83 lakh TB patients, including 1.2 lakh TB patients for MDR TB. Among HIV-infected TB patients, 90% will be provided ART during TB treatment to reduce death. Anti-TB drugs alone are projected to cost Rs. 1,797 crore, of which 62% is for costly second-line MDR TB drugs that such patients are otherwise unable to afford themselves.

Re-engineering RNTCP systems for NRHM alignment and health systems development

RNTCP will re-organize along the health block lines, aligning and integrating sub-district programme management and supervision with NRHM. Improved alignment will place general health staff at the forefront of improved TB case finding, integrated with routine household visits, and improved treatment supervision. RNTCP is developing a comprehensive HRD plan to update and develop the skills of both programme personnel and general health system staff involved with service delivery.

With the proposed integration of programme staff with NRHM health block activities and better utilization of general health and field staff for case-finding and treatment support, extensive training of the general health staff will be required. Manpower will be needed for extending the reach of RNTCP and effectively engaging all health providers, the bulk of which would be re-purposed to existing programme staffs. Human resource costs are estimated to be Rs. 1,368 crore, or 22% of the overall

proposed budget.

Supervision, monitoring, programme operations, and research

The RNTCP has defined best programme practices for supervision and monitoring, and will continue to exercise rigorous supervision and evaluation practices. This task will be greatly facilitated in future with the use of electronic case-based notification, extended to the private providers and laboratories, and this information will be used for better programme monitoring and patient case management. The programme plans to innovate with large-scale operational research to develop effective approaches, and deploy the best practices. Substantial local innovation will be required to find regionally-appropriate solutions for better case-finding and treatment for different vulnerable groups suffering from TB. Programme operations, supervision, monitoring and research are estimated to cost Rs 748 crore, or 12% of the overall proposed budget.

Important activities under the 12th five year plan :

1. **Alignment of basi c RNTCP sub-district management units with NRHM blocks** for strengthening supervision and monitoring - Whereas RNTCP since inception has used sub-district "Tuberculosis Units" (TU) of 5 lakh population for reporting, monitoring and supervision, now these will be aligned at 1 per NRHM health blocks. The number of Senior Treatment Supervisor (STS) would be increased accordingly, to operate under Block Medical Officer.
2. **Human Resources:**
   a. **National Level:** 116 contractual positions in areas such as Epidemiology, Microbiology, Drug Resistance, TB-HIV, Public Private Mix, ACSM, Information Technology, Finance, Accounts, Procurement, Administration, Biostatistics, HRD, Monitoring, Evaluation, Research & Public Health are proposed in 12th FYP at national level institutes (Central TB Division, National Reference Laboratories, Office of Regional Directorates).
   b. **State Level:** States/UTs would be provided consultants in areas such as Epidemiology, Microbiology, Drug Resistance, TB-HIV, Public Private Mix, ACSM, Information Technology, Finance, Accounts, Procurement, Administration, Monitoring, Evaluation, Research & Public Health. This will include the requirements of state level institutes (State TB Cell, State TB Demonstration & Training Centres-STDCs, Intermediate Reference Laboratories(IRL), State & Zonal task forces of medical colleges) etc.. States with populations exceeding 30 million will be eligible for additional manpower.
   c. **District Level:** Every district would be supported with Medical officer, District Program Coordinator, PPM Coordinator, Drug Resistance TBHIV supervisor, LTs, Data Entry Operator, Accountant, TBHV (per 1 lakh urban population), MO/LT/TBHV for Government Medical College / Government Hospitals with DNB courses as per need, Medical officer/Counselors/statistical assistant for DRTB Centre. For private hospitals detailed guidelines & criteria's will be framed and will be submitted for approval to the Ministry of Health & Family Welfare. Districts with population exceeding 4 million will be eligible for additional manpower.
   d. **Sub-District Level:** Senior Treatment Supervisor (STS) & Senior TB Laboratory Supervisor (STLS) per TU.
3. **Laboratories/Diagnosis:**
   a. **Improved Diagnosis –** the network of existing 13000 designated microscopy centres (DMCs) will be upgraded and rationalized. States and districts will be allowed flexibility to increase DMCs as per local need. The LED-FM microscopes will be provided to all DMCs with high workload.
   b. **Universal Drug-Susceptibility Testing**: Testing for Multi-Drug Resistance TB (MDR-TB) will be made available to all MDR suspects through decentralization of testing for MDR-TB at district hospitals / district TB centers and all hospitals attached with government medical colleges using rapid tests. These Rapid automated molecular tests will be made available in each district hospital and hospital attached with government medical colleges. Private medical colleges may also be considered with the approval of government in due course of time (~1000 Culture Based Automated Nucleic acid amplification test (CBNAAT) machines will be used for early detection of TB including drug resistant TB.)
   c. **Scale-up of Reference Laboratories:** The laboratories capable of conducting culture &

drug susceptibility would be scaled up from 43 (one per 25 million population) to an achievable 120 (one per 10 million population) with requisite infrastructure, equipment & HR support.

4. **Urban TB Control:**
   In the urban areas TB control program will be aligned with Urban Health Mission. The Tuberculosis unit is proposed for 1 per 1-2.5 lakh population in urban areas for intensifying TB control activities. Innovations & pilots would be conducted in urban congregate settings to improve TB control.
5. **Drugs:**
   All the TB patients, including drug resistant TB patients, will be provided free anti-tuberculosis drugs in public as well as private sector as per program approved regimens. Adequate monitoring and supervision will be ensured for this.
6. **Public Private Mix (PPM):**
   The current and proposed NGO-PP schemes will be implemented with suitable revised financial norms. It is proposed that engagement of the private sector be enhanced through an outsourced mechanism based on the needs of the program at central and state and district levels.

Recent Policy updates under RNTCP:

1. A new system of Monitoring of programme through Composite Indicator introduced which enables the monitoring of input, process and outcome indicators.
2. Revision of Supervision and Monitoring Strategy (March, 2012) was undertaken to address the new needs.
3. Orders were issued for notification of all TB cases diagnosed and treated by practitioners and the other health establishments.(May 2012)
4. The manufacture, sale, distribution, use and import of the Sero-diagnostic test kits for tuberculosis in India, has been banned (June, 2012)
5. Guidelines for "Programmatic Management of Drug Resistant Tuberculosis" were 0revised (June, 2012) wherein diagnostic & treatment guidelines were also included for XDR and XDR-TB patients having ofloxacin resistance.
6. All TB suspects to be screened for HIV in the high prevalence states (July, 2012)
7. All TB patients to be screened for Diabetes (2012)
8. Guidelines for management of Pediatric TB cases were revised introducing Newer Diagnostic Algorithm and Weight Bands. (2012)

The overall budget required in 2012–2017 to achieve this Universal Access vision, to save 750,000 lives from TB, and to control MDR TB are estimated to be Rs. 5825 crore as under 12th FYP and the program requested the same to Planning commission.

But based on the Physical and financial performance during the 11th FYP, a budget of Rs 4500 crores has been allocated to Revised National TB Control Programme under 12th Five year Plan (2012-17).

Categories	2012-13	2013-14	2014-15	2015-16	2016-17	Total	Percentage of total
	Budget (Rs Lakh)	Budget (Rs Lakh)	Budget (Rs Lakh)	Budget (Rs Lakh)	Budget (Rs Lakh)	Budget (Rs Lakh)	
Investment Costs							
Civil Works	655	946	2,426	1,271	1,238	6,536	1.45%
Lab Equipment	590	1,042	1,651	1,850	1,906	7,039	1.56%
Office Equipment	149	389	401	236	252	1,427	0.32%
Vehicles	226	428	1,369	224	273	2,519	0.56%
Ist Line Drugs	9,115	13,256	13,566	14,117	13,869	63,923	14.21%
2nd Line Drugs	11,900	22,258	21,832	11,821	12,063	79,874	17.75%
Training	1,245	725	2,182	1,634	1,539	7,326	1.63%
Medical Colleges	1,315	891	1,995	2,285	2,355	8,841	1.96%
Advocacy, Communication and Social Mobilisation	1,495	1,227	2,434	2,850	2,727	10,732	2.38%
Contractual Services	17,481	21,104	28,173	27,162	23,903	1,17,823	26.18%
Consultancy Services and Research Studies	459	955	2,263	1,585	1,471	6,733	1.50%
NGO & PP Support	2,786	4,549	9,139	9,446	9,315	35,235	7.83%

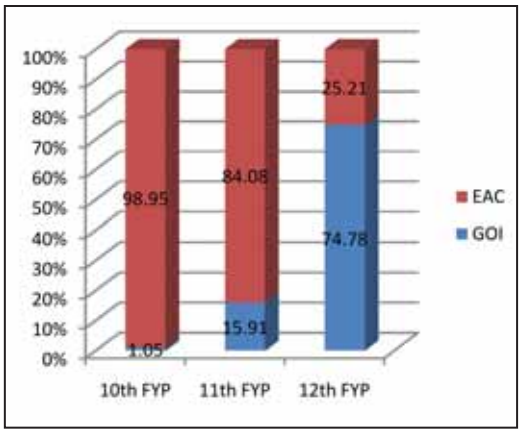
Categories	2012-13	2013-14	2014-15	2015-16	2016-17	Total	Percentage of total
	Budget (Rs Lakh)	Budget (Rs Lakh)	Budget (Rs Lakh)	Budget (Rs Lakh)	Budget (Rs Lakh)	Budget (Rs Lakh)	
Lab Materials (Round9-GFATM)		879	2,368	2,663	1,941	7,851	1.74%
Expand TB Project		978	-	-	0	978	0.22%
Sub Total	47,417	69,627	89,799	77,143	72,850	3,56,836	79.30%
Recurrent costs							
Printing	561	623	1,312	1,605	1,592	5,692	1.26%
Lab materials	1,474	2,547	5,783	8,510	8,066	26,381	5.86%
Counseling Charges	1,055	2,241	4,345	4,974	4,657	17,271	3.84%
Patient support & transportation charges	635	1,349	2,614	2,993	2,802	10,393	2.31%
Vehicle Operation	1,022	431	2,166	2,317	2,035	7,970	1.77%
Vehicle hiring	650	789	2,062	2,196	1,919	7,616	1.69%
Office operations	777	400	781	835	733	3,526	0.78%
Supervision & Monitoring	1,815	1,067	2,086	2,234	1,969	9,171	2.04%
Equipment Maintenance	11	124	301	349	338	1,123	0.25%
WHO Technical Assistance	600	803	843	846	930	4,022	0.89%
Sub Total	8,598	10,373	22,295	26,858	25,040	93,164	20.70%
Contingency @ 0%	-	-	-	-	-	-	0%
Total	56,015	80,000	1,12,094	1,04,002	97,890	4,50,000	100%

Details of programme funding both domestic and externally aided component during 10th, 11th and 12th FYPis as under:

Table 2: Funding of RNTCP under different FYP by various sources (all amount in Rs Lakhs)

Donors	**10th FYP (2002-07)**	**11th FYP (2007-12)**	**12th FYP (2012-17)**
Government of India	**9.68**	**25525**	**354895**
EAC			
World Bank	14387.93	69964	0
DFID	3500.00	21303	0
GFATM	3999.76	43479	113408
USAID	200.00	150	
UNITAID			6297
Total	22087.69	134896	119705
Total	**22097.37**	**160421.00**	**474600**
EAC as Percentage of Total	99.96	84.09	25.22

Fig 1 : Step towards self relience



It is evident from figure 1that percentage of domestic component is progressively increasing over the period and has reached around 75% indicative of self-reliance.

3. TB EPIDEMIOLOGY

Overview of Incidence, Prevalence, Mortality

Though India is the second-most populous country in the world, India has more new TB cases annually than any other country. In 2011, out of the estimated global annual incidence of 9 million TB cases, 2.3 million were estimated to have occurred in India (**Table 1**).

Table 1: WHO estimated burden of tuberculosis in India, 2011

	Number (Millions) (95% CI)	**Rate Per 100,000 Persons (95% CI)**
Incidence	2.3 (2.0–2.5)	185 (167–205)
Prevalence	3.1 (2.0–4.6)	256 (161–373)
Mortality	0.32 (0.21–0.47)	26 (17–39)
	Number (Millions) (95% CI)	**Percent (95% CI)**
HIV among estimated incident TB patients	0.11 (0.075–0.16)	5% (3.3–7.1%)
MDR-TB among notified pulmonary TB patients	0.064 (0.044–0.075)	5.3% (3.6–6.2%)
Notified New pulmonary TB patients	0.021 (0.015–0.027)	2.1% (1.5–2.7%)
Notified Re-treatment pulmonary TB patients	0.043 (0.039–0.048)	15% (13–17%)

Incidence of tuberculosis disease

Measuring the incidence of tuberculosis disease is challenging. Long term cohort studies for direct measurementof incidence are operational difficulties, prohibitively expensive and have an inherent risk of bias, due to missed or misclassified cases. Measuring the impact of the tuberculosis control programme through routine surveillance activities requires a consistently effective surveillance system that captures the great majority of incident cases over a period of years, as well as stability in underlying population characteristics. Estimation of disease incidence from prevalence requires clear understanding of the duration of disease. Estimates of disease incidence by any means may be confounded by migration, urbanization, and changes in the prevalence of co-morbidities associated TB (e.g. HIV infection, diabetes. smoking, malnutrition, etc.) None of this information isavailable in India.

Prior to the implementation of RNTCP, from 1960-1986 a number of community surveys and active surveillance activities in mainly South India were conducted. Results from these surveys have been summarized in an earlier review article. These surveys were interpreted to suggest that the historical annual incidence of culture positive pulmonary tuberculosis may have ranged from 800–2500 per 100,000 populations.

Tuberculin surveys

Several tuberculin surveys were carried out in the pre-RNTCP era, estimating the ARTI among children <10 years as 1% to 2% per year. However, these surveys were non-standardized and carried out in limited areas mainly in the southern part of India. The first nation-wide standardized tuberculin survey was carried out during the period 2000-2003. For the purpose of the survey, the country was stratified into 4 zones (north, west, south and east). An identical methodology of sampling was used across all zones, allowing for stratified analysis for children with and without BCG scar. Given the ages of enrolled children, the results corresponded to the ARTI applicable to 1998, i.e. the pre-RNTCP period.

For the second survey, unpublished results are shown as shared by NTI, applicable to the year 2007, i.e. immediately after national DOTS coverage was achieved.

The sample size in survey 2 was substantially smaller, as the first survey showed that BCG scar did not influence ARTI interpretation, hence sampling was not stratified by BCG scar status. Table 2 details the major findings, based on the same mirror image analytic technique. Results are shown for all enrolled children, irrespective of BCG scare status.

Table 2: Results of National ARTI survey 1 (2000-2001) and Survey 2 (2009-2010)

	Survey 1			Survey 2			Average annual decline
Zone	Sample	Prevalence	ARTI	Sample	Prevalence	ARTI	%
North	48,323	10.1 (9.1-11.1)	1.9 (1.7-2.1)	12,535	5.9 (4.7-7.0)	1.1 (0.8-1.3)	6%
East	37,854	6.2 (5.5-7.0)	1.2 (1.0-1.3)	19,159	6.5 (4.8-6.2)	1.2 (0.9-1.5)	—
West	48,282	8.7 (7.7-9.6)	1.7 (1.5-1.9)	15,743	4.0 (3.2-4.9)	0.8 (0.8-0.9)	8%
South	50,533	6.1 (5.4-6.7)	1.1 (1.0-1.2)	22,059	6.8 (5.9-7.7)	1.3 (1.1-1.5)	—
Total	184,992		1.5 (1.4-1.6)	69,496		1.1 (1.0-1.2)	3.6%

A few State surveys have been published. A state-wide survey was carried out in Orissa state with Danida support in 2002-2003, with similar testing methodology and estimation procedures as the nationwide survey, which showed an statewide ARTI of 1.8%. Similarly a state-wide survey was carried out in Kerala in the year 2006–2007. The ARTI in this survey was not able to be calculated with confidence, due to the fewer than expected number of infections detected. By any measure, the ARTI for Kerala would be less than 1% per annum.

The ARTI in Tiruvullar has been closely evaluated by epidemiologists from the National Institute for Research in Tuberculosis, Chennai, for more than 30 years. (Table 5) RNTCP was implemented in Tiruvullar district in 1999. Three sequential ARTI surveys have shown a decline in ARTI of approximately 6% per year. The annual rate of decline in the prevalence of infection in children <10 years old has been estimated at 5.8%, from the first survey to the third survey.

Table 3: Results of consecutive ARTI surveys in MDP project area, Tiruvullar District

	1999–2001	2001–2003	2004–2006
Prevalence of Infection	7.8 (7.1–8.6)	6.9 (6.2–7.6)	6.0 (5.2–6.7)
Annual Risk of TB infection	1.6 (1.5–1.8)	1.4 (1.3–1.6)	1.2 (1.1–1.4)

Use of tuberculin surveys among children to estimate disease incidence in adults is not recommended by the Task Force on TB Impact Measurement. The frequently applied "Styblo conversion" estimate of 50 incident cases of new smear positive pulmonary tuberculosis per 1% annual risk of tuberculosis infection has been criticized as no longer valid in the presence of a modern tuberculosis programme. Additionally, there were some operational differences between the 2000 and 2010 surveys (such as for example different tuberculins). Effectively, the highly uncertain relationship between ARTI and incidence makes for a uselessly imprecise incidence estimate.

While the national and local ARTI surveys have shed little direct evidence on incidence, they have provided important direct evidence of reductions in the prevalence of TB infection among children and thus in TB transmission. This provides strong circumstantial evidence of a general decline in TB incidence.

Current WHO approach to incidence estimation

For 2010, RNTCP with consultation WHO estimated incidence using trends in annual risk of infection based on two nationwide tuberculin surveys conducted in 2000 and 2010, trends in notification rates in districts with early (1999-2003) implementation of RNTCP, and estimation of the level of under-reporting of TB cases not captured by the TB surveillance system. To estimate the 2010 incidence, the total number of notified cases for 2010 was inflated by the plausible level of estimated under-reporting of TB cases not captured by the surveillance system. With this number, to estimate trends in incidence the observed ARI decline from nationwide surveys, was combined with the observed decline in notification rates from districts with early implementation of RNTCP. This yielded a final estimate of an annual

decline of 1.46% (standard deviation 0.071%). In the absence of better information, incidence was assumed to be decreasing from 2001 onwards, when the countrywide coverage of RNTCP crossed the 50 population mark, also consistent with observed trends in ARTI and notification rates. This reduction is assumed to be accelerating, as is expected to be the effect of a consistently well-functioning national surveillance system (a common observation in other countries around the world). Starting from the 2010 incidence value, incidence was calculated backwards to 2001, applying the calculated rate of decline. Prior to 2001, incidence was assumed flat for this period since there is no clear evidence of a trend from

The limitations in this approach have been widely acknowledged, including the glaring absence of direct information on the extent of under-reporting, under-diagnosis of TB, over-diagnosis of TB, and failure of some populations to even to access health care. National inventory studies will be needed to fully understand the extent of unreported TB detected in the private sector.

Prevalence of Tuberculosis Disease

The first estimates of tuberculosis prevalence in India became available in the 1950s, and the figure of 4/1000 for the nation as a whole was accepted then. The findings of various studies, have been summarized by V. R. Chadha. Studies in Bangalore, Tumkur, and Chingleput districts in South India from the pre-RNTCP era showed modest to no evidence of change in the prevalence of tuberculosis.

One study carried out in the BCG trial area in Tiruvallur district, Tamil Nadu, showed that in that pre-RNTCP era, the prevalence of culture positive tuberculosis declined by 1.8% per annum, and smear-positive tuberculosis declined by 2.1% per annum. However, declines in prevalence ceased after the 4th survey 2006 – 2008, roughly 8 years after RNTCP implementation. The implications of this plateau in prevalence are unclear, and results of the 5th survey are currently in process.

Table 4: Consecutive disease prevalence surveys in MDP project area, Tiruvullar District, Tamil Nadu

	1999–2001	2001–2003	2004–2006	2006–2008*
Culture-positive TB	609 (542-676)	451 (397-504)	311 (261-362)	391 (352-440)
Smear-positive TB	326 (277-376)	257 (223-291)	169 (141-197)	182 (153-211)

* Data courtesy of Kolappan et al, NIRT; publication pending; presented at the National Workshop on TB Burden Estimation, July 2011, LRS Institute

Current WHO approach to prevalence estimation

To estimate prevalence, data from two time points were used: the 1956 National Sample Survey, and the series of District Prevalence Surveys conducted by RNTCP around 2008. The 1956 survey detected a adult pulmonary TB prevalence of 537 (472–603) per 100,000 population. Given the historical information showing a series of surveys with no real reduction in tuberculosis prevalence, including the historical results from the Chengleput BCG trial area of NIRT Chennai and the Tumkur survey area of NTI Bangalore, an assumption was made that TB prevalence in India did not meaningfully decline in the pre-RNTCP era.

Seven district level prevalence surveys conducted by RNTCP (including participants 15+ years old, with pulmonary TB) had a mid-point of around 2008. Sites and institutions involved included Wardha (MGIMS), Chengleput (NIRT), Bangalore Rural (NTI), Kanpur(JALMA), Jabalpur (RMRCT Jabalpur), Faridabad (AIIMS), and Mohali (PGI). The Mohali survey was excluded from the estimation due to concerns raised about the very low prevalence estimate drawn of 29 per 100,000 populations (which was implausibly lower than the prevalence of TB in London and inconsistent with the levels of TB notification).

As some of the district surveys did not use chest X-ray (CXR) screening, the prevalence results of those districts were inflated by the additional yield of TB cases found in those surveys which used CXR. Individual survey prevalence estimates (inflated appropriately for the CXR screening) were pooled to generate a weighted average, using survey precision to weight individual survey results. The 2008 weighted, pooled bacteriologically-confirmed pulmonary TB

prevalence estimate for adults was 327 (212-424) per 100,000 population. This result was adjusted to include estimates for paediatric TB prevalence (using the 1956 National Sample Survey as the basis of estimation, and applying similar assumptions as to the rate of decline as observed in adults). This pulmonary TB prevalence estimate for all ages was further adjusted to account for extra-pulmonary TB, taken from RNTCP notification data 2001–2010 (i.e. 18%, +/-1.87%). To generate time trends, the prevalence rate was assumed to be stable through 1956-2001, adjusting only for the proportion of children in the population. The final all-age, all-forms of TB prevalence estimate for 2008 was 293 (207-395) per 100,000 populations. A constant rate of decline was assumed between the level of 2001 and the estimated prevalence for 2008. The rate of decline beyond 2008 was assumed to be similar to that applied for 2001 – 2008. Final prevalence estimation results for 2010 are shown in Table 1.

The most striking limitations of this approach to prevalence estimation are the use of a series of conveniently-selected districts from around the country to estimate national prevalence. In the absence of a national disease prevalence survey, this direct information represented the best available information. Further limitations include the different screening methodology used at the sites (with and without x-ray), and the assumptions used for extra-pulmonary TB adjustments, and the lack of information about when the decline in national TB prevalence really began.

Mortality and premature death due to tuberculosis

Perhaps more than 80% of the burden of tuberculosis is due to premature death, as measured in terms of disability-adjusted life years (DALYs) lost. TB mortality is defined by WHO as the number of TB cases dying during the treatment, regardless of the cause of their death. Case fatality rates from India prior to RNTCP implementation were uniformly high, although data from that time period are somewhat unreliable. Data from specific surveys, however, suggest that case fatality rates prior to RNTCP were generally greater than 20%.

The best available data on TB burden estimation in India comes from a series of large community-based mortality surveys. Using verbal autopsy and methodology endorsed by the Registrar General of India, surveys have been conducted in Andhra Pradesh (NIRT), Orissa (NIRT) , Tiruvallur (NIRT), a Kolkata slum (National Institute of Cholera and Enteric Diseases), and in Rural Andhra Pradesh (George Institute).

Table 5: Summary results of mortality surveys used in mortality estimation for India.

Study Area	Reference	Time range	Sample	TB mortality rate Per 100,000 person-years	95% CI
Kolkotta, WB (slum area)	Kanungo Setal 2010	2003-4	87,921 (person years)	35	n/a
Andhra Pradesh (rural areas)	Joshir Retal 2006	2003-4	180,162 population (prospective)	28	n/a
Andhra Pradesh (statewide)	Kolappan,	2005	395,886 (registered)	76	(67–85)
Orissa (statewide)		2005	n/a	35	n/a
Thiruvillar, TN (MDP area)	Kolappan IJTLD, submitted	2007-8	114,605 (registered)	39	(27–51)

After excluding the outlier (Andhra Pradesh survey), due to "high" HIV which was considered non-representative of the country, the remaining 4 measurements provided a weighted mean=36, SD=5.7. Excluding HIV, direct estimation using available mortality data from 4 surveys yielded 2005 mortality of 429,000 (291,000–567,000). From this information, case fatality was derived among un-reported TB cases for the 2005 time points, for both HIV uninfected and infected groups. Using those case fatality rates, and the numbers of reported and estimated unreported incident TB

cases (HIV uninfected and HIV infected), mortality was estimated forward and backward in time from 2005. Current mortality estimates are shown in table 1 and the Appendix. Notably, given current incidence estimation, the mortality estimate for 2005 generated a derived case-fatality rate for un-reported HIV-uninfected TB cases of 32%, at the upper plausible and historical range. A lower case-fatality rate for this sub-group would imply that the corresponding incidence estimations are too low, or that the mortality estimate taken from the mortality surveys is too high.

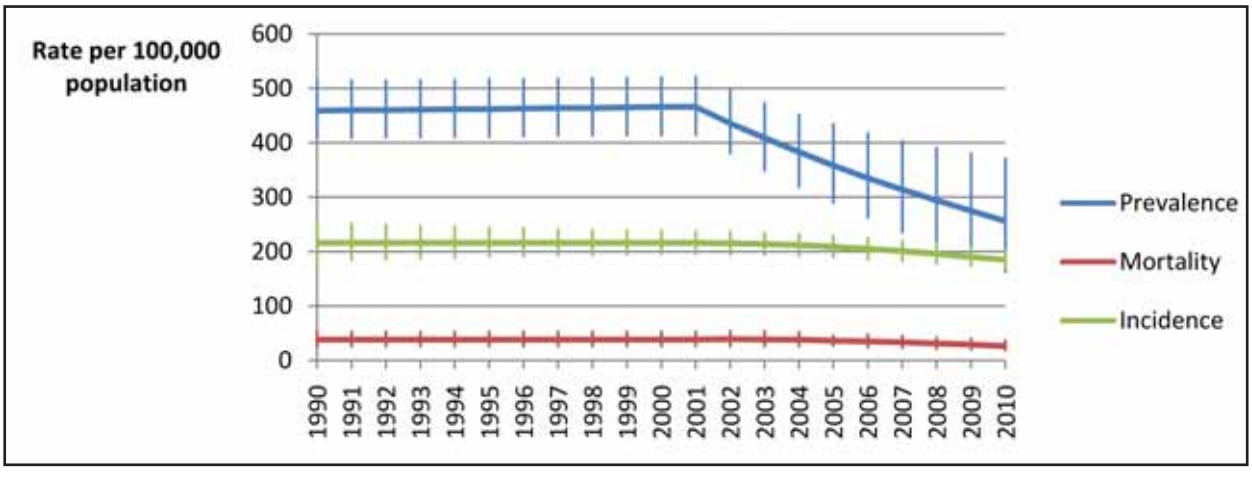
Additional information on TB mortality has emerged from the AIIMS Ballabgarh community-based prospective mortality survey, which from 2002 – 2007 reported a TB mortality of 40 per 100,000 person years. The nationally-representative Million Deaths study, accounting for deaths from 2001 – 2003, has informally reported TB deaths of 77 and 40 per 100,000 person years for men and women respectively. Similarly, TRC has analysed the excess mortality among cohorts of TB patients, looking at long term mortality after treatment relative to age and sex matched community cohorts. Taken together, it is plausible that the existing estimate may have somewhat under-estimated TB mortality.

Limitations of existing mortality estimation include the use of verbal autopsy to assign cause of death as per standard methodology, survey representativeness, high heterogeneity, and the exclusion of the large Andhra Pradesh study data, which by all accounts had a similar methodological approach to other data included.

Millennium Development Goal and Stop-TB Partnership Targets

Current WHO estimated prevalence, incidence, and mortality trends from 1990 - 2010 are plotted in the figure below, with associated uncertainty. First, as described earlier, the incidence of TB is estimated to be falling. Second, the prevalence of TB has reduced by an estimated 44% from 1990–2010. Third, TB mortality has fallen by an estimated 32% from 1990–2010. If current burden estimates are reasonable, than India stands a strong likelihood of achieving the TB-related MDG and associated Stop TB Partnership Targets. Additional information is likely to be required for 2015 burden estimation to improve confidence and precision of existing estimates.

Figure: Trends in WHO-estimated prevalence, incidence, and mortality. India, 1990–2010. Source, WHO Global TB Control Report, 2011.



Impact of other determinants of TB epidemiology

Targets for the DOTS strategy were initially developed on the foundation of mathematical modelling, which suggested that rapid progress towards the MDG could be made through improving access to high quality TB diagnosis and cure, thereby cutting transmission. These models predicted that, if at least 70% of the incident cases of highly infectious TB were detected and at least 85% of them were cured, this would result in rapidly declining incidence (between 5 and 10% per year), prevalence, and death rates. New analysis, however, have called these earlier analyses into question. In several countries, TB case notification has not fallen as rapidly as expected, despite several years of DOTS implementation. Experience from

more than 20 years of DOTS implementation has informed new models suggesting that much higher levels of case detection, cure rates, and interventions on other determinants of TB epidemiology may be required to sustain and accelerate reductions in disease prevalence and incidence.

WHO has suggested that the expected effect of improved diagnostic and treatment services may be negated by an increase in the prevalence of risk factors for the progression of latent TB to active disease in segments of the population. A population level increase in vulnerability may tend to increase incidence despite reductions in transmission achieved under the Stop TB strategy. Broadly described, these risk factors may be biomedical (such as HIV infection, diabetes, tobacco, malnutrition, silicosis, malignancy), environmental (indoor air pollution, ventilation) or socioeconomic (crowding, urbanization, migration, poverty).

The impact of these other determinants on TB epidemiology in India has yet to be fully understood. India is clearly experiencing an epidemic of diabetes, with an estimated 20-30 million diabetics in 2000, and an estimated 80 million diabetics by 2030. Diabetes has been shown to be an independent risk factor for tuberculosis in community based study from South India and multiple studies globally. Modelling has suggested that diabetes accounts for 14.8% of all tuberculosis and 20.8% of smear-positive TB. While the HIV epidemic in India appears to have peaked, the total number of persons living with HIV/AIDS remains high, and with time the level of immune deficiency and TB vulnerability may increase. Malnutrition remains highly prevalent in India, and will remain a significant factor for years to come. India is urbanizing at a fantastic pace, bringing larger numbers of persons into urban areas with documented higher rates of TB transmission. Tobacco use is highly prevalent in India, and has been suggested to be a potent contributor to TB-related mortality. The confluence of these and other risk factors raises the possibility that even with implementation of the Stop TB Strategy in India, expected reductions in TB incidence will be difficult to achieve and sustain.

Current modelling suggests that the greatest impact on incidence of TB in India will be achieved by reducing diagnostic delay, particularly if done in combination with deployment of higher-sensitivity initial diagnostic testing and improved overall cure rates. Existing survey and health care utilization surveys have pointed to the dominance of the private sector in health care delivery in India and as the initial point of care in particular for most persons seeking health care across all income groups.

TB Burden Estimation

Technical Expert Group has been nominated by Ministry of Health & Family Welfare, Govt. of India for estimation of TB Burden in India. Under the guidance of same RNTCP's plans for monitoring incidence, prevalence and mortality, anti-TB drug resistance and HIV burden among TB patients are as below:

1. Incidence
   - Inventory studies: a nationally-representative inventory survey has been recommended by country's Technical Expert Group on TB Burden Estimation. A detailed protocol is under preparation by NTI Bangalore.
   - Improved surveillance systems through implementation of national TB case notification
2. Prevalence
   - National prevalence study is under consideration by the country's Technical Expert Group on TB Burden Estimation.
3. Mortality
   - A large nationally-representative community-based prospective all-cause mortality survey is underway, in collaboration with the Registrar General of India with the support of other partners (including CGHR, Toronto); this information is expected to be available in 2013.
4. Anti-TB drug resistance
   - A nationally-representative anti-TB drug resistance survey in 2013 has been proposed.
5. HIV among TB patients
   - Routine surveillance of HIV status among all TB patients nationwide has yielded sufficient coverage and information to use programme data to inform this estimation; no additional surveys are expected or planned. Efforts would be focused on improving HIV status ascertainment for all TB patients, including those in low HIV prevalence areas.

4. Infrastructure

Health System In India And Health System Strengthening

Providing quality health care to every household is a challenge in a country of over a billion people living in over lakhs of cities, towns, villages and hamlets. Health is state subject and the progress in health sector is determined by the leadership of the states. The role of the Central Government is to provide overall leadership, provide further resources, formulate policies, provide technical guidance, share good practices and monitor effective provision of health services to the population of India.

Health Care Infrastructure in India

The entire Health services including the Family welfare programme is implemented through the Primary Health Care system. The Primary Health Care infrastructure has been developed as a three tier system with Sub-Centre (SC), Primary Health Centre (PHC) and Community Health Centre (CHC) being the core strengths of the Primary Health Care system.

Table 1. Population norms for Physical infrastructure

Center	Population norm	
	Plains	Hilly areas
Sub center	5000	3000
Primary Health Center (PHC)	30,000	20,000
Community Health Center (CHC)	1,20,000	80,000

Source: Rural Health Bulletin March 2007

The Primary Health Centres are the initial point of contact for the patient and provide basic medical services (including for TB). Referral linkages exist at PHCs for specialized care with the secondary and tertiary levels. The community outreach workers and the Anganwadi workers form the major strength of all the health interventions, including TB (DOT provision and health education).

The available infrastructure along with the available Human resource is tabulated in Table 2. Shortfall of human resource especially among the rural areas is a major issue. Over the last few years, there has been a strategic shift in focus in the public health approach of the country. The National Health Policy 2002, envisaged increasing public health spending from 0.9% of Gross Domestic Product (GDP) (in 2000) to 2% by 2010. The country spent approximately 4.2% of its GDP on health in 2009.

Table 2. RURAL HEALTH CARE INFRASTRUCTURE STATUS (as on March 2010)

No. of Sub centers	1,47,069
No. of PHC	23,673
No. of CHC	4535
Health worker (Female)/ANM at Sub center/PHC	1,91,457 (shortfall of 15,079)
Doctors at PHC	25870 (shortfall of 2433)
Total Specialists at CHCs (Surgeon; Physician; Pediatrician and Obs & Gynae.)	18140 (shortfall of 11361)
Laboratory Technician at PHC/CHC	15904 (shortfall of 14225)
Staff Nurse/Midwife at PHC/CHC	58450 (shortfall of 13683)

National Rural Health Mission (NRHM)

Recognizing the importance of Health in the process of economic and social development, NRHM was launched in 2005 to improve the availability and access of quality health care to people, especially for those residing in rural areas, the poor, women and children, resulting in better quality of life of the citizens.

The Mission aims to primarily carry out necessary architectural correction in the basic health care delivery system; adopts a synergistic approach by relating health to determinants of good health viz. segments of nutrition, sanitation, hygiene and safe drinking water; mainstreaming the Indian systems of medicine to facilitate health care. The Plan of Action includes increasing public expenditure on health, reducing regional imbalance in health infrastructure, pooling resources, integration of organizational structures, optimization of health manpower, decentralization and district management of health programmes, community participation and ownership of assets, induction of management and financial personnel into district health system, and operationalizing community health centres into functional hospitals meeting Indian Public Health Standards in each Block of the Country.

The focus is on functional health system at all levels, village to district. In this process, the Mission helps in achieving the goals set under the National Health Policy and the Millennium Development Goals. The Disease Control Programmes including RNTCP have been brought under the umbrella of NRHM.

RNTCP and NRHM - The National Rural Health Mission is a mechanism which has provided an "umbrella" in all states with formation of the State/ District Health Societies looking after Reproductive and Child Health (RCH) and National Disease Control Programmes in integrated way. TB related objective of the Mission is *"Prevention and control of communicable and non- communicable diseases, including locally endemic diseases"* with expected outcome of*"maintaining 85% cure rate through entire Mission period and also sustain planned case detection rate"*.

With the additional resources being pooled in the structural and human resource, deficits are expected to be met, as TB control strategy with its critical components like laboratories, drug stores, Laboratory Technicians (LTs) have been incorporated as part of the Public Health Standards established for each level of health institution. In addition, ASHA workers would also facilitate enhanced outreach activities.

Revised National Tuberculosis Control Programme (RNTCP):

Brief history of TB Control in India

1950s-60s: Important TB research conducted in the country documented the mass domiciliary application of chemotherapy in the treatment of pulmonary TB 1962: The National TB Programme (NTP) was formulated by National TB Institute, Bangalore. The NTP established 446 District TB Centres, 330 TB units in urban areas and set up 47,000 beds for TB patients. The Programme was implemented integrating it with the general health care system of the country

1992: Government of India, together with World Health Organization (WHO) and Swedish International Development Agency (SIDA), reviewed the National TB Programme. Based on the findings and recommendations of the review, the GOI evolved a revised strategy and launched the Revised National TB Control Programme (RNTCP) in the country which was expanded in phased manner.

2006: Nation-wide coverage of RNTCP

Structure of RNTCP

The structure of RNTCP comprises of five levels, as follows:

(1) National (2) State (3) District (4) Sub-district (5) Peripheral health institutions A major organizational change is the creation of a sub-district level – the tuberculosis unit (TU) for the systematic monitoring and supervision of diagnostic and treatment aspects of the programme. State TB Control Societies (STCSs) and District Tuberculosis Control Societies (DTCSs) have been formed to give more ownership to the states and districts.

National level (Central TB Division)

The Central TB Division (CTD) is a part of the Ministry of Health and Family Welfare (MoHFW), and is responsible for tuberculosis control in the whole country. It is headed by a National rogramme Manager, the Deputy Director General TB (DDG TB).

State level

At the State level, the State Tuberculosis Officer (STO) is responsible for planning, training, supervising and monitoring the programme in their respective states as per the guidelines of the STCS and technically

follows the instructions of the CTD for programme implementation.

District level

The district is the key level for the management of primary health care services. The District Tuberculosis Centre (DTC) is the nodal point for TB control activities in the district. The District TB Officer (DTO) at the DTC has the overall responsibility of physical and financial management of RNTCP at the district level as per the guidelines of the DTCS.

Sub-district level (Tuberculosis Unit, for 5 lakh population)

The TU is the nodal point for TB control activities in the sub-district. A team, comprising a specifically designated Medical Officer – TB Control (MO-TC), Senior Treatment Supervisor (STS) and Senior Tuberculosis Laboratory Supervisor (STLS) at the TU have the overall responsibility of management of RNTCP at the sub-district level.

Peripheral Health Institutions (PHIs)

At this level are the dispensaries, PHCs, CHCs, referral hospitals, major hospitals, specialty clinics / hospitals (including other health facilities) within the district. Some of these PHIs will also be DMCs.

5. Human Resource

RNTCP is being implemented through the existing state general health systems and states contribute significantly to RNTCP in terms of human resources. Though states are managing these crucial human resources, the programme lays down policy framework to assist the states in the development and management of human resources.

RNTCP is now under the wider umbrella of National Rural Health Mission (NRHM), which was launched in the country in April 2005. The operationalization of NRHM has set in motion, a process of decentralised, horizontally integrated approach to manage and implementdisease control programmes. National Strategic Plan will ensure integrated training programmes to encompass the vast training needs and the expanded trainee universe. The strategy includes a paradigm shift in human resource development policy and endeavour for adapting to system wide changes.

Current approach:

- Balanced approach in transition – RNTCP is in transition from verticality in HRD to decentralization. Currently special training programmes for higher level staff and horizontal integrated training programmes for peripheral staff
- Optimal decentralization – Most of the trainingactivities has been adequately decentralized at appropriate level depending on the capacity of the training needs and capacity to conduct training
- Training cascade – Especially for newer initiatives and policy change updates the training cascade is followed.
    - o Training of state & district level officials at National Institutes as Master Trainers,
    - o These Master Trainers in turn train the sub-district (block) level officials & staff.
    - o Health Facility level staff are then trained by the block level officials.
    - o Health facility level staff and Block level official further train the outreach / community level functionaries.
- This takes on an average 3-6 months for the country to be covered. Country has the capacity to ensure more than half a million human resource for health in less than a year.

Following HRD activities are being undertaken by the programme:

- Developing training manuals and updating with latest policy changes
- Developing training curriculum with inclusion of practical demonstration, field visits and skill development
- Identifying training needs in terms of
    - o total fresh staff and officer to be trained
    - o staff and officials to be trained in specific updates
    - o specific staff and officials needing retraining as found during the supervisory visits

Challenges:

Huge number of officials and staff under in the public health sector though advantageous on one side for managing the services, but also poses a significant challenge. Competing time requirement from same official or staff for undergoing training in various programmes as well as number of trainings needed for development of optimal skills poses another managerial challenge on the system. Also, utmost care is needed for decisions on allowing time for training different cadres without compromising the services rendered by them during the same time. Identified training needs with time, introduction of newer initiatives, policy changes, projects and programmes, newer technologies etc add to the complexities of the HR development.

Follow-up and long-term impact of trainings are difficult to evaluate and also the sustenance of the trained manpower in services under the programme.

Training methodology:

Standardized modular training has been the hallmark of trainings under RNTCP. It has ensured uniformity in the capsule of knowledge imparted to the trainees in a specific time by a trained Trainer. However, it has always been supported well by use of audio-visual aids and power point presentations, field visits for reality based understanding of scenarios, role plays, practical sessions to develop skills etc.

At all level trainings are usually assessed using pre and post-test.

Using ICT for training:

In 2012, RNTCP developed training videos for training Data Entry Operators(DEO) in Nikshay, a Case Based Web Based ICT application for Tuberculosis. DEOs at district, block and health facility level throughout the country were trained in less than two month using these training videos. Programme has also developed training videos for Block Medical Officer / MO-TCs and Senior Treatment Supervisors keeping in view huge training requirement accordingly to the policy of alignment of TUs with NRHM Block under 12th Five Year Plan.

For updating the State level teams and DTOs on a regular basis RNTCP has also envisaged setting up video conferencing facility for all State TB Officer in immediate future.

Plan is also to educate the most peripheral formal and non-formal health workers with simple messages using the SMS gateway as well as a dedicated call center for information transmission.

Other learning opportunities:

District and state level officials exchange the knowledge, experiences routinely during the programme activities including -

- State level internal evaluations
- Central level internal evaluations
- State and central appraisals before initiating PMDT services
- International, National, Regional, State & District level review meetings

Human Resource & training status as on 31st December 2012:

Official / staff	No of sanctioned post	No in place regular Govt	No in place contract	Total No in place & trained	% trained
District TB Officers	698	628	0	567	90%
Second Medical Officer at DTC	462	279	31	246	79%
Medical Officer – TB Control	2564	2308	48	1770	75%
Medical Officers	92513	73694	1299	58938	79%
Paramedical staff	334689	288701	2506	232858	80%
DOTS Plus & TB-HIV Supervisor	653	0	562	480	85%
Senior Treatment Supervisor	2706	202	2355	2381	93%
Senior TB Laboratory Supervisor	2697	144	2395	2387	94%
TB Health Visitor	3239	366	2442	2650	94%
Laboratory Technician at DMC	14107	9445	3986	12080	90%
Data Entry Operator	698	0	676	650	96%
DOT Providers	693628			484672	68%
ICTC Counsellors	6009	3657	2033	5180	91%
District HIV supervisors	549	366	90	387	85%
ART Medical Officers	560	388	139	418	79%

6. Procurement and Drug logistics

The Procurement of 1st and 2nd Line Anti TB Drugs, Laboratory Equipment's and Purified Protein Derivative (PPD) is undertaken at the Central level through a procurement agent, M/s RITES Ltd. who have been contracted by Ministry of Health and Family Welfare to undertake procurement under various Programme Divisions of the Ministry of Health and Family Welfare including RNTCP.

Anti TB Drugs: An uninterrupted supply of quality assured Anti TB Drugs is an essential component of DOTS strategy under RNTCP. During the year 2012, programme experienced some delays in supplies but the situation was managed by procurement of some individual drugs at the state/district level. The Programme is striving hard to ensure that the bottlenecks in the procurement and supply at all level are sorted out and a smooth flow of drugs is maintained.

First Line Anti TB Drugs: With the financial support of DFID and World Bank ending in 2011 and 2012 respectively, procurement of drugs for the entire country including GFATM funded states is now proposed to be through Domestic Budgeting Source (DBS) mechanism following the General Financial Rules of Government of Indiato be made byRITES, the procurement agency of Ministry of Health and Family Welfare. The procurement of 1st Line Anti-TB Drugs under GOI Domestic Funding and for the GFATM funded states for the year 2012-13 has already been initiated and the supply is expected to start reaching the GMSDs by mid-2013.

Second Line Anti TB Drugs: The supplies of 2nd line Anti-TB drugs are received from 2 different sources; from Government of India through the DBS mechanism and from Global Drug Facility through the GFATM grant to the programme. Against the indents of 2011-12, the Government of India supplies of Cycloserine Caps & Ethambutol-200mg Tabs for 4,550 patients for the states of Assam, Delhi, Goa, H.P, Jammu & Kashmir, Maharashtra, Puducherry, Chandigarh and Punjab are currently underway and rest of the drugs are under rebidding process. Out of a total of 20,450 patient's courses to be procured out of GFATM funds, only 15,275 IP courses are being procured currently due to budget constraints, but the balance shall be adjusted in the next procurement year 2012-13, for which supplies are expected by mid-2013.

In addition, procurement of 400 courses of XDR-TB drugs for the year 2011-12 for GFATM funded states (Andhra Pradesh, Gujarat, Rajasthan, Tamil Nadu, West Bengal, Karnataka, Kerala, Madhya Pradesh and Maharashtra) has also been initiated and the drugs are expected to reach by April 2013.

In keeping with the scale-up activities of the programme, procurement of 9,000 MDR-TB patient courses & 50 XDR-TB patient courses under DBS mechanism for the year 2012-13 has been initiated and 21,000 patient courses along with the balance IP & CP courses from the previous year, is also being procured through Global Drug Facility (GDF) against GFATM funding.With all these supplies expected in the Year 2013, the programme is gearing up to ensure an uninterrupted supply of these drugs.

Quality Assurance measures at Procurement:

1st line Anti-TB Drugs: Since 2008-09, procurement of 1st Line Anti-TB Oral Drugs has been limited to 'WHO Pre-Qualified suppliers' and pre-dispatch inspection and testing of all batches is mandatorily done. Injection Streptomycin is procured through International Competitive Bidding (ICB) from WHO-GMP suppliers only, Joint Inspection for verification of WHO-GMP Certificates by a team under DCG(I) is ensured and pre-dispatch inspection of all batches is done.

2nd line Anti-TB Drugs: Procurement for the World Bank funded States is done through ICB by the Procurement Agency of Ministry of Health & Family Welfare. For this procurement, WHO-GMP Certification is required, As in case of 1st line Anti-TB Drugs, Joint Inspection for verification of WHO-GMP Certificates by a team under DCG(I) is ensured and pre-dispatch inspection of all batches is done. For GFATM funded states, procurement is done through Green Light Committee (GLC) and Global Drug Facility (GDF) of Stop TB Partnership from "WHO Pre-Qualified suppliers" only.

Quality Assurance measures Post Procurement:

To ensure good quality drugs at all stocking/service delivery points under the programme and till the final consumption of drugs, the programme has developed a protocol in which samples are tested at an Independent Quality Assurance Laboratory contracted by RNTCP. Under the protocol, each quarter, random samples of 1st and 2nd line Anti-TB Drugs are drawn from GMSDs,

State Drug Stores & District Drug Stores and sent for testing to the independent QA Lab. The test reports are presented to a Committee headed by Drug Controller General (India). In addition to this, samples also get picked up randomly from drug stores by various Central and State Drug Inspection Authorities and sent for testing at the State labs. Based on the test reports, further necessary action is taken by the Programme.

Purified Protein Derivative (PPD):

Government of India procured 3,57,900 vials of 1.5ml PPD for diagnosis of tuberculosis in paediatric patients in the country and the supplies are expected to be completed by March 2013.

For use of PPDs in the programme, a cold chain is required to be maintained and accordingly all stats were advised to procure refrigerators of required capacity for maintenance of cold chain at the State Drug Store (SDS) and the district drug stores. Detailed guidelines on the supply chain and administration for PPDs were also circulated to all states.

Equipment:

The Contracts for Laboratory equipment for solid Culture & Drug Sensitivity Testing (DST) for establishing IRLs in the country were awarded during the year, delivery of all the equipment has been completed. Ministry of Health & Family Welfare (GoI) entered into a memorandum of Understanding with EXPAND TB for supply of equipment & consumables for setting up of 40 identified LPA labs and 30 Liquid Culture labs through UNITAID funding.

Microscopes: Central TB Division proposed to replace the Binocular Microscopes with LED Microscopes in a phased manner over the next 5 years and plans to procure 1500 BMs and 2500 LED microscope during the year 2012-13.

Post Procurement Reviews: Three Post Procurement Reviews of Contracts executed in the States were undertaken by CTD. Based on the reports of the Post Reviews, follow-up corrective actions have been taken by the concerned States. Post Procurement Review of State/ District level procurements is also being done during Central and Internal Evaluations, Annual Financial Audit and visit to the States by officials from Central TB Division.

Drug Logistics Management: Drug requirements, consumption and stock positions, both at State and district levels are monitored at the Central TB Division (CTD) through the Quarterly Reports submitted by the districts. The 1st Line Anti-TB Drugs procured are stored at the six Government Medical Store Depots (GMSDs) across the country and issued to the States based on the District Quarterly Programme Management Reports and the monthly State Drug Stores (SDS) Reports. The States are required to maintain defined buffer stocks at each levels i.e., at the PHIs, TUs, DTCs & the SDS. The District Quarterly Reports are analysed in detail at CTD and any discrepancies arising are notified to the concerned districts & States for necessary corrections.

For long-term sustainability of the programme, decentralization of inventory management practices is very important. To ensure that the States are able to manage their drug logistics as per RNTCP guidelines, regular trainings & re-trainings on Drug Logistics Management were conducted by Central TB Division for the State level staff during the year.

7. Implementation Status

7.1. Case Detection and Treatment

Diagnosis of Pulmonary TB

Case detection is based on identification of TB suspects attending health facilities and subjecting them to sputum examination in a RNTCP Designated Microscopy Centre (DMC). The following criteria were being used for the diagnosis of sputum smear positive Pulmonary TB Cases. Any patient presenting with cough for more than 2 weeks is a pulmonary TB suspect and is be referred to the DMC.

All TB suspects undergo 2 sputum smear examination (spot and morning) over two consecutive days at the DMC. RNTCP standardized diagnostic algorithms are used for diagnosing both smear positive and smear negative pulmonary TB in adult and pediatric patients. All specimens are examined by Ziehl-Neelsen staining technique (bright field binocular microscopes) and auramine staining techniques (200 Medical college DMCs using LED FM Microscopes). The RNTCP has adopted standardized diagnostic algorithms for diagnosing smear positive, smear negative pulmonary and extra pulmonary TB in adult and paediatric patients. Drug resistant TB cases are diagnosed using solid culture/liquid culture DSTs/LPA. CBNAAT is used for diagnosing TB and DR-TB in 18 sites.

Treatment of TB Patients under RNTCP

INH (H), Rifampicin(R), Pyrazinamide (Z), Ethambutol (E) and streptomycin (S) is used in the treatment of TB patients; all drugs are given three times weekly. A new case of TB patient will receive 6 months of treatment with 2 months of IP (HRZE) and 4 months of CP (HR). Re-treatment TB case will receive 8 months of treatment with 3 months of IP (2 month HRZES and 1 months HRZE) and 5 months of CP (HRE). Drugs are supplied in an individual patient-wise box (PWB), which contain the entire course of treatment for each patient. The PWB have a colour code indicating the category [Red for Category I and Blue for Category II]. In each PWB, there are two pouches one for intensive phase (A) and one for continuation phase (B). All doses of the intensive phase and at least the first dose of each week of the continuation phase are given under direct observation by a DOT provider. Follow up sputum smear examinations are done at the end of the intensive phase (IP), 2 months into the continuation phase (CP) and at the end of treatment. If the smear is positive at the end of the intensive phase, the same drugs are given for 1 more month and then the CP is started. The treatment outcome is determined according to the results of the follow-up smear examinations done during treatment. For paediatric TB patients separate PWB is developed under the programme. Asymptomatic children under 6 years who are household contacts of smear positive pulmonary TB patients, chemoprophylaxis with isoniazid (5 mg/kg body weight) is administered daily for a period of 6 months.

RNTCP has quality assured laboratory network for the sputum smear microscopy in three tier system of National Reference Laboratory NRL, Intermediate Reference Laboratory IRL and DMC A nationwide network of RNTCP quality assured designated sputum smear microscopy laboratories providing appropriate, affordable and accessible quality assured diagnostic services for TB suspects and cases. To meet the standards of internationally recommended diagnostic practices for TB, the programme provides the supply of quality reagents and equipment to the laboratory network. An inbuilt routine system has been designed for sputum microscopy External Quality Assessment (EQA) and for supervision and monitoring of the diagnostic systems by the RNTCP Senior TB Laboratory Supervisor (STLS) locally and by the Intermediate (State level) and National Reference Laboratory network for RNTCP at higher levels. The programme has certification procedure for the culture and drug susceptibility testing for solid, liquid and Molecular (Line Probe Assay) with quality assurance protocol based upon WHO and Global Laboratory Initiative recommendations.

Quality Assured Laboratory services: RNTCP has established a nationwide laboratory network, encompassing over 13,309 Designated Sputum Microscopy Centres (DMCs), which are being supervised by Inter- mediate Reference Laboratories (IRL) at State level, and National Reference Laboratories (NRL) & Central TB division at the National level. RNTCP aims to consolidate the laboratory network into a well-organized one, with a defined hierarchy for carrying out sputum microscopy with external quality assessment (EQA).

National Reference Laboratories (NRL): The four NRLs under the programme are National Institute for

Research in Tuberculosis [NIRT] Chennai, National Tuberculosis Institute [NTI], Bangalore, Lala Ram Swarup Institute of Tuberculosis and Respiratory diseases [LRS], Delhi and JALMA Institute, Agra. The NRLs work closely with the IRLs, monitor and supervise the IRL's activities and also undertake periodic training for the IRL staff in EQA, Culture & DST activities.

Three microbiologists and four laboratory technicians have been provided by the RNTCP on a contractual basis to each NRL for supervision and monitoring of laboratory activities. The NRL microbiologist and laboratory supervisor / technician visits each assigned state at least once a year for 2 to 3 days as a part of on-site evaluation under the RNTCP EQA protocol

Table : Site Evaluation conducted during the year 2012

NRL	States and UnionTerritories (UTs) assigned for EQA	Total nos. of IRLs assigned	Total nos. of states / UTs assigned	No of OSE conducted during the year (2012-13)
NIRT	Andhra Pradesh, Chhattisgarh, Goa, Gujarat, Dadra Nagar Haveli, Daman & Diu, Kerala, Lakshadweep, Sikkim, Tamil Nadu, Punjab,	10	13	8
LRS	Delhi, Arunachal Pradesh, Haryana, Manipur, Nagaland, Mizoram, Meghalaya,	4	9	1
NTI	Maharashtra, Orissa, West Bengal, Rajasthan, Karnataka, Bihar, Madhya	12	9	0
JALMA	Uttar Pradesh, Uttarakhand, Himachal Pradesh, Assam	5	4	2

Intermediate Reference Laboratory (IRL): One IRL has been designated in the STDC / Public Health Laboratory /Medical College of the respective state. The functions of IRL are supervision and monitoring of EQA activities, mycobacterial culture and DST and also drug resistance surveillance (DRS) in selected states. The IRL ensures the 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 and panel testing to each district in the state, at least once a year.

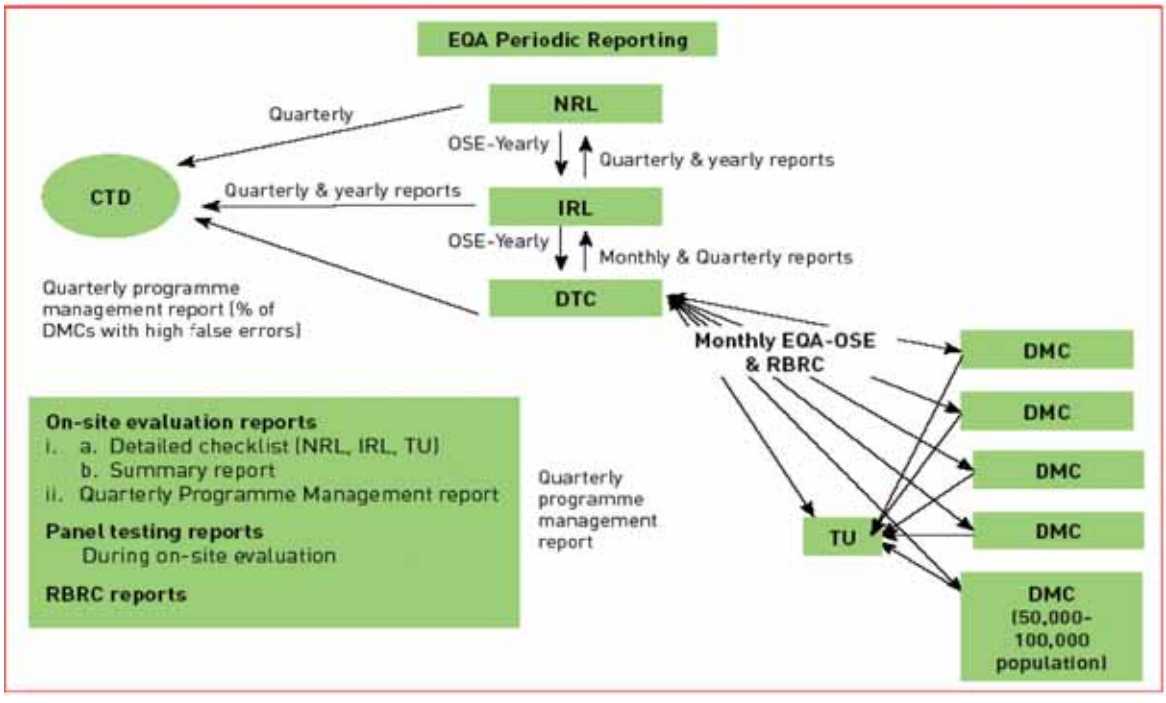
Designated Microscopy Centre (DMC): The most peripheral laboratory under the RNTCP network is the DMC which serves a population of around 100,000 (50,000 in tribal and hilly areas). Currently all the districts in the country are implementing EQA. For quality improvement purposes, the NRL OSE recommendations to IRLs and districts are discussed in the RNTCP laboratory committee meetings, quarterly at CTD. 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 Quality Assurance activities include:

- On-site Evaluation,
- Panel Testing and
- Random Blinded Rechecking.

The figure 1 shows the schematic representation of the External Quality Assurance EQA reporting.

Figure 1 : Schemalic representation of the External Quality Assurance (EQA) reporting



Incidence rate (all NEW TB cases per lakh population) **, Estimated no of NEW TB cases and Total no of NEW TB cases notified under RNTCP since year 2000 is as under:

Table : 2 Incident New TB (New Smear Positive + New Smear Negative + Extra Pulmonary) cases

Year	Incidence rate (all NEW TB cases per lakh population) **	Estimated no of NEW TB cases	Total no of NEW TB cases notified under RNTCP
2000 *	168	1238251	195,077
2001*	168	1347716	382,488
2002*	168	1457181	511,615
2003*	168	1566645	759,329
2004*	168	1676110	991,454
2005*	168	1785575	1,070,551
2006 *	168	1895040	1,140,017
2007	168	1895040	1,197,670
2008	168	1928640	1,226,472
2009	168	1955520	1,241,756
2010	168	1977360	1,227,667
2011	168	2049768	1,209,489
2012	168	2063880	1,181,234

* DOTS expansion was done in phased manner with complete coverage by March 2006. Thus the total number of cases notified under RNTCP till 2006 are lesser.

** Estimated by WHO based on ARTI and assumption of equal proportion of smear positive and smear negative cases amongst new cases while extra-pulmonary cases occurring at the rate of 20% of new smear positive cases.

Table : 3 Prevalent All TB cases (NSP+NSN+NEP + All re-treatment cases)

Year	Prevalence rate (all TB) cases per lakh population) **	Estimated no of all TB cases in population	Total no of TB cases notified under RNTCP
2000 *	434	3,201,394	240,835
2001*	418	3,349,234	468,360
2002*	401	3,475,115	619,259

2003*	384	3,579,039	906,638
2004*	367	3,661,004	1,188,545
2005*	350	3,721,011	1,294,550
2006 *	333	3,759,060	1,400,340
2007	316	3,568,992	1,474,605
2008	300	3,438,834	1,517,363
2009	283	3,290,628	1,533,309
2010	266	3,129,055	1,522,147
2011	249	3,040,489	1,515,872
2012	232	2,855,034	1,467,585

* DOTS expansion was done in phased manner with complete coverage by March 2006. Thus the total number of cases notified under RNTCP till 2006 are lesser.

7.2. Drug Resistant TB

India is one of the high burden countries for tuberculosis as well as drug-resistant tuberculosis. As per WHO's "Global Tuberculosis Report , 2012", India account for an estimated 64000 patients out of 310000cases of Drug Resistant TB estimated to have occurred amongst the notified cases of TB across the globe in a year.

The programme has developed a multi-faceted response plan to combat the challenge of drug resistant TB. The key focus of RNTCP is to prevent the emergence of drug resistance by providing quality DOTS diagnostic and treatment services and promoting adherence to International Standards of TB care by all healthcare providers.

The programme has taken concrete steps to promote rational use of anti-TB drugs. These include the novel initiative of extending universal access to free quality anti-TB drugs across the country and development of a guidance document for healthcare providers on the prevention and management of drug resistance TB outside the programme settings. The programme through the aegis of professional medical associations and Medical Council of India is sensitizing, educating and urging healthcare providers on judicious use of anti-TB drugs. The intervention of drug regulatory authority of the country is being sought to enforce ban on sale of anti TB drugs in open market.

Besides initiating and strengthening measures for prevention of drug resistance, the programme has simultaneously initiated diagnostic and treatment services for the management of DR TB as an integral component of RNTCP.

The Programme Management for Drug Resistant TB PMDT services for quality diagnosis and treatment of drug resistant TB cases were initiated in 2007 in Gujarat and Maharashtra. Despite the modest progress from 2007 - 2009, the programme has extended drug susceptibility testing to all smear positive retreatment cases upon diagnosis, and all new cases that are smear-positive after first-line anti-TB treatment across the country by 2012. By 2015 drug susceptibility testing will be made available to all smear positive cases registered under the programme. This is further complemented by a nationwide laboratory scale up with 43 culture & DST laboratories (Solid & LPA techniques including Liquid Culture in 33 labs) in the public health sectors by 2015.

The 12th five year Plan (2012-17) for RNTCP has the objective to provide universal access to quality diagnosis and treatment to all TB cases in the community including TB HIV and Drug Resistance TB cases.

Diagnosis of Drug Resistant TB:

For Management of Drug Resistant TB, RNTCP provides decentralized diagnostic and treatment services. Diagnosis is based on clinical indication to offer DST to initially all failures of first line regimen, contacts of known MDR TB case. Subsequently, services will be extended to all smear positive re-treatment cases at diagnosis, smear positive follow up case and finally to all smear negative re-treatment cases at diagnosis and HIV associated TB cases at diagnosis. For diagnosis of XDR-TB, DST for second-line drugs is extended to patients on failure of MDR TB treatment when culture remains positive at 6 months.

For drug susceptibility testing sputum specimen is transported to accredited reference laboratory. Rapid molecular test like Line Probe Assay (LPA) and CB-NAAT, if available is the preferred DST method for first line drugs. DST for 2nd line drugs is done at 3 National Reference Labs (NIRT-Chennai, NTI-Bangalore, LRS Institute of TB & RD-Delhi). DST to second-line drugs will be offered to all confirmed MDR TB cases at diagnosis as the lab capacity becomes increasingly available in all 33 labs being developed for liquid culture and DST in a phased manner up to 2015.

RNTCP has quality assured laboratory network for bacteriological examination of sputum in three tier system of National Reference laboratory (NRL), Intermediate Reference laboratory (IRL) and Designated Microscopy Centre (DMC).

The programme has certification procedure for the culture and drug susceptibility testing for solid, liquid and Molecular (Line Probe Assay) with quality assurance protocol based upon WHO and Global Laboratory Initiative recommendations. There are 45 certified Culture and DST laboratories in the country which includes laboratories from Public sector IRL, Medical College, Private and NGO laboratories.

35 laboratories have been certified for solid C & DST that includes 4 NRL (NTI, Bangalore, NIRT, Chennai, JALMA , Agra and LRS, New Delhi), 17 IRLs (Andhra Pradesh, Chattisgarh, Delhi, Gujarat, Haryana, Jharkhand, Kerala, Maharashtra(Nagpur), Madhya Pradesh (Indore and Bhopal),Odisha, Puducherry, Rajasthan(Ajmer), Tamilnadu, Uttar Pradesh, Uttarakhand and West Bengal) 5-Medical colleges (PGIMER, Chandigarh, AIIMS-Dept. of Medicine-New Delhi, JJ Hospital-Mumbai, SMS- Jaipur and MGIMS-Wardha), 3-NGO (BPHRC-Hyderabad, Choithram Hospital, Indore and DFIT Nellore),4-ICMR institutes (RMRC-Port Blair, RMRC-Bhubaneswar, RMRC Dibrugar and RMRC- Jabalpur) and 2-Private (CMC-Vellore and Microcare- Surat). The proficiency testing for solid is in advance stages for IRLs in Assam, Karnataka, Manipur, Arunachal Pradesh, Punjab, Himachal Pradesh, Srinagar, Jammu & Goa for RNTCP certification. RNTCP also encouraging the Laboratories from Medical Colleges, ICMR, Private sector and NGO sector laboratories for certification by providing technical assistance and training of the human resources at National Reference Laboratories.

10 laboratories are certified by RNTCP for liquid culturethat include 4 NRLs, 2 IRLs(Andhra Pradesh and Gujarat),1 Medical College(SMS Jaipur), 3 Private Laboratories(P D Hinduja, SRL Mumbai and Kolkata). Proficiency testing for liquid culture is ongoing for IRLs (Assam, Delhi Karnataka, Kerala, Maharashtra(Nagpur and Pune) for certification. RNTCP is in process of establishing 17 Bio safety level-3 laboratories for liquid culture as per laboratory scale up plan for liquid culture in selected Intermediate Reference laboratories and C & DST laboratories at Medical Colleges. (5 in 2012)

35 laboratories has been certified for Line Probe Assay by RNTCP 4 NRL (NTI, Bangalore, NIRT, Chennai, JALMA , Agra and LRS, New Delhi), 21 IRL (Assam, Andhra Pradesh, Bihar, Chattisgarh, Delhi,, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh (Bhopal and Indore), Maharashtra(Pune and Nagpur), Odhisa, Puducherry, Rajasthan, Tamilnadu, , Uttarakhand, Uttar Pradesh and West Bengal), 6- Medical College (Vishakhapatnam, AIIMS-Dept. Of Medicine-New Delhi , AIIMS-Dept. of Laboratory Medicine-New Delhi, Govt. Med. College-Jamnagar, JJ Hospital-Mumbai and SMS- Jaipur) ,2 -NGO (DFIT, Nellore and BPHRC, Hyderabad) and 2-Private (P D Hinduja- Mumbai and Subharti Medical). The Line probe Assay is a molecular diagnostic test which can provide the DST results within one day. RNTCP has completed the demonstration and evaluation phase in selected laboratories and based upon the evidence adopted the policy for rapid diagnosis of MDR-TB by LPA. The Molecular laboratories are equipped with clean room facility and GT BLOT machines to perform up to 90 test per day for diagnosis of MDR-TB.

Figure 1: RNTCP Certifical laboratories in 2011-12 by technology

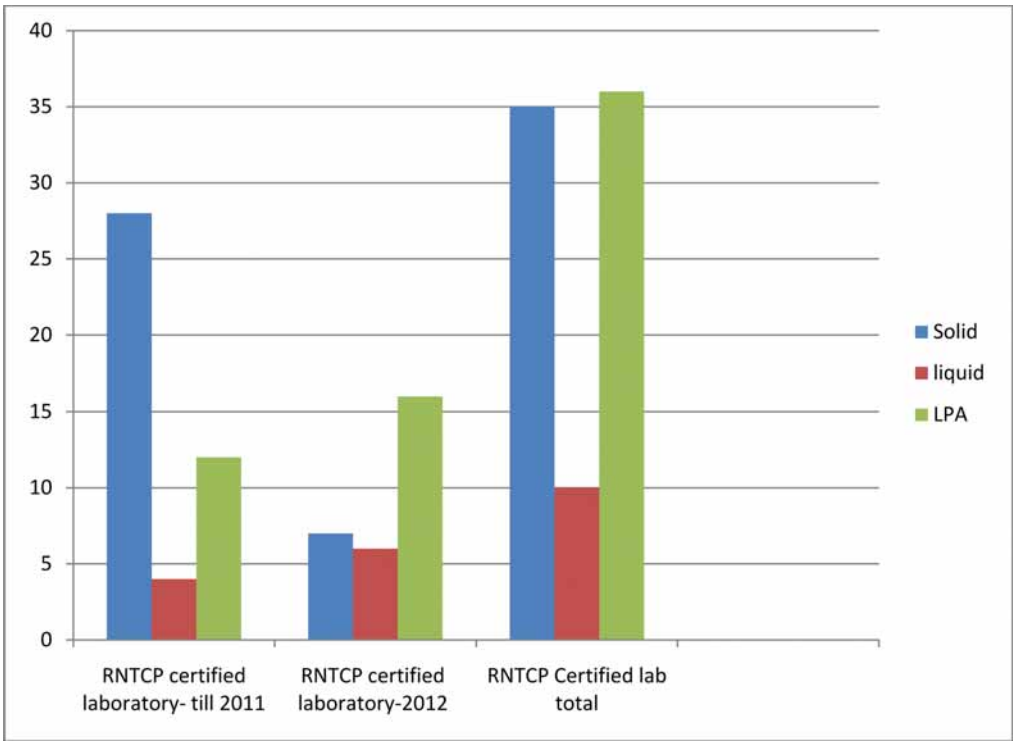
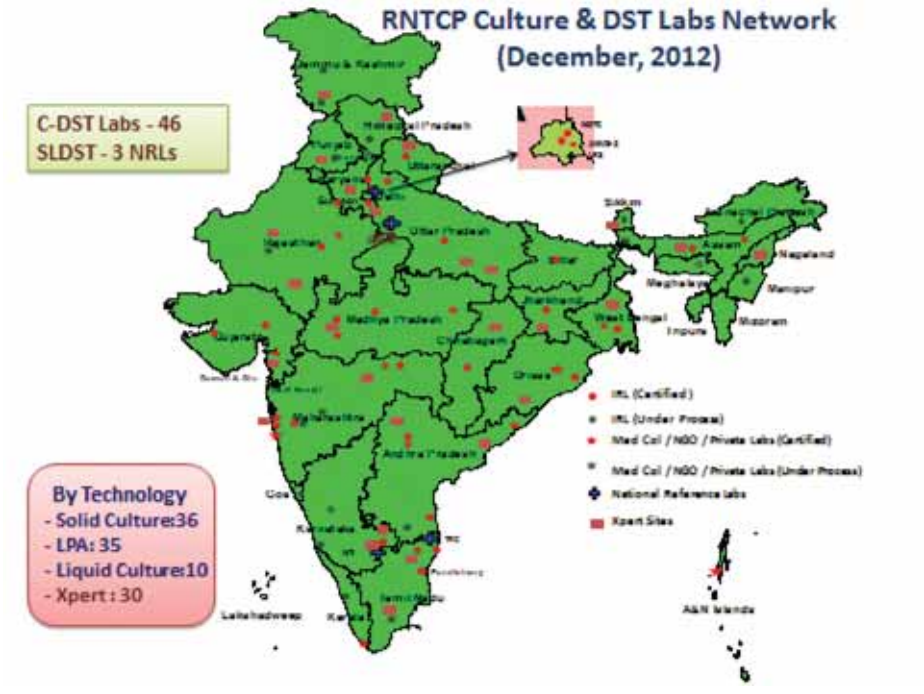


Figure 2 : RNTCP Culture & DST Labs Network (December, 2012)



Development of Diagnostic Capacity

Second Line DST: As on 2012 three NRLs (NTI-Bangalore, NIRT-Chennai and LRS-New Delhi) is performing the second line DST in solid and liquid culture. RNTCP finalized protocol and guidelines for certification for second line DST. RNTCP has identified eight laboratories that includes few IRLs (Andhra Pradesh, Delhi, Gujarat, Kerala, Maharashtra-Nagpur, Rajasthan) and Medical College (SMS Jaipur and JJ Hospital Mumbai) laboratories to initiate proficiency testing for second line DST. The RNTCP will provide necessary technical support for certification of SLD in private and medical college.

Newer initiative by the RNTCP:

RNTCP is conducting Systematic feasibility study introducing Genexpert in 18 Tuberculosis Units across the 12 states under programmatic conditions. The National Steering committee is monitoring the progress made for the study.

Figure: CBNAAT (Cartrpdge based Nuclei acid amplification test)

The programme also implementing the EXPAND-TB project to supplement laboratory capacity by rapid DST for MDR-TB suspects in10 sites across the nine states covering 70 districts , which are currently facing laboratory capacity deficit to accelerate the PMDT scale-up plan of the country. The eight sites are currently (Kohima-Nagaland, Srinagar- Jammu & Kashmir, Madurai-Tamilnadu, Mumbai-Maharashtra, Medak-Andhra Pradesh, Surat-Gujarat and Varanasi- Uttar Pradesh , Patiala-Punjab,) started delivering services while remaining sites (Sikkim and Bangalore-Karnataka)are in process of delivering services. Cartridge Based Nucleic Acid Amplification test (Genexpert):

The RNTCP in collaboration with union and NRLs is implementing project LED Fluorescent Microscopy in high workload Teaching Hospitals with the aim to improve cost effectiveness and time efficiency. The projects started with providing the 200 LED FM microscope and FM consumables in Medical College, training of the Laboratory technician, supervision and monitoring of project and generate evidence for scaling up of LED-FM microscope in high work load setting.

Treatment of M/XDR TB:

Treatment of Drug Resistant TB is based on Rifampicin DST results. Initial hospitalization at DR-TB Centres is followed by ambulatory care. Standardized treatment regimen for MDR TB under daily DOT includes (6-9m) Kanamycin, Levofloxacin, Cycloserine, Ethionamide, Pyrazinamide, Ethambutol / (18m) Levofloxacin, Cycloserine, Ethionamide, Ethambutol. PAS is used as a substitute drug in case of intolerance. In cases with

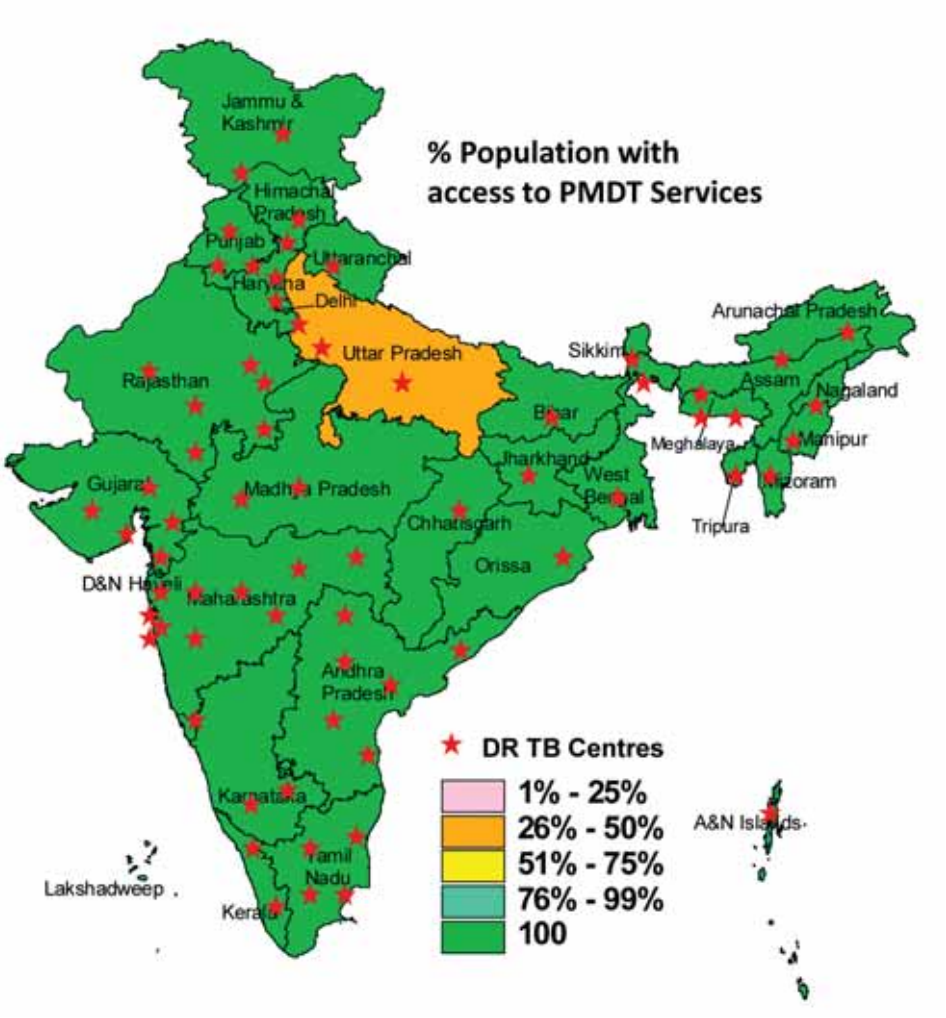
Ofloxacin or Kanamycin resistance detected at baseline wherever facilities to undertake quality assured DST to second line drugs is locally available, the regimen for MDR TB can be suitably modified to replace Levofloxacin with Moxifloxacin and PAS or to replace Kanamycin with Capreomycin respectively. Drug supply using 1 monthly patient wise box of different weight bands is in place.

Standardized treatment Regimen for XDR TB under daily DOT includes (6-12m) Capreomycin, PAS, Moxifloxacin, High dose INH, Clofazimine, Linezolid, Amoxy-Clavulanic Acid / (18m) all the above drugs except Capreomycin. Clarithromycin and Thyacitazone used as a substitute drug in case of intolerance.

Achievements and Status of RNTCP in enhancements of PMDT services

India introduced PMDT services in all 35 states on 10th Jan 2012. As on February 2013, PMDT services were available in all 35 states of the country across 638 districts covering a population of 1089 million (92%) and are being rapidly scaled up. The state of Uttar Pradesh

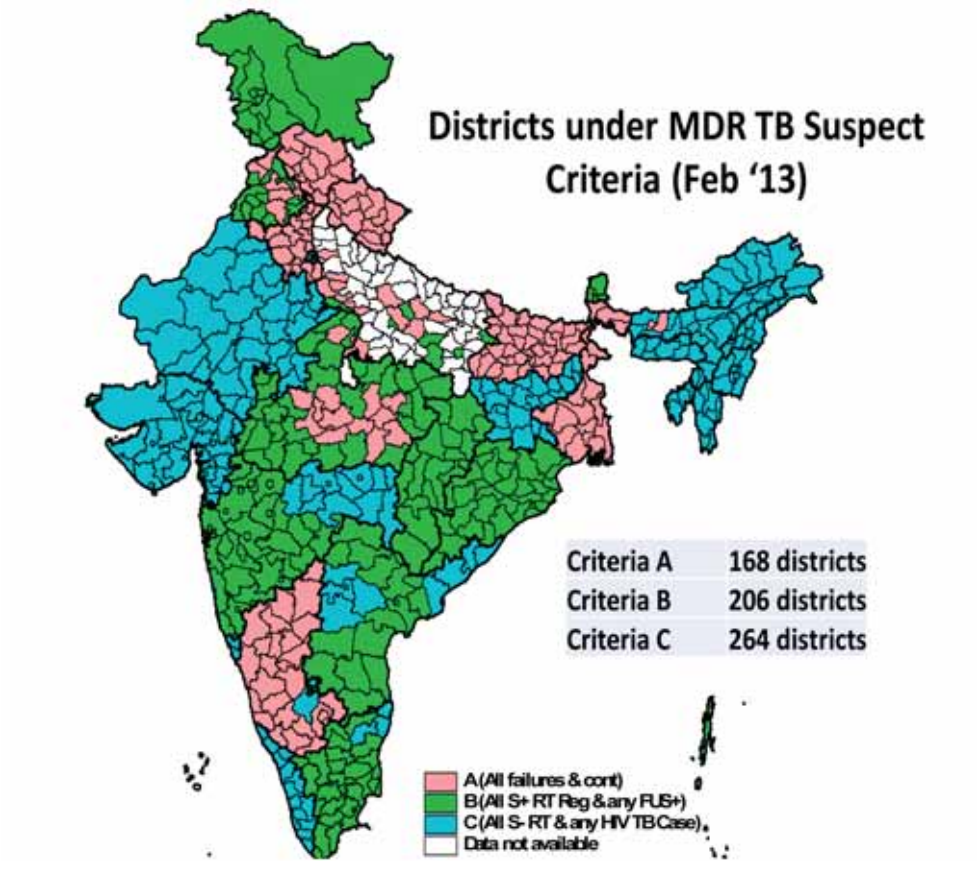
Figure 3: Percentage (%) Population with access to PMDT Services



is expected to complete the necessary preparation of the remaining districts to achieve state wide coverage by 24th March 2013 and CTD is extending all possible support to the state. 34/35 States-UTs have achieved 100% complete geographical coverage and Nationwide coverage is aimed to be achieved by 24th March 2013.

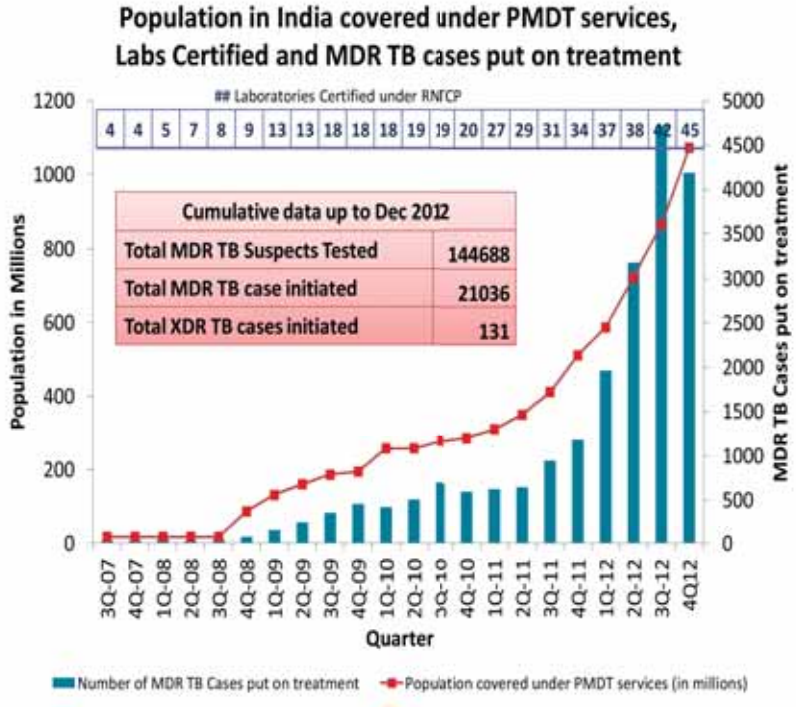
46 laboratories are currently offering quality diagnostic services for drug resistant TB including 35 labs equipped with rapid molecular diagnostic techniques. 76 DR TB wards established with airborne infection control measures.

Figure 4 : Districts under MDR TB Suspect Criteria (Feb'13)



As on February 2013, the PMDT services have been scaled up to 638/692 districts. Further 206/692 districts have advanced to MDR TB Suspect Criteria B i.e. offer DST to all smear positive re-treatment pulmonary TB cases and to cases with any follow up smear positive during first line treatment while 264/692 districts have further advanced to MDR TB Suspect Criteria C i.e. offer DST additionally to all smear negative re-treatment pulmonary TB cases and to all TB HIV cases.

In 2011 and 2012, the country has shown an accelerated progress in scale up of PMDT services as compared to the early implementation years from 2007 – 2012. This is clearly evident from the table below:



Substantial improvements in policies and procedures have been implemented to reduce treatment default, affective 1 in 5 registered MDR TB case. Explanatory research is underway to understand the unacceptable failure rates, but early results suggest poor outcomes have been strongly associated with baseline pre-treatment Ofloxacin resistance in this patient cohort. This analysis is being expanded to subsequent sites and cohorts to inform ongoing revision of programme policies and procedures.

Indicator	2007-10	2011-12	Enhancements (in folds)
Culture-DST Labs (with WRD)	19	45	26(1.4 folds)
Culture –DST Labs with LPA	4	35	31(7.8 folds)
WRD – Xpert-MTB-Rif Sites	0	30	30
States with 100% geographical coverage of PMDT	2	34	32(16 folds)
Districts implementing PMDT services	138	638	500(3.6 folds)
Population (in millions) with access to PMDT services	288	1089	801(2.8 folds)
DR TB Centers functional	20	76	56(2.8 folds)
Cumulative MDR TB suspects tested	20965	144688	123723(6 folds)
Cumulative MDR TB cases diagnoses	6046	27795	21749(3.6 folds)
Cumulative MDR TB cases put on treatment	3610	21036	17426(4.8 folds)

A "High Level meeting on Prevention and Management of Drug Resistant TB in India" was organized under the chairmanship of Hon'ble Health Ministers of State, GoI at Vigyan Bhavan, New Delhi on 30th August 2012.

The meeting was attended by various national and international experts from WHO, Geneva, SEARO and India inaddition to the technical partners, donors and civil society representatives. Greater commitment, ownership and self-reliance in terms of allocation of all resource was evident.

Diagnostic Challenges & Solutions Deployed..(1)

Challenges	Solutions
• Access to rapid molecular DST limited due to weak case finding systems and sample transport systems	• Streamlining systems and training to improve suspect identification, prompt sample collection & transport systems from PHIs/DMCs
• Setting up of Liquid Culture Labs – Infrastructure upgrades to BSL III & HR • Foreseeable follow up capacity crisis in most of the states on shift to Criteria C with rapid molecular tests	• State to take the ownership • Enhance coordination to fast-track processes for BSL III & HRD for LC labs • Follow up capacity enhancement through — 1 sample per follow up culture policy — Fast track application of potential labs to reach proficiency stage with NRLs — Budget for C-DST Schemes with private labs
• Limited access to Second Line DST due to lack of systems • Lack of clarity on RNTCP policy for CB-NAAT and R&R systems	• SLDST protocol finalized at NTI, trainings for 8 labs in Feb '13 • Clear policy on CB-NAAT, Lab SOP & QA updated with CB-NAAT indicators at NTI

High level Meeting on Prevention and Management of Drug Resistant TB (DR-TB) in India

Treatment Challenges & Solutions Deployed...(2)

Challenges	Solutions
• ~ 20% attrition from Dx to Rx : — Delay in treatment initiation in spite of rapid DST — Tracing patients due to poor case holding	• Shift to Criteria C with LPA/CB-NAAT • CB-NAAT to offer decentralized DST and same day diagnosis • Improve DOTS, timely results and coordination
• Limited DR TB Centers and bed capacity to cope with enhanced case load due to Criteria C with LPA/CB-NAAT	• Fast-track DR-TB Centre establishments • Strengthen districts capacity for ambulatory PTE, ADR management • DR TB Centre Scheme in 2013
• Low treatment outcomes due to high interim attrition of patients – Culture Not Known, Default, Died	• Reinforce counseling, follow up & ADR Mx •Intensify SME for improve case holding •RNTCP Integrated Rx Algorithm for DR TB •Bedaquiline – controlled introduction
• Manual information management	•NIKSHAY for PMDT in 2013
• SLD logistic & supply chain management	•Good packing & storage of monthly PWBs • More Store Assist, Scheme for SLD packing

The 1st Meeting of the National Expert Committee on Diagnosis and Management of Tuberculosis under RNTCP was held 3rd – 4th January 2013 and number issues regarding diagnosis and treatment were discussed.

Initiatives proposed for 2013-14:

- Focus to enhance quality and access of PMDT services through intensified supervision and monitoring
- Greater emphasis on regular holding of State PMDT Committee meetings every quarter to review progress and address implementation challenges
- Monitor advancements in early offer of DST under MDR TB Suspect Criteria C, in all districts with rapid molecular tests (LPA/CB-NAAT) as DST capacity enhances while improve follow up culture capacity (by engaging more Public/Private labs) and phased scale up SLDST Capacity across India
- Ensure efficient sputum sample transport system for C-DST & drug boxes as per new standardized specifications in all states
- Improve coordination between labs, districts, field staff and DR TB center for prompt treatment of confirmed MDR TB cases in the states
- Strengthen basic DOTS, intensify SME by districts to improve quality of services for universal access by addressing delays and attritions during treatment
- Streamline information management and notification of TB and DR TB from private sector through NIKSHAY, TB Notification and Lab surveillance
- Further strengthening partnerships and developing Urban TB Control models
- Finalization and Dissemination of Standards for TB Care in India & Enriched Partnership Guidelines
- Introduction and streamlining of Universal access to free quality TB drugs
- Engaging Large Corporate Hospitals and DNB Institutions to avail their expertise in extending universal access to quality diagnosis and treatment of drug resistant TB.
- List of laboratories under RNTCP certification is given in Annexure-C

7.3. TB-HIV

Background: HIV infection increases the risk of progression of latent TB infection to active TB disease thus increasing risk of death if not timely treated for both TB and HIV and risk of recurrence even if successfully treated. Correspondingly, TB is the most common opportunistic infection and cause of mortality among people living with HIV (PLHIV), difficult to diagnose and treat owing to challenges related to co-morbidity, pill burden, co-toxicity and drug interactions. Though only 5% of TB patients are HIV-infected, in absolute terms it means more than 100,000 patients annually, ranks 2nd in the world and accounts for about 10% of the global burden of HIV-associated TB. This coupled with heterogeneous distribution within country is a challenge for joint delivery of integrated services. National and international studies indicate that an integrated approach to TB and HIV services can be extremely effective in managing the epidemic. Studies also indicate that emphasis needs to be on early diagnosis linked to TB and HIV treatment.

Evolution of joint TB/HIV collaboration

Since the advent of the collaborative efforts in 2001, TB-HIV activities have evolved to cover most of the recommendations as per the latest WHO policy statement issued in 2012. In 2007, the first National Framework for joint TB-HIV collaborative activities was developed which endorsed a differential strategy reflective of the heterogeneity of TB-HIV epidemic. Coordinated TB-HIV interventions were implemented including establishment of a coordinating body at national and state level, dedicated human resources, integration of surveillance, joint monitoring and evaluation, capacity building and operational research. Interventions have focused on improving services for HIV-infected patients, with intensified TB case finding at HIV care settings and linking with TB treatment; and for TB patients with provider initiated HIV testing and counselling, provision of ART and decentralised CPT and nationwide coverage was achieved in July 2012.

Progress

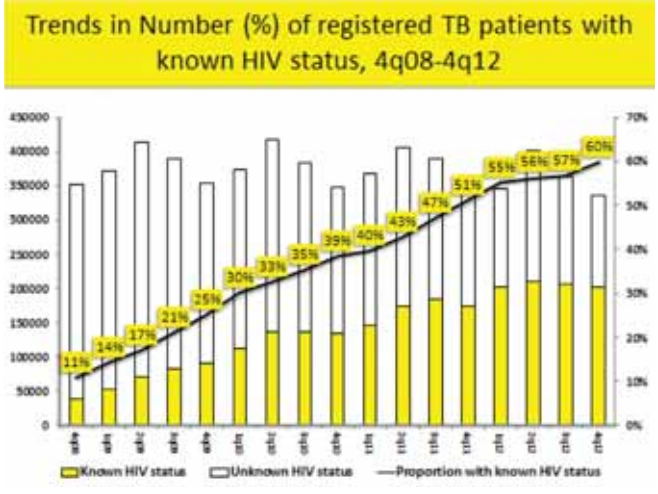
A tremendous progress has been made in the implementation of collaborative TB/HIV activities.

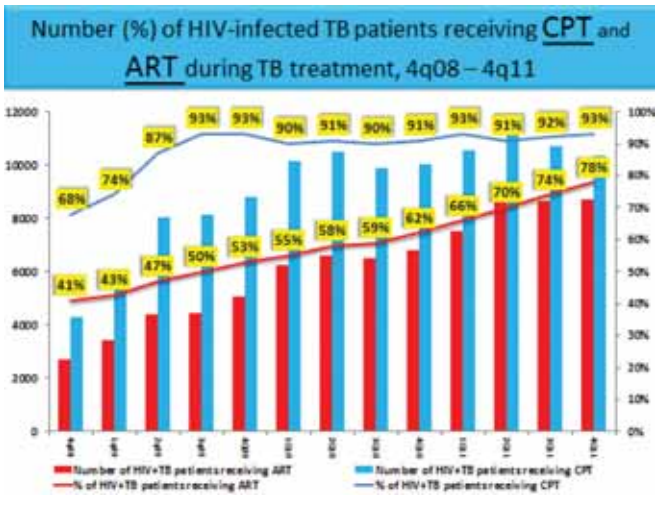
1. Intensified TB case finding has been implemented nationwide at all HIV testing centres (known as integrated counselling and testing centres, or ICTCs) and has now been extended to all ART centres, with better reporting coming from States implementing the intensified TB-HIV package.

Table 1: Intensified TB Case Finding at ICTC and ART centres, 2012

HIV care facility	Number of clients / patients screened for TB diagnosis	Number of TB patients detected
ICTC	5,77,442	49,319
ART centre	1,38,967	28,399
TOTAL	7,16,409	77,718

2. HIV testing of TB patients is now routine through provider initiated testing and counselling (PITC), implemented in all states with the intensified TB-HIV package. In these settings, the density of HIV counselling and testing services is adequate for PITC for TB patients to be effectively implemented. During the year 2012, about 8, 21,807 (56%) TB patients were examined and 44,063 (5%) were found to be HIV positive.





3. Persons found to be HIV-positive are eligible for free HIV care at a network of antiretroviral treatment (ART) centres. ART centres are located in medical colleges, mainly staffed and operated by the State AIDS Control Societies, and a few are situated within the facilities of private or NGO partners. As of December 2012, there were 372 ART centres operating in the country, 809 link-ART centres and 158

link-ART centre plus centres. Ten Regional Centres of Excellence provide second-line ART services for PLHIV, there are 24 centres providing second line ART (ART-plus centres). HIV-infected TB patients who are on protease inhibitor based second line ART are getting rifabutin-based TB treatment in place of Rifampicin. Among HIV-infected TB patients diagnosed in 2012, nearly 32,313 (92%) were started on co-trimoxazole prophylaxis and nearly 26,051 (74%) were started on ART. Though this is an improvement over past performance, this is not sufficient and both programmes are making substantial efforts to improve early initiation of ART in HIV-infected TB patients.

4. Policy decision has been taken by National Technical Working Group on TB/HIV collaborative activities (NTWG on TB/HIV) to expand coverage of whole blood finger prick HIV screening test at all DMC without a stand-alone or F-ICTC. The expansion shall be prioritized in states and districts where there are low levels of DMC and ICTC/F-ICTC co-location, and linked with procurement and supply cycle of NACP.
5. Provider Initiated HIV Testing and Counselling (PITC) among Presumptive TB cases (TB suspects) is now a policy –
   a. In High HIV prevalent states /settings - The implementation will be done in a phased manner, starting with high prevalent states and then in A and B category districts in rest of the country.
   b. In low HIV prevalent states/settings - HIV testing among presumptive TB cases should be routinely implemented in the age-group of 25-54 years in low HIV prevalent districts (C & D) at places where there are co-located TB and HIV testing facilities.

   The state of Karnataka was implementing PITC among TB suspects in 2012 as a feasibility study which was subsequently continued after the study. Out of the 31 districts, the proportion of presumptive TB cases knowing their HIV status was nearly 46% (range 10-83%) and 9% (range 9-29%) were found to be HIV positive.

Number of TB suspects examined for sputum smear microscopy in the state (2012)	No. (%) TB suspects tested for HIV (2012)	No. (%) of TB suspects known to be HIV (2012)
5,06,483	2,32,165 (46%)	21,899 (9%)

During the supervision and monitoring visits, it was observed that there was significant proportion of TB suspects who knew their HIV status or were referred from ICTC/ART centres. The other high HIV prevalent states like Andhra Pradesh, Tamil Nadu and Maharashtra are in the process of implementation.

6. Intensified case finding activities to be specifically monitored among HIV infected pregnant women and children living with HIV
7. The National AIDS Control Programme (NACP) and RNTCP have taken the policy decision to adopt Isoniazid prophylaxis therapy (IPT) as a strategy for prevention of TB among PLHIV whose implementation will be in a phased manner.
8. The RNTCP has prioritized presumptive TB cases among people living with HIV for diagnosis of TB and Rifampicin resistance with rapid diagnostic tools having high sensitivity e.g. Xpert MTB/RIF®

Challenges

There are several challenges that need to be addressed. Only 56% of TB patients are screened for HIV and knew their HIV status, of those identified as HIV positive, only 74% about are linked to ART as the majority are poor and unable to reach centralized ART centres. As compared to TB services, which are mostly decentralized and integrated into the general health system, HIV services remain largely centralized. Thus, this gap between RNTCP and NACP infrastructure results in suboptimal linkages. Implementation of airborne infection control measures in health care settings is also limited. Despite the achievements, the mortality among HIV-infected TB patients continues to be unacceptably high. There may be several reasons for the high mortality among HIV-infected TB patients: these include undiagnosed or late diagnosis of HIV, delayed or missed TB diagnosis among PLHIV, provision of inadequate chemotherapy to drug-resistant TB cases in the context of unavailability of decentralized culture and DST facilities, late presentation by HIV/TB patients (indicated by low CD4 counts at the time of diagnosis), and operational issues like long distances to travel for patients and lack of finances resulting in suboptimal linkages to centralized ART services.

Vision ahead:

The RNTCP and NACP (National AIDS Control Programme) have jointly planned the following interventions in their next strategic plans (2012-17):

1. The next five-year plan would focus on reinforcing mechanisms for ensuring effective implementation and improving service delivery for TB and HIV infected patients.
2. Decentralization of HIV testing facilities and co-location in all TB microscopy centres has been planned to ensure universal coverage of HIV testing among TB patients.

3. Early and improved diagnosis of TB and Rifampicin resistance, through rapid diagnostic technology for PLHIV is envisaged. Field-testing and deployment of improved TB diagnostic tools, such as high-sensitivity cartridge-based nucleic acid amplification tests, for more effective diagnosis of TB and drug-resistant TB among PLHIV is expected to reduce morbidity and mortality.
4. Measures to improve access of HIV-infected TB patients to ART centres by provision of travel support and engagement with the affected community have been planned.
5. Early initiation of ART for all PLHIV with CD4 counts of <350, and for all HIV-infected TB patients irrespective of CD4 count. Early initiation of ART is expected to improve immune competency and prevent the development of TB.
6. Optimize supervision and monitoring of implementation of TB/HIV collaborative activities

7.4. Childhood Tuberculosis

Background

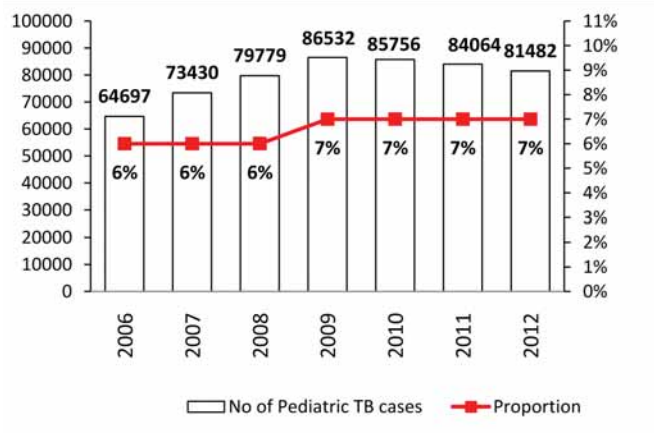
The actual burden of paediatric TB is not known due to diagnostic difficulties but has been assumed that 10% of total TB load is found in children. Globally, about 1 million cases of paediatric TB are estimated to occur every year accounting for 10-15% of all TB; with more than 100,000 estimated deaths every year, it is one of the top 10 causes of childhood mortality. Though MDR-TB and XDR-TB is documented among paediatric age group, there are no estimates of overall burden, chiefly because of diagnostic difficulties and exclusion of children in most of the drug resistance surveys.

Contrary to traditional national TB programmes paediatric tuberculosis (i.e., TB among the population aged less than 15 years) has always been accorded high priority by RNTCP since the inception of the programme. In order to simplify the management of paediatric TB, RNTCP in association with Indian Academy of Paediatrics (IAP) has described criteria for suspecting TB among children, has separate algorithms for diagnosing pulmonary TB and peripheral TB lymphadenitis and a strategy for treatment and monitoring patients who are on treatment. In brief, TB diagnosis is based on clinical features, smear examination of sputum where this is available, positive family history, tuberculin skin testing, chest radiography and histo-pathological examination as appropriate. The treatment strategy comprises three key components. First, as in adults, children with TB are classified, categorised, registered and treated with intermittent short-course chemotherapy (thrice-weekly therapy from treatment initiation to completion), given under direct observation of a treatment provider (DOT provider) and the disease status is monitored during the course of treatment. Second, based on their pre- treatment weight, children are assigned to one of pre-treatment weight bands and are treated with good quality anti-TB drugs through "ready-to-use" patient wise boxes containing the patients' complete course of anti-TB drugs are made available to every registered TB patient according to programme guidelines. India is the first country to introduce paediatric patient wise boxes.

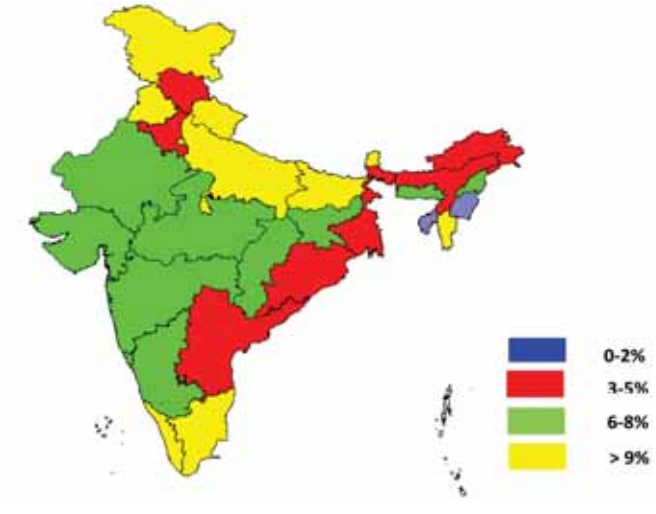
Progress

1. The number of paediatric TB cases registered under RNTCP has shown an increasing trend in the past five years and for 2012, about 81,482 cases were notified accounting for 7% of all cases. Expectedly, smear negative and EP cases predominate.

Trend of Paediatric TB cases out of all New TB cases under RNTCP



However, the proportion of paediatric TB case detection has variation among the states,which significantly varies from 5-14% in larger states.



National consultation on management of childhood tuberculosis in 2012

The National guidelines on Paediatric TB diagnosis and

management were updated based on the recent evidence and advances in paediatric TB diagnosis and treatment in consultation with Indian Academy Paediatrics during January- February 2012.

Diagnosis of Paediatric TB (0-14 years):

A new diagnostic algorithm is developed for pulmonary TB, the commonest type of extra pulmonary TB (Lymph node TB) and for other types of extra-pulmonary TB. The diagnostic algorithms for the diagnosis of pulmonary TB and Lymph node tuberculosis are provided in Annexure D.

a. All efforts should be made to demonstrate bacteriological evidence in the diagnosis of pediatric TB. In cases where sputum is not available for examination or sputum microscopy fails to demonstrate AFB, alternative specimens (Gastric lavage, Induced sputum, bronco-alveolar lavage) should be collected, depending upon the feasibility, under the supervision of a paediatrician.

b. A positive Tuberculin skin test / Mantoux positive were defined as 10 mm or more induration. The optimal strength of tuberculin 2 TU (RT 23 or equivalent) to be used for diagnosis in children.
   - There is no role for inaccurate and inconsistent diagnostics like serology (IgM, IgG, IgA antibodies against MTB antigens), various in-house or non-validated commercial PCR tests and BCG test.
   - There is no role of IGRAs in clinical practice for the diagnosis of TB.

c. Loss of weight was defined as a loss of more than 5% of the highest weight recorded in the past three months.

Intermittent versus Daily regimen in Children:

The intermittent therapy will remain the mainstay of treating paediatric patients. However, children with severe disseminated disease, Neuro-tuberculosis and seriously ill hospitalised children having high likelihood of vomiting and intolerance to oral drugs an initial daily supervised therapy during their stay in the hospital is needed. After discharge they will be taken on thrice weekly DOT regimen (with suitable modification to thrice weekly dosages). The following are the daily doses (mg per kg of body weight per day) Rifampicin 10-12 mg/kg (max 600 mg/day), Isoniazid 10 mg/kg (max 300 mg/day), Ethambutol 20-25mg/kg (max 1500 mg/day), PZA 30-35mg/kg (max 2000 mg/day) and Streptomycin 15 mg/kg (max 1gm/day).

The following newer Case definitions for paediatric TB patients will be incorporated in the RNTCP manuals.

a. Failure to respond: A case of paediatric TB who fails to have bacteriological conversion to negative status or fails to respond clinically / or deteriorates after 12 weeks of compliant intensive phase shall be deemed to have failed response provided alternative diagnoses/ reasons for nonresponse have been ruled out.

b. Relapse: A case of paediatric TB declared cured/ completed therapy in past and has (clinical or bacteriological) evidence of recurrence.

c. Treatment after default: A case of paediatric TB who has taken treatment for at least 4 weeks and comes after interruption of treatment for 2 months or more and has active disease (clinical or bacteriological).

d. For programmatic purposes of reporting, all types of retreatment cases where bacteriological evidence could not be demonstrated but decision to treat again was taken on clinical grounds would continue to be recorded and reported as "OTHERS" for surveillance purposes.

Drug dosages in Children: There will be six weight bands and three generic patient wise boxes will be used in combination to treat patients in the six weight bands. The newer weight bands are 6-8 kg, 9-12 kg, 13-16 kg, 17-20 kg, 21-24 kg and 25-30 kg. However, a lead time of at least 2 years is required for the programme to procure and introduce the newer generic patient wise boxes.

TABLE 1: Treatment Categories and Regimens for Childhood Tuberculosis

Category of treatment	Type of patients	TB treatment regimens	
		Intensive phase	Continuation phase
New cases	• New smear-positive pulmonary Tuberculosis (PTB) • New smear-negative PTB • New extra-pulmonary TB.	$2H_3R_3Z_3E_3$*	$4H_3R_3$
Previously treated cases	• Relapse, failure to respond or treatment after default • Re-treatment Others	$2S_3H_3R_3Z_3E_3$ + $1H_3R_3Z_3E_3$	$5H_3R_3E_3$

H=Isoniazid, R= Rifampicin, Z= Pyrazinamide, E=Ethambutol, S= Streptomycin

*The number before the letters refers to the number of months of treatment. The subscript after the letters refers to the number of doses per week.

Pulmonary TB refers to disease involving lung parenchyma. Extra Pulmonary TB refers to disease involving sites other than lung parenchyma. If both pulmonary and extra pulmonary sites are affected, it will be considered as Pulmonary for registration purposes. Extra Pulmonary TB involving several sites should be defined by most severe site.

Smear positive: Any sample (sputum, induced sputum, gastric lavage, broncho-alveolar lavage) positive for acid fast bacilli.

New Case: A patient who has had no previous ATT or for less than 4 weeks.

Relapse: Patient declared cured/completed therapy in past and has evidence of recurrence.

Treatment after Default: A patient who has taken treatment for at least 4 weeks and comes after interruption of treatment for 2 months and has active disease.

Failure to respond: A case of pediatric TB who fails to have bacteriological conversion to negative status or fails to respond clinically / or deteriorates after 12 weeks of compliant intensive phase shall be deemed to have failed response provided alternative diagnoses/ reasons for non-response have been ruled out.

Others: Cases who are smear negative or extra pulmonary but considered to have relapse, failure to respond or treatment after default or any other case which do not fit the above definitions.

a. To ensure that every child gets correct dosages, weighing of the patient in minimal clothing (as appropriate) using accurate weighing scales is essential.

b. All paediatric TB patients should be shifted to next weight band if a child gains a kilogram or more, above the upper limit of the existing weight band.

Drug formulations: Since, the number of tablets is too many to consume and younger patients have difficulty in swallowing tablets the DOT centres will be provided with pestle and mortars for crushing the drugs. It will be the responsibility of the DOT provider to supervise the process of drug consumption by the child and in case any child vomits within half an hour of period of observation, fresh dosages for all the drugs vomited will be provided to the caregiver.

Treatment regimens: There will be only two treatment categories – one for treating 'new' cases and another for treating 'previously treated cases'. (Table 1 above)

TB Meningitis: During intensive phase of TB Meningitis, Injection Streptomycin is to be replaced by Tablet Ethambutol.

Extending intensive and continuation phase:

Children who show poor or no response at 8 weeks of intensive phase should be given benefit of extension of IP for one more month.

a. In patients with TB Meningitis, spinal TB, miliary, disseminated TB and osteo-articular TB, the continuation phase shall be extended by 3 months making the total duration of treatment to a total of 9 months.

b. A further extension may be done for 3 more months in continuation phase (making the total duration of treatment to 12 months) on a case to case basis in case of delayed response and as per the discretion of the treating paediatrician.

TB preventive therapy: The dose of INH for chemoprophylaxis is 10 mg/kg (instead of currently recommended dosage of 5 mg/kg) administered daily for 6 months. TB preventive therapy should be provided to:

a. All asymptomatic contacts (under 6 years of age) of a smear positive case, after ruling out active disease and irrespective of their BCG or nutritional status.

b. Chemoprophylaxis is also recommended for all HIV infected children who either had a known exposure to an infectious TB case or are Tuberculin skin test (TST) positive (>=5mm induration) but have no active TB disease.

c. All TST positive children who are receiving immunosuppressive therapy (e.g. Children with Nephrotic syndrome, acute leukemia, etc.).

d. A child born to mother who was diagnosed to have TB in pregnancy should receive prophylaxis for 6 months, provided congenital TB has been ruled out. BCG vaccination can be given at birth even if INH chemoprophylaxis is planned.

7.5. Tuberculosis and Diabetes

Background

In 2012, there were an estimated 371 million cases of DM globally, In South East Asia Region, more than 70.3 million people have diabetes. In India, As a consequence of population growth, aging, changed lifestyle and urbanization, the country has 63 million persons with diabetes mellitus

Tuberculosis and Diabetes Mellitus: The recent medical literature on the interactions between Tuberculosis and Diabetes has shown that:-

- People with a weak immune system, as a result of chronic diseases such as diabetes, are at a higher risk of progressing from latent to active TB. Hence, people with diabetes have a 2-3 times higher risk of TB compared to people without diabetes
- About 10% of TB cases globally are linked to diabetes
- Large proportions of people with diabetes as well as TB arenot diagnosed, or are diagnosed too late. Early detection can help improve prognosis.
- DM can lengthen the time to sputum culture conversion and theoretically this could lead to the development of drug resistance if a 4-drug regimen in the intensive phase of therapy is changed after 2 months to a 2-drug regimen in the presence of culture-positive TB.
- People with diabetes who are diagnosed with TB have a higher risk of death during TB treatment and of TB relapse after treatment.
- DM is complicated by the presence of infectious diseases, including TB. It is important that proper care for diabetes is provided to patients suffering from TB/DM.
- It has been argued that good glycemic control in TB patients can improve treatment outcomes.

One of the important activities of the Collaborative Framework is the routine implementation of bi-directional screening of the two diseases. The ways of screening, recording and reporting for the two diseases in routine health care settings are not well determined, and these knowledge gaps need to be addressed. The basic components involved are

1. Establish the mechanisms for collaboration
2. Detect and manage Tuberculosis in patients with Diabetes Mellitus
3. Detect and manage Diabetes Mellitus in patients with Tuberculosis

WHO-Union Collaborative Framework was held in Delhi, India, (October 2011)to review and discuss linkages between diabetes mellitus (DM) and tuberculosis (TB), the need for bi-directional screening.

A study to assess feasibility and results of screening TB patients for DM within the routine health care setting across 8 tertiary care hospitals and 8 Tuberculosis Units were carried out in the country during February to September 2012.

It was found that nearly 98% of TB patients were screened for Diabetes. About13% were diagnosed to have DM based on fasting blood glucose, which included 8% of registered TB patients with a diagnosis of DM already known, and 5% having a new diagnosis of DM.

Screening TB patients for DM in Tertiary Hospitals and Tuberculosis Units: data combined for the three quarters in India, 2012*

Indicator	Tertiary Hospitals	Tuberculosis Units	TOTAL
Number of patients with TB registered over the three quarters	5217	3052	8269
Number (%) with known diagnosis of DM	526 (10)	156 (5)	682 (8)
Number needing to be screened with RBG	4691	2896	7587
Number (%) actually screened with RBG	4666 (99)	2801 (97)	7467 (98)
Number with RBG >110 mg/dl and needing to be screened with FBG	1937	901	2838
Number (%) screened with FBG	1824 (94)	879 (98)	2703 (95)
Number (%) with FBG ≥ 126 mg/dl (newly diagnosed with DM)	283 (6)	119 (4)	402 (5)
Number (%) with known and newly diagnosed DM	809 (16)	275 (9)	1084 (13)
Number (%) with known and newly diagnosed DM referred to DM care	779 (96)	254 (92)	1033 (95)
Number (%) with known or newly diagnosed DM who reached DM care	779	241	1020

(*Source: Under publication in Tropical Medicine and International Health, 2013)

The project has shown that DM screening using RBG and then FBG is feasible to do under different types of health facilities and identifies one in eight patients with the disease. This activity would lead to better and earlier detection of DM, earlier and better treatment of DM (which might have gone un-recognized) and improved clinical outcomes on anti-TB treatment.

The policy decision was taken to screen all TB patients for DM in the 100 districts where National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) activities are being implemented. Such arrangement will continues as and when NPCDCS programme is expanded to other districts in the country.

The study results found that for the three quarters, a total

of 254 patients were identified with TB. There were 18 patients newly diagnosed with TB as a result of screening and referral, with the remainder being patients already diagnosed from elsewhere. TB case rates per 100,000 patients attending the DM clinic each quarter were 859, 956 and 642.

Screening of Diabetes Patients for Tuberculosis during each quarter for all the sites combined, India, 2012$

Indicator	Q1-2012	Q2-2012	Q3-2012
Number of DM patients seen in the clinic in each quarter	7218	12237	11691
Number of DM patients already diagnosed with TB from elsewhere	58	74	48
Number (%) of DM patients screened at least once for TB symptoms in each quarter	1907 (26%)	6393 (52%)	5661 (48%)
Of those screened, number (%) of DM patients with a positive TB symptom screen	104 (5%)	135 (2%)	160 (3%)
Of those with a positive screen, number (%) of DM patients referred for TB investigations	57 (55%)	128 (95%)	158 (99%)
Number of DM patients diagnosed with a new episode of TB after referral for investigations	2	11	5
Total number of DM patients with newly diagnosed TB and already known to have TB*	62*	117*	75*
Number of patients known to have started or to be on anti-TB Treatment	61	99	66
TB cases per 100,000 DM patients seen in the clinic each quarter	859	956	642

* Total number does not add up to sum of new and known: this is because one site did not have information on the divide of new and known TB cases

($Source: Under publication in Tropical Medicine and International Health, 2013)

The study concluded that it is feasible to screen DM patients for TB resulting in high rates of TB detection. However, more attention to detail, human resource requirements and electronic medical records is needed to improve the performance.

8. Advocacy Communication and Social Mobilization

Advocacy Communication and Social Mobilization (ACSM) in TB control:

The key objective of Advocacy Communication & Social Mobilization (ACSM) in RNTCP is to generate demand for quality diagnosis and treatment of TB in the community; thus increasing the case detection rate, treatment adherence,resulting in completion of all diagnosed TB cases in the programme. Within the context of RNTCP, ACSM refers to health communication for bringing about awareness, changes in health perceptions and health seeking behaviour.

The goals of ACSM for TB control are as follows:

a. Improving case detection and treatment adherence

b. Widening the reach of services

c. Combating stigma and discrimination

d. Empowering people affected by TB and the community at large.

e. Mobilizing political commitment and resources for TB.

Aim of ACSM activities for TB control:

a. Creating awareness among people about the disease Symptoms & signs, diagnosis, and treatment in order to increase accessibility and utilization of available services for TB control.

a. Motivating all care providers to provide standardized diagnostic and treatment services to all TB patients in a patient-friendly environment as per their convenience.

b. Mobilize communities to engage in TB care, and to increase the ownership of the programme by the community

c. Advocacy to influence policy changes and sustain political and financial commitment

RNTCP has well defined communication strategy which clearly defines communication needs (objectives), communication players (target audiences), communication channels, communication tools (activities), roles and responsibilities at each level, i.e. Centre, State and District level. The programme encourages need based ACSM strategy planning and implementation.

The programme will be taking a paradigm shift in the next five years' strategic plan in the form of reaching the targets of universal access, that is to detect at least 90% of estimated all type of the TB cases of the community and ensuring successful treatment of at least 90% new cases and at least 85% previously treated cases.

Role of ACSM is more challenging in newer challenges of the programme such as Drug Resistant TB and TB HIV. These patients have to undergo treatment for a longer duration with more toxic drugs including injectable. Moreover, most of these patients have a previous history of default which can result in lack of motivation to complete treatment. Added to these is the stigma and discrimination by the family and society.

Important ACSM activities undertaken:

School Awareness Programme:

Realizing the necessity of Universal Access, school awareness programme started and carried out by the RNTCP field personnel to generate awareness among students and teachers of all school and colleges in all the States/UTs. Specific guidelines & timeline were framed and disseminated to all the States/UTs to carry out the activity in time bound manner during 2012 – 2013 FY. As per Guidelines all schools & colleges are visited by RNTCP teams under ACSM activity in order to generate awareness and sensitize them towards TB as a disease, its cause, spread, availability of free diagnosis for early detection and availability of free treatment with quality assured drug (DOTS). Social myths, stigma and other misconception about TB need to be emphasized removed from the community. In this year more than 3.5 lakh schools unless visited all over the states covering more than 4.5 lakh teachers and over 9 lakh students.

Children being made aware of the facliteies available in RTCP as a part of School Health Awareness Programme

The initial first visit to the school included simple messages through quiz, drawing and painting, slogan and essay writing, games etc. and the event concluded with take home message. In order to gauge the impact of the event during follow up visit and to make them more sincere towards the cause, it has asked to assign some target to the children and teachers; like convey the key messages to their parents or share and discuss the issue in the Village Health and Sanitation Committee meetings or discuss the key points with prominent people of their community etc.. To make the event more effective and motivate to the participants through their class teachers provided some token gifts like - pen, pencils, key rings, colour boxes, notebooks etc. and distribution as prizes to motivate the students for continued TB prevention education in their families and communities.

School Health Awarness Programme

The second visit carried out after two-three months to follow up and re-sensitization. During this visit same person visited same school/college already visited and the same activity done with focus on the subject already covered. Follow up visit started with a quiz to gauge the remaining level of the information already given followed by the planned activities and token gift items.

ACSM from States

A lot has been said but a lot more has been done to move towards our aim to make India a TB free nation. Many hands, many hopes and many ideas have joined together to work towards this common goal. All efforts have been streamlined with a vision to "STOP TB in my Lifetime". All the states/UTs follow the RNTCP ACSM strategy. State level ACSM Quality Support Group has been formed in all the states/UT to support and review ACSM activities. District specific ACSM action plan is being prepared and implemented to achieve the annual targets.

"Panchayti Raj Institutions" involvement in RNTCP:

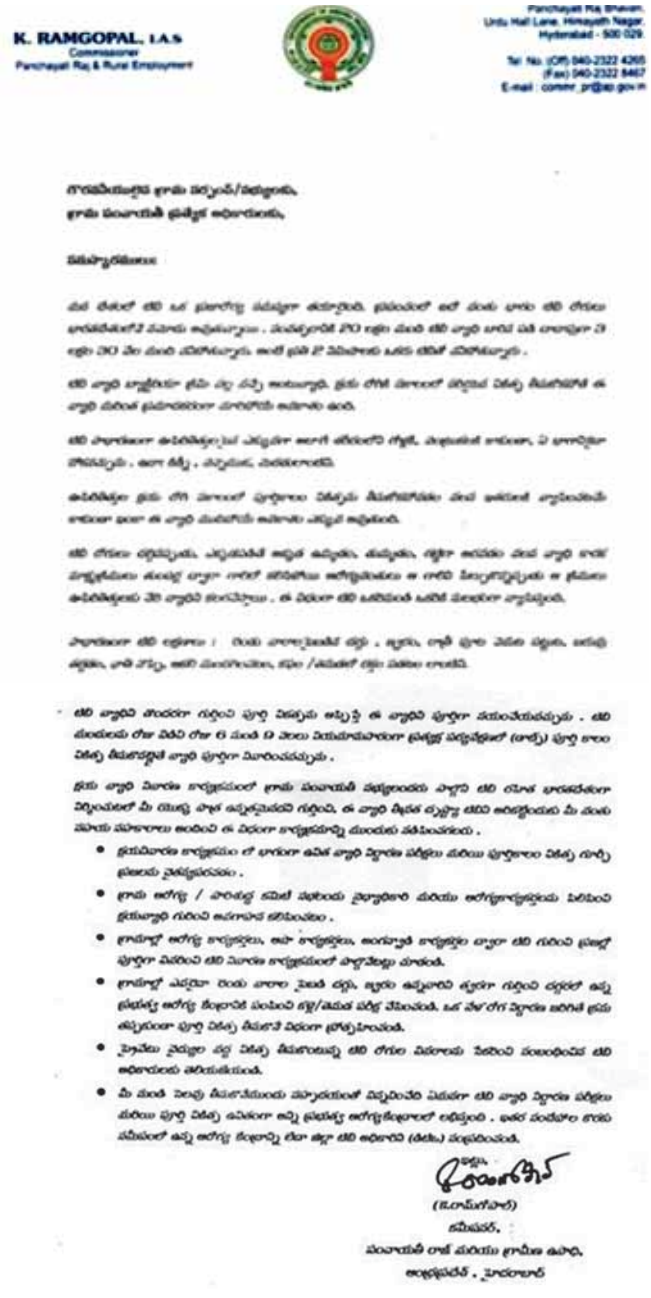
Overarching goal of the **"universal access"** to TB care programme in the next five years is somehow related and depend on the involvement of various stakeholders, ownership and mobilization of the community, media,

policy makers, CBOs / NGOs, local self-governments, reduce stigma and improve level of trust on the Government health services etc. and involvement of the local PRI members is one of the good approach. Programme initiated process of involving PRI members at village level in RNTCP by sending a greeting letter on the occasion of New Year (2013). The greeting letter was sent by the DTOs addressing to the village PRI head with an appeal to support the RNTCP indicating some important points to focus at village level.

Celebration of World TB Day:

Every year on March 24, the Stop TB Partnership encourage us to observe World TB Day, a day dedicated to raise awareness and knowledge of the disease responsible for the deaths of several million people annually. In 2012 on the occasion of World TB day, CTD planned an outreach activity through hired media agency in seven states (Andhra Pradesh, Haryana, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Uttar Pradesh) for massive awareness campaign and mobilization drive to bring about a collective effort from various groups. The outreach plan was carried out from 16th to 31st March 2012. For the outreach activity RNTCP conceptualised the theme "TB Mukti Abhiyan" in conjunction with the World Health Organization's Global plan theme "Stop TB in my lifetime". The theme 'TB Mukti Abhiyan' – Stop TB in lifetime also gives important messages on collective ownership in bringing about change. Based on this a Pledge wall was developed to get the longest signature campaign.

The outreach activity, raising awareness through Vans across the abovementioned seven states, comprised of airing the 22 minute film on TB treatment, adherence and completion of DOTS course; 'Atoot Door' in respective regional languages (Oriya, Telgu and Marathi). Promoters pasted/placed communication materials like stickers and posters at strategic points like DOTS centre, chemist shops, general stores and Panchayats etc. and distributed leaflets. Digital flipchart was also shown which was followed by interactive sessions with village locales on subject pertaining to knowledge and awareness related to TB and DOTS. General public were mobilized to come to the van. To engage the crowd the team conducted quizzes and distributed prizes like key chains and pens. While the activity was on, signature campaign pledge wall was taken simultaneously. A target was kept for one unit


K. RAMGOPAL, I.A.S
Commissioner
Panchayat Raj & Rural Employment

Panchayat Raj Bhavan,
Urdu Hall Lane, Himayath Nagar,
Hyderabad - 500 029.

(1 van team) to cover 3 – 4 villages per day across the 90 districts in 7 states.

Advertisements in Leading Newspapers on Newer Initiatives:

In order to generate awareness on the newer initiativeslike TB Notification, TB-HIV co-infection and Ban of Sero-diagnostic Test for diagnosis of TB, advertisements are being published in the leading national and regional newspapers,all across the country.


Let Us Stop
Malpractices in TB Diagnosis
Inaccurate Serological Blood Tests for Diagnosis of TB banned by the Government of India in Public Interest
REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAM


HIV and TB can be two sides of the same problem.
1st December World AIDS Day
Stay away from the complication of twin infections. Get tested.
There is a universal HIV testing for TB patients as well as TB screening for People Living With HIV.
Free diagnostic screening for TB and HIV detection is available at all Government hospitals.


We can beat the challenge of Tuberculosis (TB)
Every time you handle a TB case, tell your nearest health authorities. Because that's how we can know the dimension of the problem and deal with it better.
Notification of TB cases
TB continues to be a major public health problem accounting for substantial morbidity and mortality in the country. Early diagnosis and complete treatment of TB is the corner-stone of TB prevention and control strategy. Inappropriate diagnosis and irregular/incomplete treatment with anti-TB drugs may contribute to complications, disease spread and emergence of Drug Resistant TB.
In order to ensure proper TB diagnosis and case management, reduce TB transmission and address the problems of emergence and spread of Drug Resistant-TB, it is essential to have complete information of all TB cases. Therefore, the healthcare providers shall notify every TB case to local authorities i.e. District Health Officer/Chief Medical Officer of a district and Municipal Health Officer of a Municipal
Corporation/Municipality every month in a given format (indicated below).
For the purpose of case notification, a TB case is defined as follows:
A patient diagnosed with at least one sputum specimen positive for acid fast bacilli, or culture-positive for mycobacterium tuberculosis or RNTCP endorsed 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.
For the purpose of this notification, healthcare providers will include clinical establishments run or managed by the Government (including local authorities), private or NGO sectors and/or individual practitioners.
Sd/-
Under secretary
to the govt. of India
Order No. Z-28015/2/2012-TB
Dated: 07.05.2012
For more information, contact the concerned State TB Officers/District TB Officers, whose details are available at www.tbcindia.nic.in

9. Partnership

The programme has engaged all relevant health-care providers for tuberculosis (TB) care and control through public–private and public–public mix approaches (PPM). However despite best inputs through various successful PPM models, it has been estimated through various studies that 30-40% of all TB cases are still not notified under the programme. To achieve the objective of "Universal access" it is mandated that these missing cases are brought under the umbrella of RNTCP.

Recognizing the need to strengthen collaborations with the private sector and NGOs, efforts, though isolated, have been made by RNTCP since the earlier days of RNTCP in order to widen access to quality TB care. As the RNTCP expanded, new initiatives of PPM were undertaken in various parts of the country. A unique feature of all these PPM projects was that they adhered to the RNTCP policies & guidelines and implantation was decentralised through close coordination with the state &district RNTCP machinery. These PPM projects from various parts of the country in general demonstrated that the involvement of private hospitals could increase case detection without compromise on the quality of management of TB cases. Using the experiences gained from the collaborations with NGOs and the private sector, first guidelines for the participation of the NGOs(in 2001) and private practitioners (in 2002) were published by RNTCP. The guidelines for NGO/ PP schemes have undergone revisions once in 2008 and are again under revision in consultation with various stakeholders to provide them with more options as per RNTCP priorities.

The Public Private Mix advocacy kit (flipbooks, stickers, display boards, posters etc.) has been developed for facilitating interaction with Private Practitioners for community involvement. A training module for the Medical Practitioners has been especially designed to update them on the technical and operational aspects of the programme.

At present RNTCP has established 2325 partnerships with NGOs and 13997 partnerships with private practitioners and private sector partners. Regional Consultations have been organised as a part of development of new strategy for partnership and capacity building of partners and implementers at state level.

No doubt the spectacular performance of the programduring 11th FYP was efforts of Government of India but some commitment from WHO and different donors was also involved. There were two major donors who were supporting the program and also continued under 12th FYP. These are

1. **World Bank Support:** World Bank has supported RNTCP since it started expanding the coverage of DOTS over a decade ago with a first credit of UD$ 142 million in 1997-2005 and a second credit of US$ 170 million. The second World Bank credit has ended on 30th September 2012. With the support from World Bank DOTS were implemented 28 states and UTs of the country.
2. **Global Fund Support:** The Global Fund has supported (by grants) DOTS expansion in India under different rounds. During October 2011 to march 2013 GFATM has provided grants of $107.27m in phase 1.The program has submitted the proposal for phase 2 of Single stream funding grant to global fund with total budget of US$269.89 million for period of April 2013 to September 2015.

Through the global fund grants apart from the DOTS implementation following activities have also been done:

- Implementation of PPM through IMA and CBCI
- Scale up of laboratory services through FIND
- Scale up of Drug Resistant TB with the help of WHO

Involvement of Other Public Sector in RNTCP

The central government departments like railways, steel, ports, coal and mines have their own health care facilities spread across the country. Usually these facilities cater to a "captive population" who receive subsidized or free services from said facilities. The health facilities outside Ministry of Health (Other sectors), like Employees' State Insurance (ESI), Railways and Central Government Health Services (CGHS), as well as the Ministries of Defence, Steel, Coal, Mines, Petroleum and Natural Gas, Shipping, Power, Chemicals and Fertilizers, have been roped in the programme and their views compiled through national consultations.

CATHOLIC BISHOP'S CONFERENCE OF INDIA (CBCI)

Under its partnership with The Catholic Bishops'

Conference of India the project is being implemented in 19 states through a network of catholic health facilities, which include 395 hospitals, 2017 dispensaries, 146 Diocesan Social Service Centers, 41 other social service centers, 5 medical colleges, 72 nursing school & colleges, 9 DNB teaching hospitals, 77 community care centers and 14 centers for targeted interventions for PLWAs.

Signed schemes functioning in the 19 projects states (as on 31st December 2012)

At the end of year 2012, 159 CHFs are involved under 211 signed schemes- 10 in ACSM Scheme, 28 each in sputum collection center& Pick-up & transport schemes, 77 as DMC-A, 14 as DMC B, 1 LT Scheme, 17 Adherence schemes, 5 slum schemes & 24 TB-HIV Schemes, There are 338 listed institution-based DOT centers& more than 800 community based DOT centers in the CBCI CARD network. Cumulatively about 1, 34,750 TB suspects have been referred for sputum examination of which 67295 were referred from CHFs in year 2012.During 2012, under the project, 137 CHF level sensitizations & trainings were conducted in which 5108 CHF personnel participated. Also, 44 Dioceses level Sensitizations were conducted in which 1166 participants from RNTCP & Church institutions participated. The STPCs actively participated in 24 State driven & 9 centrally driven Internal Evaluations& 13 PMDT appraisals.

Indian Medical Association (IMA) Project

RNTCP PPM IMA project started as a sub-recipient to the Central TB Division's Global Fund Round-six in Apr'08 in five states and one Union Territory of India, namely, Uttar Pradesh, Punjab, Haryana, Maharashtra, Andhra Pradesh and Chandigarh covering 167 districts. Later on, ten more States viz Bihar, Chhattisgarh, Gujarat, Jharkhand, Kerala, Orissa, Rajasthan, Tamil Nadu, Uttaranchal, and West Bengal were added to promote RNTCP and PPM-DOTS under GFATM RCC.

The objective of this project was to improve access to the diagnostic and treatment services of DOTS and thereby improve the quality of care for patients suffering from Tuberculosis through involvement of IMA leaders and members in RNTCP. Key activities of the project includes state/district level workshops, publication of quarterly

TB/RNTCP newsletter, publication in JIMA, conduct district level CMEs of all IMA branches in the target states, produce IEC materials, assist DTOs in training of private providers etc.So far IMA has sensitized 41925, and trained 9723 private doctors all over India in 15 states & 1 union territory.

CME of Private Practitioners

The IMA has supported in formation of Coalition of Professional Bodies against TB at the National level which has following members-

- API-Association of Physicians of India
- IAP-Indian Academy of Pediatrics
- NCCP- National College of Chest Physicians
- ICS- Indian Chest Society
- FPAI- Federation of Family Physicians Association Of India
- Indian Association of Medical Microbiologists
- Indian Association of Pathologists and Microbiologists
- Indian Association of Preventive and Social Medicine
- Indian Public Health Association

Pharmacist Involvement in RNTCP:

India has large number of private retail (community) pharmacists (over 700 000) across the country, and 50–60% of TB patients seek treatment in private sector. But pharmacies have been an untapped potential in any national health programme. Since 2006, the Indian Pharmaceutical Association (IPA), a national professional body of pharmacy professionals in India, has been piloting a public–private partnership project of engaging pharmacists in Mumbai. IPA sought the State TB officer's permission for the project, and the Food and Drug Administration was informed and necessary permission was obtained for DOT provision in pharmacies. The District/City TB Officer, WHO RNTCP Consultants along with IPA trained pharmacists, and IPA is currently working with Navi Mumbai, Mumbai, Bhivandi and Kalyan- Dombivli corporations. Local chemist association selects the willing pharmacists for participation. After a small beginning, IPA scaled up the work to to nine Corporations in the state of Maharashtra and four states of India.

Encouraged by these pilot project findings, MoU has been signed on April 2012, with Indian Pharmaceutical Association (IPA), All India Organisation of Chemists & Druggists (AIOCD), Pharmacy Council of India (PCI) and SEARPharm Forum representing World Health Organization (WHO) – International Pharmaceutical Federation (FIP) Forum of National Associations in South East Asia for engaging pharmacists in RNTCP for TB Care & Control in India. The focus of Pharmacists involvement will be for early identification and referral of TB suspect for diagnosis, Directly Observed Treatment (DOT) provision for TB patients, increasing community awareness about TB and MDR-TB, patient education and counselling, promoting rational use of Anti-TB drugs and contributing to preventing the emergence of drug resistance. **A National Core Committee for RNTCP Pharmacists Partnership** has been formed and the first meeting organised in October 2012 for coordination and oversight of partnership. A training module is under development for pharmacist's involvement under RNTCP which would be utilised for capacity building of pharmacists by associations under this partnership.

IEC DEVELOPED UNDER RNTCP PHARMACISTS PARTNERSHIP

Involvement of Medical Colleges in RNTCP

Involvement of medical colleges in the RNTCP is a high priority. Under RNTCP Medical Colleges play important roles in service delivery, advocacy, training and operational research. Systematic involvement of medical colleges under RNTCP has been a success story. RNTCP is supporting Medical Colleges with additional human resources, logistics for microscopy, funds to conduct sensitizations, trainings and research in RNTCP priority areas. Medical colleges have contributed in a major way in finding more TB cases, especially smear negative and extra - pulmonary cases. The involvement of Medical Colleges in RNTCP completed 10 years. Evolution of Medical College involvement in RNTCP Keeping in view of increasing participation of Medical colleges in the Programme as tuberculosis units, microscopy centers, treatment observation centres, etc., medical colleges were divided in five zones North, East, West, South and North-East which has been increased to six zones this by splitting the South Zone into two zones i.e. South 1 Zone comprising of Karnataka & Andhra Pradesh and South 2 Zone comprising of Tamil Nadu, Kerala & Pudducherry this year to ensure maximum representation and proper involvement of Medical Colleges. At present over 304 medical colleges both public and private medical colleges have been involved in TB control in India.

Medical College Core Committee: A Medical College Core committee is formed in each Medical college including least 4 members, with representatives from department of medicine, chest medicine, microbiology and community medicine. The Core Committee functions to establish quality assured sputum smear microscopy facility in the medical college as well as treatment and referral services to all kind of TB patients. Furthermore it Organize sensitization / workshops / trainings for faculty members / PGs / UGs / Interns / paramedical staff, etc and also undertake Operational Research for RNTCP.

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

State Task Force (STF): Composed of a Chairman who is an elected representative from the medical college in the State, STO of the State is the member secretary. Members of STF include representatives of each of the Medical colleges of the State, on rotation basis if required. The main task of STF is to provide leadership and advocacy, coordination, undertake monitoring, lead operational research and support policy development on issues related to effective involvement of medical colleges in RNTCP at State level and to ensure establishment of DMC cum DOT centres in all Medical Colleges.

Zonal Task Force (ZTF): Composed of a Chairman who is an elected representative from STF chairpersons in the respective Zone with two years tenure. Member secretary of ZTF will be the STO of the State where Medical College of ZTF Chairman is situated. Members of ZTF are representatives of the State Task forces within the zone. In addition to Ensuring constitution of State Task Force (STF) in all States under the Zone, the main task of ZTF is to provide leadership and advocacy, coordination, undertake monitoring, lead operational research and support policy development on issues related to effective involvement of medical colleges in RNTCP at Zonal level. The annual Zonal Task Force (ZTF) CMEs cum Workshops are held every year. The Medical college Zonal task force workshop is an opportunity for reviewing the performance of medical colleges and advocating the guidelines of RNTCP.

ZTF workshops were held as follows during 2012:

S. No.	Zone	Date of ZTF	Venue of ZTF
1	West Zone	4-5 October 2012	Nagpur, Maharashtra
2	South 2 Zone	11-12 October 2012	Kochi, Kerala
3	North Zone	18-19 October 2012	Rohtak, Haryana
4	North East Zone	1-2 November 2012	Shillong, Meghalaya
5	South 1 Zone	26-27 November 2012	Manipal, Karnataka
6	East Zone	6-7 December 2012	Patna, Bihar

National Task Force (NTF): The NTF comprises of representatives from seven nodal medical colleges, CTD, TRC, NTI, LRS and WHO. It has a Chairman who is selected on rotational basis from amongst the 7 nodal medical colleges. DDG (TB) is the member-secretary of the NTF. The main task of NTF is to provide leadership and advocacy, coordination, undertake monitoring, lead operational research and support policy development on issues related to effective involvement of medical colleges in RNTCP at National level.

Partnership of Civil Society Organizations in RNTCP

The **"Partnership for Tuberculosis Care and Control in India" (the Partnership)** brings together civil society across the country on a common platform to support and strengthen India's national TB control efforts. It seeks to harness the strengths and expertise of partners in various technical and implementation areas, and to empower affected communities, in TB care and control. It consists of technical agencies, non-governmental organizations, community-based organizations, affected communities, the corporate sector, professional bodies, media and academia.

Expanding the partner and stakeholder base in India's fight against tuberculosis is crucial to the Partnership's strategy. Besides uniting for a noble cause, partners benefit by featuring their activities in the Partnership newsletter and website, invitations to working group meetings, use of a common logo and a directory to share ideas, best practices and resources, and access to relevant databases. Regional meetings for the southern, eastern, western, northern and north eastern regions were held.

Progress of the Partnership - January - December 2012

- Partners prepared a declaration from CSOs during the 43rd World Lung Conference of The Union held at Kuala Lumpur and are distributing the declaration widely
- In response to the threat of "TDR-TB" scare in Mumbai, the partnership issued a "Call to Action" of all stakeholders to enhance their efforts for TB care and control in India. A total of 5 dailies published the statement
- IHBP (Improving Healthy Behaviors Project) a partner in the Partnership with support from the Secretariat is implementing a project of developing a pool of TB Spokesperson
- To recognize/acknowledge the effort of individuals and organizations working for tuberculosis care and control in India, the Partnership for TB care and control in India had proposed to institute an Annual award for TB Champion Individual and TB Campion Organization from across India. The award will be supported by Dr. Madhukar Pai and Global Health Strategies (GHS), for next five years (2013-2018).
- A National Consultative meeting for partners to define the role and status of the Partnership was held in April
- Editions of the newsletter of the Partnership "Partners Speak" were distributed and were well received by readers. The theme for the 3rd edition of the year highlighted stories on Stigma and discrimination and last edition focusing on storied from tribal/ hard to reach areas.
- Intervention was conducted by REACH and IMCFJ who trained partners of the Partnership from 4 zones (North, South, East and West). More than 50% of NGO partners were trained on how to engage with the media to increase reporting on TB. Out of the trained partners about 40% had submitted a media plan for the media year March 2011-12 and had their events on TB published in local dailies

Photo credit: REACH - Training of NGOs on engaging with media

Partnership with FIND

RNTCP,with support from FIND, is providing access

to rapid and quality assured diagnosis of TB and MDR TB patients. In addition, FIND providing assistance in establishing and maintaining 30 CBNAAT laboratories, of which 18 are for diagnosis of TB and MDR TB with the funding support from WHO and 11 for diagnosing MDR TB and one CBNAAT training site.

During the year, out of 43 labs to be established, 30 (70%) LPA labs became functional by December, 2012 and nine LPA sites are in the process of infrastructure establishment and have partially or fully received equipment and consumables. Out of 33 Liquid culture sites, 15 (45%) LC labs were performing liquid culture and among them seven (21%) are certified for Liquid culture and Drug Susceptibility testing. 16 Liquid culture labs are at the various stages of TB containment lab infrastructure establishment. The remaining Line Probe Assay and Liquid culture labs will be established during the first six months of 2013. The programme has been successful in maintaining and providing results from all 18 TB and MDR TB CBNAAT sites and six out of 12 MDR TB CBNAAT sites. In addition, two CBNAAT sites with irregular electrical supply have been provided with solar power. The remaining sites will be functional in the first quarter of 2013. In order to optimise output from these rapid diagnostic labs, a total of 171 additional field staff were appointed during the year, 136 for LPA and LC sites and 35 for CBNAAT sites.11427 DR TB cases were diagnosed in 2012 till end of 3rd quarter.

Project Axshya: World Vision

World Vision India and its 6 partners namely ADRA, CARE, GLRA, LEPRA, SHIS and TB Alert have been implementing GF Round 9 grant supported Project Axshya mostly in hard-to-reach and politically disturbed areas of 74 selected districts of states like Andhra Pradesh, Bihar, Chhattisgarh, Jharkand, Madhya Pradesh, Orissa and West Bengal. To increase political commitment and resources for TB, WV India had been engaging state politicians and members of legislative assemblies (MLAs) through sensitizing activities, wherein they were updated with TB information and shown the TB situation of their respective areas. Till September'12 8180 rural unqualified healthcare providers, 840 CBOs and 42 industries were sensitized on TB & RNTCP and 300 TB awareness and screening camps were conducted by the project with the purpose of increasing TB suspect referrals from community care providers to RNTCP. As the result of this sensitization drive by the project, 70880 TB suspects were referred from the community care providers to RNTCP out of which 4615 TB cases were detected and 4223 TB cases were put under treatment of DOTS.

The Self Help Group members (above) are from District Sheohar in Bihar. The above members of a SHG have referred 30 suspects of which 12 are positive. They have conducted 18 community sensitization meetings in remote villages and plan to do several more. The approach taken by the project was the identification and strengthening of existing CBOs in order to enhance their operating capacities for TB care and control. The women above were trained for two days and now serve as the source for awareness generation on TB in the community. They have started operating along informal lines by transferring their knowledge to neighbours, extended family members and vulnerable communities.

Project Akshya (UNION)

Part of the Global Fund Round 9 India TB Grant for 2010-15, Project Axshya (meaning "TB free") is a civil society initiative that supports Government of India's Revised National Tuberculosis Control Programme (RNTCP) to expand its reach, visibility, and effectiveness.

RNTCP with support from Akshya engages community-based providers to improve TB services, especially for women and children, marginalized, vulnerable and TB-HIV co-infected populations. With an objective of strengthening civil society led public health programming in TB care and control through increased political commitment as well as involvement of community and health care workers.

The Project is implemented by The Union South-East Asia Office (USEA) with nine partners and their networks of NGOs and CBOs. Its activities focus on three key areas to support the RNTCP, and reach people across 21 states on

1. Advocacy, Communication and Social Mobilisation
2. Research and Training
3. Technical Support

Achievements at a glance

- Sensitised over 1,200 NGOs and 300 CBOs on

RNTCP to raise awareness around TB.

- Held more than 40,000 Gaon Kalyan Samiti (GKS)/ Village Health, Sanitation, and Nutrition Committee (VHSNC) meetings to inform about TB and treatment services.
- Trained over 10,000 rural health care providers RHCPs to recognize symptoms of TB, and refer possible TB patients to the nearest testing center.
- Trained more than 9,000 health staff on soft skills and interpersonal communication.
- Facilitated creation of 250 TB forums at the district level for advocaty with the programme managers for resolution of challenges faced by TB patients
- Established sputum collection and transport mechanisms to facilitate referral and diagnosis, especially in difficult to reach areas. Over 77,000 sputum samples were transported, of which 6,000 were detected positive for TB.
- Developed and disseminated an illustrated Patients' Charter outlining the rights and responsibilities of TB patients.
- Supported the Partnership for TB Care and Control, India, which has more than a 100 partner organisations committed to improving TB services across India.

Unique interventions by Project

The lack of nutritious food, a problem often faced by TB patients from economically disadvantaged sections of society. The issue was taken up through district, state, and central government officials and brought to the notice of the The Union Minister for Food and Civil Supplies, Prof. K.V. Thomas.

The Project PMU team developed and submitted a policy note urging the inclusion of TB patients in the Food Security Bill. It was accepted by the Hon'ble Minister and TB patients are now recognised as a beneficiary group in the Bill.

'Bulgam Bhai' ('Mr Sputum') mass media campaign

Project Axshya developed a unique mass media campaign titled 'Bulgam Bhai' ('Mr Sputum') focussing on creating awareness on treating 2 weeks of cough as a symptom of TB, and promoting sputum testing for TB diagnosis. The campaign consiststed of TV spots, radio spots, ringtones, outdoor, street theatre performances, video van activities, and an inter-personal toolkit containing games and puzzles to be used by front line health workers to raise awareness on TB. The innovative campaign was also awarded at the 2012 Emvies, India's premier advertising awards.

"Superhero" Bulgam Bhai asking greeting audiences with his signature phrase – Do hafte ho gaye kya? (Has it been two weeks?)

Creating awareness through community radio

Project Axshya engages community radio stations across the country, to create awareness about TB among local communities through innovative radio programming. Under this initiative, RNTCP officials including State and District TB officers came as guests on the radio shows, answering questions on TB from listeners and directing them to appropriate centres for diagnosis and treatment.

Discussion during a community radio programme on TB awareness

Operational Research under Project Axshya:

Operational Research (OR) is a vital component of Project Axshya. Key activities include – research capacity building through product-orientated training and mentorship, and assisting national health programme to implement relevant operational research, generate evidence and formulate appropriate policy decisions.

Project Axshya has included trainings conducted in collaboration with CTD-NTI-WHO and CDC, Atlanta, offering courses on "TB and Epidemology," "Multidrug resistant and clinical management," and a "Management Development Programme training on Leadership and Management for TB control." To date, 9 publications from

researched undertaken by the project have been published in international peer reviewed scientific journals.

PATH

With support from USAID, PATH is providing technical assistance to the Revised National Tuberculosis Control Programme (RNTCP)to support its efforts to

(i) strengthen the laboratory network's capacity to diagnose drug-resistant TB;

(ii) provides assistance for Phase-1 that assessed the workload of select RNTCP contractual staff and a Phase-2 HRH assessment that examined opportunities and constraints for integration with general health system.

(iii) facilitate the introduction of improved infection control practices and build infection control expertise within India;

(iv) assist RNTCP in strengthening its approaches and methodologies related to advocacy, communication, and social mobilization (ACSM);

(v) Support the effective expansion of Programmatic Management of Drug Resistant TB (PMDT) activities.

(vi) PATH provided technical assistance (TA) for the establishment and accreditation of solid culture and DST labs

(vii) PATH initiated a Public Private Mix (PPM) project in collaboration with the Pharmacy Association, District Drug Control Administration, and the District TB Control Society in Ongole, Prakasam District, Andhra Pradesh.

Impact Project

CARE India is implementing IMPACT project in ten districts of the state of West Bengal. The goal of the project is to support RNTCP to decrease the morbidity and mortality caused by tuberculosis, MDR TB and HIV co-infection in West Bengal in India. The project works through the strategies which include support for positive health seeking behaviour of patients by linking them to welfare schemes, improve community capacities to support patients to adhere and complete treatment, Intensify and expand community based DOTS in the poor performing TUs.

10. Supervision, Monitoring and Evaluation in 2012

Supervision, Monitoring and Evaluation are essential components of the Revised National Tuberculosis Control Programme. Whereas measuring both implementations outcome & impact are necessary for policy & plan development; budgeting and resource allocation. Supervision, monitoring and evaluation are essential for ensuring proper systems in place for ensuring quality services to all TB patients.

2012 would stand as the year which witnessed a strategic shift in the way the RNTCP has implemented its supervision, monitoring and evaluation activities. Historically, the supervision & monitoring activities under the programme have been focused more on the outputs, specifically the New Smear Positive Case Detection Rate and the New Smear Treatment Success Rate. In spite of existence of policies and strategies which called for comprehensive supervision & monitoring of the programme including the inputs and the processes the same were variably and inadequately observed in practice. The year 2012 observed divergence of practices from just focusing on 'the outputs' towards also ensuring the supervision & monitoring of the 'inputs and the processes' in the programme.

With the Revised National Tuberculosis Control Programme having set itself an ambitious objective of 'Universal Access to quality assured diagnosis and treatment for all TB cases in the community' as a part of the Vision for TB Free India outlined in the Twelfth Five-year plan for 2012-17, this strategic shift in the practices in supervision and monitoring of the programme reflects the firm steps initiated by the programme towards its march in meeting the said objective.

Joint Monitoring Mission for RNTCP is undertaken by WHO/World Bank/Global Fund and other partners every third year. An Independent Evaluation of RNTCP, India through the Fifth Joint Monitoring Mission (JMM) was conducted by WHO in collaboration with the Central TB Division, DGHS/MOHFW/GOI and involving all concerned stakeholders, partners & donors from 21-31st August, 2012 with the objectives "to review the country's progress towards the TB-related Millennium Development Goals (MDGs), challenges and plans for TB control efforts, and to advise GOI and partners on the pathway towards achieving Universal Access to TB care".

JMM 2012, New Delhi

The JMM also provided inputs on strategic approaches and innovative mechanisms for achieving the key targets of the 12th five year plan. The JMM is held every three years as a part of the RNTCP Independent Evaluation strategy and the last JMM was held in April 2009. The recently concluded mission (2012) comprised of 92 experts of which 39 were International Experts and 53 were National Experts on TB Control. The International Experts were from various International Organizations such as the WHO, Global Fund, World Bank, DFID Bill & Melinda Gates Foundation etc.

The **Biannual RNTCP National Review Meetings** were held twice in 2012 one from 9th to 11th June 2012 and the other from 9th to 11th January 2013. Both the meetings demonstrated leadership in the strategic shifts in the supervision and monitoring practices under the programme. The meetings were completely focused on review of the inputs and the processes under the programme. The Biannual National RNTCP Review Meeting held in June 2012 had the theme of 'Process indicators in RNTCP implementation'. Similarly the theme of the meeting held in January 2013 was '12th Five Year Plan, newer initiatives and change management'. The reviews in the meetings revolved around the Composite Indicator and the States/UTs were thus demonstrated the way to monitor and review the programme comprehensively and were also asked to carry the practice forward. All the States/UTs have reported regular review meetings in the states at all levels and adoption of the practices as detailed above.

Biannual National RNTCP Review Meeting of STOs and RNTCP Consultants, 9th to 11th January 2013.

Strengthening workshop held at NTI, Bangalore.

The **Composite Indicator** was rolled out in March 2012 with the aim of diverging the focus of supervision & monitoring on merely the 'outputs' to a more comprehensive focus on all areas of the programme and also on each of the inputs and the processes. The Composite Indicator which is an agglomeration of indicators across the various thematic areas has been designed and formulated in a manner to encourage broad based analysis of the programme. Each of the indicators comprising each of the thematic area are scored and the 'thematic area-wise scores' and a 'Composite Score' are brought out for each of the district every quarter based on the quarterly reports. The States are scored based on the averages of the constituent districts. These are then used for review during the quarterly review meetings of the districts. All the States/UTs have reported use of the Composite Indicator during various reviews of the programme. The Composite Indicator was the main tool for review during the Biannual National RNTCP Review Meeting of STOs and RNTCP Consultants held during 2012.

Each of the Districts analyzes their respective scores and explores the reasons for the deficient scores therein. The districts then draw an activity plan to address the gaps identified. The Composite Score hence has not only served as a tool to identify the programme performance but also doubles up as a management tool under the programme. The composite scores are being regularly published in the performance reports of RNTCP and are also included in the annual report for 2012. The scores for the 4th quarter 2012 are presented in the present edition.

A total of 690 districts/reporting units were scored on the Composite Indicator for the 4th quarter 2012. 34 districts were not scores since they had not completed one year of implementation. The median scores in each of the thematic area are presented in table1.

Table 1: Composite and Thematic area-wise Median Score

S.No.	Thematic Areas	Maximum Possible Score	Median Score
1	Human resource management	65	47.6
2	Financial management	20	20
3	Case finding efforts	30	14
4	Drugs and Logistics	20	10
5	Quality of services	115	65.6
	Composite Score	250	150

The distribution of districts as per Thematic area-wise and Composite Score when classified for scores above and below 70% is presented in Table 2.

Table 2: Distribution of Districts as per Thematic area- Composite Score

S.No.	Thematic Areas	Maximum Possible Score	No. of Districts with	
			Scores > 70%	Scores < 70%
1	Human resource management	65	416	240
2	Financial management	20	347	309
3	Case finding efforts	30	27	629
4	Drugs and Logistics	20	328	328
5	Quality of services	115	95	561
	Composite Score	250	70	586

A strengthened Central Internal Evaluation was another achievement witnessed in 2012. Central Internal Evaluation of Nine States and eighteen districts therein were undertaken in 2012. The States and the districts which were evaluated are presented in Table 3. The participation in the Central Internal Evaluations was also made more broad based with inviting participants from all the National Institutes, the State & District programme

managers, the partners, medical colleges, NACP officials and the RNTCP Consultants. This helped in experience sharing and learning on good practices across the states and across various stakeholders. Though the Central Internal Evaluations have aptly expounded that the programme is to a large extent being implemented well and has certainly come a long way in reaching to the remotest parts of the country. However, shortcomings remain. Some of these salient shortcomings which emerged from these evaluations are enlisted in Box 1. A summary of the findings on various parameters of service provision under the programme elucidated through patient interviews is presented in Table 4. (Annexure E)

Similarly 102 districts have been evaluated by the States/ UTs in 2012. The States have also been asked to draw up a schedule of participants and the dates for ensuring regular internal evaluations as per norms to strengthen the process of State Internal Evaluations. This aspect would be more rigidly monitored in 2013.

Table 3: States and Districts Evaluated Central Internal Evaluation in 2012

Sr No	States	Dates of CIE	Districts
1.	Karnataka	13th to 18th February 2012	Dharwad and Tumkur
2.	Andhra Pradesh	9th to 13th April 2012	Nellore and Hyderabad
3.	Uttar Pradesh	16th to 20th April 2012	Kanpur Nagar and Gorakhpur
4.	Manipur	14th to 18th May 2012	West Imphal and Thoubal
5.	Rajasthan	18th to 22nd June 2012	Jodhpur and Kota
6.	Madhya Pradesh	9th to 13th July 2012	Bhopal amd Ujjain
7.	Bihar	23-27 July 2012	Kishanganj and West Champaran
8.	Orissa	8th to 12th Oct 2012	Sambalpur and Koraput
9.	Jharkhand	19-24 Nov 2012	Dumka and East Singhbhum

Central Internal Evaluation of Orissa. The STO accompanying the team to one of the patients visits

The CIE team in Dharwad,Karnataka sharing the findings with the district officials.

Central Internal Evaluation of Manipur. The DTO,Thoubal accompanying the team to one of the patients visits.

CIE team briefing the District Magistrate, Dharwad, Karnataka on the findings

Supervisory visits and feedback: Supervisory visits are the most powerful tools for programme monitoring and ensuring immediate corrective actions. It helps in validation of programme data and provides an opportunity to provide immediate feedback thus increasing the efficiency & motivation of the staff through updation of their knowledge, perfection of their skills and improving their attitudes towards work. RNTCP lays out clear responsibilities to the respective staff at all levels in relation to supervisory visits.

The supervisory visits made from the National level in the year 2012 are detailed as below:

- More than 120 visits were made to States/UTs from CTD for various purposes.
- More than 80 districts were visited from CTD from wherein visits were made upto peripheral level till patient's homes.

Focused Action Plan: The strategy for **Focused Action Plan for Under-performing districts** was formulated and rolled out in March 2012. Based on the annual data of the year 2010, Thirty five (35) districts which did not achieve both New Smear Positive Case Detection Rates (NSP CDR) of 50% of expected and Treatment Success Rate (TSR) of 85% among New Smear Positives; 78 districts which did not achieve New Smear Positive Case Detection Rates of 50% of expected and another 120 districts which did not achieve the Treatment Success Rate of 85% among New Smear Positives cases were identified as Under-performing districts. A strategy was developed for improving programme performance in these under-performing district and these "High focus districts" were specifically chosen for intensified monitoring & supervision by programme. These districts receive priority attention and are provided with intensified support and resources.

Box 1: Salient Findings of Central Internal Evaluations in 2012

1. Involvement of the General Health System continues to remain inadequate and this was observed in the majority of the States and the districts visited.
   a. Involvement of the CMHO, the Block Medical Officer, the PHI-MO and the peripheral health staff is inadequate and requires major strengthening.
   b. Programme dependent at certain places heavily on the contractual staff which needs to be immediately dziscouraged.
2. Human resource – the various issues identified in human resources are as follows
   a. Lack of full time STO at the State.
   b. Continued lack of a sanctioned post of District Tuberculosis Officer (DTO) in the districts
   c. DTOs if available are not full time.
   d. Lack of full Complement of staff at STDC
   e. Vacancies among contractual staff positions both at the State and the District level.
   f. Frequent transfers of State and District programme managers.
   g. Untrained staff at all levels.
      i. Lack of appropriate monitoring of trainings in the state
      ii. Inadequate capacities to conduct trainings of staff
   h. Lack of accountability among the general health staff
   i. Lack of appropriate performance appraisals for the contractual staff.
   j. Irregular and often protracted delay in payments of contractual staff remuneration and POL bills.
   k. Long and protracted process of renewal of contracts and recruitment of contractual staff.
3. Full-fledged State TB Training and Demonstration Centre, as per guidelines and as per programme requirements,not existing in a few states.
4. Supervision and Monitoring continues to be weak in majority of the States
   a. This is mostly true for district and the sub-district levels.
   b. Routinely, supervision & monitoring at the District by the CMHOs and the Sub-District levels by the BMOs/MOTCs including Peripheral Health Institutions (PHI) levels is sub-optimal.
   c. State Internal Evaluations are not conducted as per norms.
   d. Supervisory reports not sent out to the visited institutions
   e. Action Taken Reports not being ensured. Feedbacks to Districts on the quarterly reports are either not sent or are at times not robust in quality.
5. Medical college involvement:
   a. State Task Force Meetings not being organized as per norms and at times also without a clear defined agenda and leadership.
   b. Deficient Training and sensitization of medical college faculties/residents/interns.
   c. Grossly inadequate uptake of operational researches
      i. Continued lack of information on the same.
   d. Inadequate advocacy by the medical colleges
6. TB/HIV collaborative activities:
   a. Trainings of all staff, as per guidelines, in

Intensified TB-HIV package continue to be deficient.

b. ICTCs/F-ICTCs not established at all DMCs.

7. Lack of sufficient decentralization of DOTS services
   a. Inadequate community representation
8. Other Sector Involvement such as the ESI Hospitals, CGHS, and Railways has various issues in involvement and are not participating to the extent desired.
9. NGO/Private Practitioner is majorly deficient
   a. No Line listing available and also inadequate knowhow of the NGOs/PPs available in the districts
   b. Involvement is not need based
   c. Payments of Grant-in-aid not being done on time
   d. Performance appraisals not being done
   e. Clear defined MoUs not signed
   f. Collaboration with the IMA at the district level is weak.
10. Advocacy, Communication and Social Mobilization also has serious shortcomings:
    a. Improperly chalked out Annual Action Plans for ACSM activities
    b. Funds often not used timely and is the most vulnerable to be subjected to transfer in case of exigencies
    c. Inadequate capacity in the districts to implement ACSM activities
    d. Sub-optimal involvement of the peripheral health staff and the PHC in ACSM activities under the programme.
       i. Execution of ACSM activities is mostly through the contractual staff.
    e. Need based ACSM activities are not carried out
       i. Area and population specific needs are not identified and targeted

11. TB Surveillance in India

RNTCP since implementation followed international guidelines for recording and reporting for Tuberculosis Control Programme with minor modifications. Epi-info based EPI-CENTRE software was being used for the purpose of electronic data transmission from district level upwards. Initially DOS version was in use and the programme shifted to windows version in 2007. However, the data available at district, state or national level is in aggregated form.

Nikshay: TB surveillance using Case Based Web Based IT system

Central TB Division (CTD) in collaboration with National Informatics Centre (NIC) has undertaken the initiative to develop a Case Based Web Based application named Nikshay with objectives as below:

Objectives:

a) Short term:

1. To improve Tuberculosis surveillance in the country.
2. To facilitate individual patient wise monitoring & tracking of TB treatment.
3. To automate reporting, once the case wise data is regularly entered and update.
4. To facilitate online referral/transfer mechanism with real time information transmission to prevent patient loss.
5. To monitoring of TB Treatment saving the lead time in hard copy updating in TB register.
6. To make available of real time data at block & district for prioritized, focused supervision.
7. To create electronic Database of all TB patient details, for further in-depth analysis.
8. Effective Programme management (e.g. e-HRD, e-procurement e-supply chain, e-cash transfer).

b) Long term:

1. Linking the TB Database with UID (2016-17) for extending social welfare schemes
2. Disease trend & pattern studies for geographical understanding for epi-foci, using GIS for
   a. Contact tracing
   b. Identification of local / focal epidemics of MDR-TB,
   c. Outbreaks investigation of XDR-TB

Current features of Nikshay Software

The current feature of the Nikshay Software is as follows:

Users

National (CTD), State (State TB Cell, State TB Demonstration Centre), District (District TB Cell), Tuberculosis Unit, Culture and Drug Sensitivity Laboratory, DR-TB Centre, State Drug Store

Functionalities

Input mode:

1. TB patient registration, diagnosis, treatment details
2. DOT provider details
3. Follow-up smear examination details
4. Treatment adherence details
5. HIV details
6. Chemoprophylaxis details
7. Health Establishment registration
8. TB patient notification entry
9. Contractual staff details

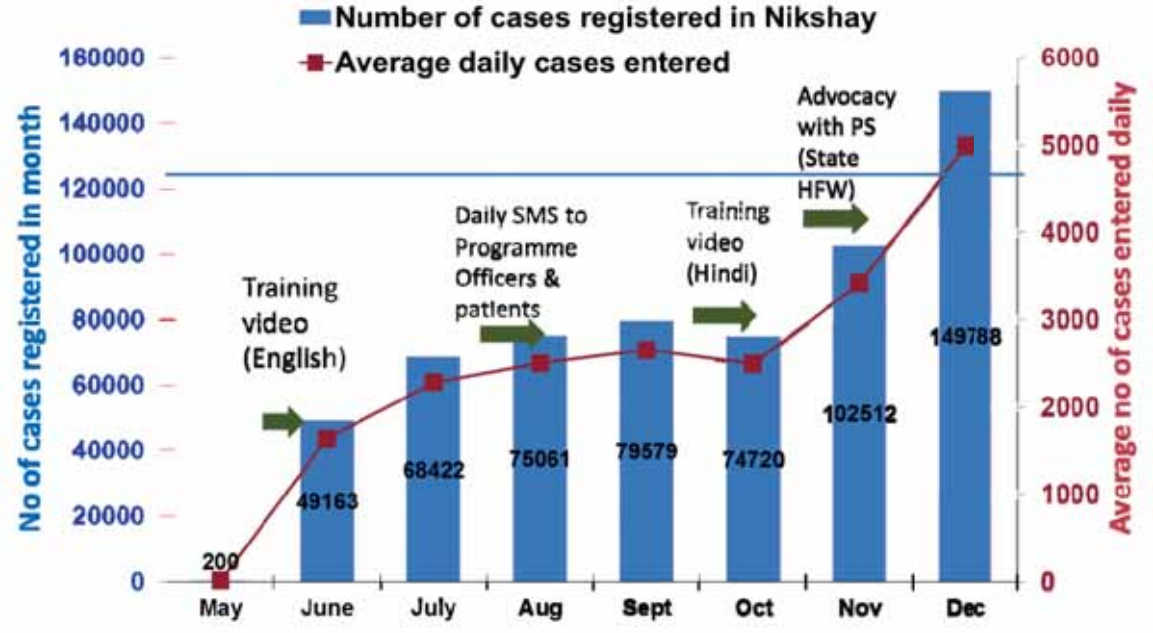
Output mode:

1. STO directory
2. DTO Directory
3. TU directory
4. PHI directory
5. Patient Registration Status Report
6. DOT provider directory
7. SMS based pull and push for various aspects
8. Generation of quarterly reports
9. All aspects as stated in Objectives in point no.2 above

Progress in Nikshay implementation in 2012

The figure shows the progress of Nikshay implementation in 2012

Figure : Progress of NIKSHAY IMPLEMENTATION IN 2012



Future Plan: The future plan for Nikshay is to add the following features:

Programmatic Management of DR-TB

1. Transfer / referral – feedback mechanism
2. SMS gateway for adherence data
3. Hand Held device (Tablet/Mobile) use by STS for the application
4. Multiple entry mode
5. TB notification
6. Web based TB notification by private facilities
7. Mobile based and IVRS based TB notification system for private health facilities
8. Programme management
9. Payments to eligible patients
10. Payments to eligible DOT providers
11. Payments to NGOs / PPs and partners
12. Payments of salary of contractual staff under RNTCP
13. Human Resource Development (training)
14. Financial management (SOE, UC&AR)
15. Drugs and logistics management
16. Automated output with inbuilt statistical software
17. OR proposal tracking system

TB Notification in India

Background: Tuberculosis was never a notifiable disease nationally in India. Though in some of the states it was for quite a long time, it was never properly implemented due to many reasons. India's National TB Control programme provides quality assured diagnostic and treatment services to all the TB patients including necessary supportive mechanisms for ensuring treatment adherence and completion. But these services cannot be made available to large number of patients availing services from private sector, as they are not currently reported to the programme. The National Programme is unable to support TB patients and facilitate effective treatment as there is no information on TB and M/XDR TB diagnosis and treatment in private sector and unable to monitor and act for this looming epidemic. The country has a huge private sector and it is growing at enormous pace. Private sector predominates in health care and TB treatment. Extremely large quantities of anti-TB drugs are sold in the private sector. Poor prescribing practices among private providers with inappropriate and inadequate regimens and unsupervised treatment continues in private sector without supporting patient for ensuring treatment adherence and completion with unrestricted access to first and second line TB drugs without prescription. High cost of TB and M/XDR TB drugs for privately treated patients is leading to further poverty and treatment interruptions.

A large number of patients are not benefitted with these programme services and leads to non-adherence, incomplete, inadequate treatment leading to M/XDR TB, mitigating all the efforts of the programme to prevent emergence and spread of drug resistance. If the TB patients diagnosed and treated under private sector are reported to public health authorities, the

mechanisms available under the programme can be extended to these patients to ensure treatment adherence and completion. The impending epidemic of M/XDR TB can only be prevented to a large extent by this intervention.

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

Objectives:

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

Implementation tools & methods:

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

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

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

OR

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

List of RNTCP endorsed TB diagnostics are as below:

o Smear Microscopy (for AFB):

Sputum smear stained with Zeil-Nelson Staining or

Fluorescence stains and examined under direct or indirect microscopy with or without LED.

o Culture:

Solid(Lowenstein Jansen) media or

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

o Rapid diagnostic molecular test:

Conventional PCR based Line Probe Assay for MTB complex or

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

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

o Sputum Culture: Sputum culture on solid (Lowenstein Jansen) media or liquid media (Middle Brook) using manual, semi-automatic or automatic machines e.g. Bactec , MGIT etc.

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

Challenges: Huge number of private health care providers and inadequate human resources with the TB programme to follow up notified cases.

Desired outcome:

1. All health facilities in the country are mapped with details in the database by the March 2012
2. >90% of the health facilities start TB case notification by Dec of 2013.

12. Research

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

Revision of Operational Research Agenda

The revision of the OR agenda was undertaken by RNTCP in 2012, wherein research needs within each of the thematic area under the RNTCP were identifiedbased on the perception of the Consultants in the field across the country. RNTCP research agenda evolved taking into consideration the gaps, constraints and various issues identified in the field by each of the RNTCP Consultant and the need to address the same through generation of evidence. Around 150 research topics were enlisted. Through intensive consultations and discussions these were grouped and distributed across all thematic areas finally identifying approximately 70 research areas for priority execution under the programme. The list of the Operational Research Needs is available in Annexure-F.

At National Level, the two National Standing Operational Research Committee meeting were held on 8th February 2012 and 7th September 2012. The" National Standing Committee" was renamed as "National Research Committee". The six OR proposals were received, of which one was approved by the National Research Committee.

At National level currently following research studies under RNTCP is going on:

S.No.	Title	Principal Investigator
1.	Evaluation of the efficacy of trice weekly DOTS regimen n TB Pleural effusion at 6 months	Prof S. K. Sharma, AIIMS, New Delhi
2.	Assessment of RNTCP Strategy of FNAC diagnosis and duration of treatment for peripheral Lymphadenitis	Prof S. K. Jindal, PGI, Chandigarh
3.	A multi-centric study on the treatment of abdominal Tuberculosis(intestinal or peritoneal): A randomized controlled trial to compare the 6 months of cat-I treatment with 9 months of Cat-I treatment (extension for 3 months) in abdominal TB under RNTCP	Dr. Govind K Makharia, AIIMS, New Delhi
4.	A randomized control trial between 6 months Short Intermittent and 9 months short intermittent ATT regimen in Extra-spinal osteoarticular Tuberculosis: A non-inferiority trial	Dr. C. S. Yadav, AIIMS, New Delhi
	Sputum Smear conversion and treatment outcomes of New Smear Positive tuberculosis patients with co-existing diabetes mellitus put on Category I RNTCP treatment	Dr. Jaishankar, STO, Kerela
5.	Treatment of Genital Tuberculosis: A Randomized controlled trial of either Discontinuation at 6 months or continuation till 9 months after initial response to RNTCP Category I treatment	Dr. C. S. Yadav, AIIMS, New Delhi

In addition number of projects and research activities has been undertaken at state and zonal level during the year 2012 as summarised below:

Table: Summary of the Operational Research undergoing in respective Zone(s)

Zone	Number of Post Graduate Thesis approved	Number of OR submitted to Zonal OR Committee	Number of OR approved by Zonal OR Committee	Number of OR Proposal going on
East Zone	3	4	4	3
West Zone	16	4	3+2*	6
North Zone	-	4	2	13
North East Zone	4	3	1	1
South I Zone	2	-	-	-
South II Zone	-	11	7	
Total	25	26	19	23

* Submitted in previous year, but approved in this year

OR Capacity Development under RNTCP

The second round of Operational Research under RNTCP, in collaboration with The Union, WHO, CDC was conducted in March 2012. The 14 protocols were developed and were cleared by ethical committee. The following important research questions were identified in this process of capacity development.

1. Prospective study on inclusion of the family member as a DOT provider for paediatric patients in state of Gujarat.

2. A comparative study on same day sputum smear microscopy with the conventional method in the diagnosis of sputum positive pulmonary tuberculosis.

3. Intensified Case Finding from the Community Level in ten identified low case detection districts, Odisha, April – September 2012 – a Descriptive Study.

4. Contribution of Mobile Medical Unit for identifying tuberculosis suspects and cases in Mohali District, Punjab

5. Intensified tuberculosis case finding at Nutritional Rehabilitation Centres of Bihar, India

6. Factors for default (loss to follow-up) in Drug Resistant TB treatment: qualitative evaluation of patient and provider reported determinants of DRTB treatment interruptions in Nagpur, Maharashtra

7. Why do Drug Resistant TB patients default in Andhra Pradesh, India?

8. Isoniazid preventive treatment (IPT) in two districts of Tamil Nadu, India: Does practice follow policy?

9. Introduction of a system of tuberculosis (TB) case notification among the private practitioners in Dehradun City: Is it operationally feasible?

10. Treatment outcomes of MDR TB patients in Kerala, India

11. Does a real-time web-based patient monitoring system reduce patient drop-outs in the diagnostic and treatment pathway for drug resistant tuberculosis (DR-TB) in Hyderabad district, South India?

12. Assessment of the sediment re-decontamination technique in recovering tuberculosis bacilli from cultures contaminated on Lowenstein Jensen medium.

13. Fate of MDR TB suspects after 12-15 months under RNTCP: Programmatic and patient related factors for failure to test MDR TB

14. Universal access to TB care: Do all TB patients diagnosed in medical colleges come to Revised National tuberculosis control programme?

Following research papers were published under RNTCP during the year 2012 in various Journals that led to impact on Programme policy and practice:

Table: List of Research papers published under RNTCP.

S.No.	Title	Author	Journal
1.	Updated Current (2012) national guidelines for paediatric tuberculosis in India	Ashok Kumar, Devesh Gupta, Sharath Burugina Nagaraja, Varinder Singh, G R Sethi, Jagadish Prasad	J Indian Medical Association 2012; 110: 840-3 & 845
2.	Updated National Guidelines for Pediatric Tuberculosis in India, 2012	Ashok Kumar, Devesh Gupta, Sharath Burugina Nagaraja, Varinder Singh, G R Sethi, Jagadish Prasad	Indian Pediatrics,2013; Volume 50-March 16
3.	Global guidelines for treatment of tuberculosis among persons living with HIV: unresolved issues.	Kumar A, Kumar AMV, Gupta D, Kanchar A, Mohammed S, Srinath S, Tripathy S, Rajasekaran S, Chan PL, Swaminathan S, Dewan PK	Int J Tuberc Lung Dis 16: 573-578. 10.5588/ijtld.11.0482 [doi] (2012)
4.	New Vision for Revised National Tuberculosis Control Programme (RNTCP): Universal access - "Reaching the un-reached".	Sachdeva KS, Kumar A, Dewan P, Kumar AMV, Satyanarayana S	Indian J Med Res 135: 690-694. IndianJMedRes_2012_135_5_690_97751 [pii]. (2012)
5.	From where are tuberculosis patients accessing treatment in India?	Satyanarayana S, Nair SA, Chadha SS, Shivashankar R, Sharma G, Yadav S, Mohanty, S, Kamineni V, Wilson NC, Harries AD, Dewan PK	PLoS One 2011;6(9):e24160
6.	HIV prevalence among persons suspected of tuberculosis: Policy implications for India	Naik B, Kumar AMV, Lal K, Doddamani S, Krishnappa M, Inamdar V, Satyanarayana S, Gupta D, Dewan PK	J Acquir Immune Defic Syndr. 10.1097/QAI.0b013e318245c9df, 2011 [doi].
7.	Are all patients diagnosed with tuberculosis in Indian medical colleges referred to the RNTCP?	Quazi TA, Sarkar S, Borgohain G, Sreenivas A, Harries AD, Srinath S, Khan K, Bishnu B, Tapadar S, Phukan AC, Kabir A, Chaddha V, Paul D, Dewan P.	Int J Tuberc Lung Dis. 2012 Aug;16(8):1083-5. doi: 10.5588/ijtld.11.0699. Epub 2012 Jun 5.
8.	Sputum smear microscopy at two months into continuation-phase: should it be done in all patients with sputum smear-positive tuberculosis?	Gandhi MP, Kumar AM, Toshniwal MN, Reddy RH, Oeltmann JE, Nair SA, Satyanarayana S, Dewan PK, Mannan S.	PLoS One. 2012; 7(6):e39296. doi: 10.1371/journal.pone.0039296. Epub 2012 Jun 19.
9.	Feasibility and Effectiveness of Provider Initiated HIV Testing and Counseling of TB Suspects in Vizianagaram District, South India.	Achanta S, Kumar AM, Nagaraja SB, Jaju J, Shamrao SR, Uppaluri R, Tekumalla RR, Gupta D, Kumar A, Satyanarayana S, Dewan PK	PLoS One. 2012;7(7):e41378. doi:10.1371/journal.pone.0041378. Epub 2012 Jul 23.
10.	High Diabetes Prevalence among Tuberculosis Cases in Kerala, India.	Balakrishnan S, Vijayan S, Nair S, Subramoniapillai J, Mrithyunjayan S, Wilson N, Satyanarayana S, Puneet K. Dewan, Kumar AMV, Karthickeyan D , Willis M , Harries AD, Nair SA	PLoS ONE 7(10): e46502. doi:10.1371/journal.pone.0046502.2012
11.	Factors associated with delays in treatment initiation after tuberculosis diagnosis in two districts of India.	Paul D, Busireddy A, Nagaraja SB, Satyanarayana S, Dewan PK, Nair SA, Sarkar S, Ahmed QT, Sarkar S, Shamrao SR, Harries AD, Oeltmann JE.	PLoS One. 2012;7(7):e39040. doi: 10.1371/journal.pone.0039040. Epub 2012 Jul 9.

12.	Health care seeking among people with cough of 2 weeks or more in India: Is passive TB case finding sufficient?	S. Satyanarayana, Sreenivas AN, Sarabjit Singh Chadha, et al.	Public Health Action, Volume 2, Number 4, 21 December 2012 , pp. 157-161(5)
13.	Are tuberculosis patients in a tertiary care hospital in hyderabad, India being managed according to national guidelines?	Kondapaka KK, Prasad SV, Satyanarayana S, Kandi S, Zachariah R, Harries AD, Nagaraja SB, Tetali S, Anchala R, Kannuri NK, Murthy K, Koppu D, Vangari L, Rao S	PLoS One 7: e30281. 10.1371/journal pone.0030281 [doi]; PONE-D-11-07661 [pii] 2012.
14.	Addressing poverty through disease control programmes: examples from Tuberculosis control in India.	Kamineni VV, Wilson N, Das A, Satyanarayana S, Chadha SS, Sachdeva KS, Chauhan LS	Int J Equity Health. 2012 Mar 26; 11:17.
15.	How Did the TB Patients Reach DOTS Services in Delhi? A Study of Patient Treatment Seeking Behavior.	Kapoor SK, Raman AV, Sachdeva KS, Satyanarayana S (2012)	PLoS ONE 7(8): e42458. doi:10.1371/journal.pone.0042458
16.	Is One Sputum Specimen as Good as Two during Follow-Up Cultures for Monitoring Multi Drug Resistant Tuberculosis Patients in India?	Nagaraja SB, Kumar AMV, Sachdeva KS, Ramachandran R, Satyanarayana S, et al.	PLoS ONE 7(9): e45554. doi:10.1371/journal.pone.0045554 (2012)
17.	Should Sputum Smear Examination Be Carried Out at the End of the Intensive Phase and End of Treatment in Sputum Smear Negative Pulmonary TB Patients?	Malhotra S, Zodpey SP, Chandra S, Vashist RP, Satyanaryana S, et al.	PLoS ONE 7(11): e49238. doi:10.1371/journal.pone.0049238(2012)
18.	HIV testing in people with presumptive tuberculosis: time for implementation.	Ajay M V Kumar, Devesh Gupta, Radhe S Gupta, Srinath Satyanarayana, Nevin Wilson, Rony Zachariah, Stephen D Lawn, Anthony D Harries	The lancet Respitatory Diseases Published online October 24, 2012 http://dx.doi.org/10.1016/S2213-2600(12)70050-4
19.	Can Follow-Up Examination of Tuberculosis Patients Be Simplified? A Study in Chhattisgarh, India.	Kundu D, Kumar AMV, Satyanarayana S, Dewan PK, Achuthan Nair S, et al. (2012)	PLoS ONE 7(12): e51038. doi:10.1371/journal.pone.0051038

Further, three symposia, three oral presentations and eight posters were presented in a 43rd Union World Conference on Lung Health, Kaula Lampur, Malaysia during the year 2012. The topics of the poster presentation were:

1. *S Burugina Nagaraja,A Kumar, R Ranjini, K S Sachdeva, A Sreenivas, P Dewan.*Is one sputum specimen as good as during as two during follow-up cultures for Monitoring Drug Resistant TB Patients in India?

2. *M Parmar, K S Sachdeva,A Kumar, A Sreenivas, P Dewan.*Accelerated Progress towards Nationwide scale-up of Programmatic Management of DR-TB in India.

3. K *Rade, P Dave, K Pulraja, A Sreenivas, N Kulshrestha, P Dewan, A Kumar.* Improving outreach of TB Diagnostic services through a sputum collection and transportation system under Programmatic Conditions-India.

4. *S Balakrishnan, S Jayashankar, S Mrithunjayan, S Nair, D S A Karthickeyan, S Vijayan A Sreenivas.* Alarming Prevalence of Diabetes among TB Patients in Kerala, India: Policy Implications.

5. *S Mrithunjayan, S Jayashankar, S Balakrishnan, D S A Karthickeyan, S Nair, S Praveen, A Sreenivas.* Alarmingly high failure among poly-resistant TB cases treated with first line anti-TB Drugs under National TB Program in Kerala, India.

6. *K Khaparde, P Jethani, P Dewan, A Sreenivas, M R Deshpande, S Srinath, P Moonan.*Evaluation of TB Case finding through Systematic contact Investigation, Chhattisgarh, India

7. *S Shanta, J Jaju, A Kumar, S B Nagaraja, A Sreenivas, S Motta Shamroa, A D Harries, P Dewan.* TB Management Practices by Private Practitioners in Visakhapatnam, South India.

8. *S. Muhammed, S Jayashankar, A Rajakani Vivekanandan, S Balakrishnan.* Expansion with Inclusion: to achieve target of 90/90 in India.

Steps ahead

"Technical Expert Group for estimation of TB Burden in India" has been constituted by Ministry of Health & Family Welfare, Govt. of India. Following are being actively considered by the programme:

- Inventory studies: a nationally-representative inventory survey has been recommended by country's Technical Expert Group on TB Burden Estimation. A detailed protocol is under preparation by NTI Bangalore.
- Improved surveillance systems through implementation of national TB case notification.
- National Prevalence survey is under consideration by the country's Technical Expert Group on TB Burden Estimation.
- A large nationally-representative community-based prospective all-cause mortality survey is underway, in collaboration with the Registrar General of India with the support of other partners (including CGHR, Toronto); this information is expected to be available in 2013.
- A nationally-representative anti-TB drug resistance survey in 2013 has been proposed.
- Routine surveillance of HIV status among all TB patients nationwide has yielded sufficient coverage and information to use programme data to inform this estimation; no additional surveys are expected or planned. Efforts would be focused on improving HIV status ascertainment for all TB patients, including those in low HIV prevalence areas.
- A study on "Prevalence of Bacillary Positive Pulmonary Tuberculosis among adults residing in slums/ JJ Colonies under the LRSI –RNTCP implementing area in New Delhi" has been approved by National Research Committee and will start in 2013.
- The National Tuberculosis Institute (NTI) is in process of compiling the research studies undertaken by all the Tuberculosis Institutes in India.

13. Success Stories

All the STOs, DTOs, Consultants and RNTCP regular and contractual employees, who are associated with RNTCP programme are being congratulated for making this programme a success. The number of success stories was received from all part of the country but due to limited space, few selected success stories are being published in this Annual Report.

Andhara Pradesh

Self Help Group(SHG) in TB Control

SHGs act as appropriate people's institutions that provide the poor with the space and support necessary to take effective steps towards greater control of their lives in private and in society.

Sri Padmavathi Podhupu Group is one such Self Help group, located in Harijanawada in Ammapalem village, located in Venkatagiri rural mandal, Nellore District of Andhra Pradesh. This village is 7 kilometers from Venkatagiri a town and mandal headquarters in Nellore district is famous for its Handloom Cotton Sarees.

STEPS, implementing TAP programme at Nellore district with Vasavya Mahila Mandali (VMM) technical support has oriented four Out Reach Workers (ORWs) the strategy of inclusion of TB and HIV into the agenda of SHGs. The Community mobilization workshop has helped the ORWs to gain more knowledge on working with SHGs that led to the inclusion of TB and HIV into the agenda of seven Self Help Groups (5 in Venktagiri and 2 SHGs in Pellakuru mandal) are strengthened and 10 Self Help Groups (5 SHGs – Venkatagiri mandal and 5 SHGs – Pellakuru mandal) are in the process of strengthening. Till December 2012 (1 year 3 months period) 29 persons were referred (21 persons to DMC and 8 persons to ICTC centres) by SHGs for TB and HIV testing. Among 29 five persons are TB positive and one HIV positive.

Based on the experiences at "Sri Padmavathi Podhupu Sangam (SHG) VMM developed strategies to work closely with self-help groups (SHGs) and it resulted by referring 684 suspected persons (333 Persons to DMC and 351 Persons to ICTC) to government health facilities for testings. Among them 68 (47 TB Positive, 21 HIV Positive) were identified as positives and they linked for treatment.

Innovative ICT based Application

The State of Andhra Pradesh has developed an electronic web based real time monitoring system (E-Smarts) in 6 districts of Andhra Pradesh making the data collection real time.

E-Smarts was launched as a pilot intervention since June 2012. Details of sputum samples transported from districts to centralized Culture and Drug Susceptibility Testing (C&DST) Laboratories, declaration of test results and treatment initiation of confirmed cases at designated DR TB centers are entered electronically. The database of each patient is linked with a unique patient identification number and shared at all levels; the district, the C&DST Laboratory and DR TB Centre. System generated e-mails; Short Message Services, use of GPS enabled android mobiles in field, real time updating of treatment cards of patients on ambulatory Directly Observed Treatment are the other features.

By end of November 2012, a total of 1,496 Drug resistant TB suspects were registered via E-smarts with a unique patient identification number, 1379 results declared via system generated e-mails and

5460 SMS alerts of test results sent to programme key staff. Information of 205 diagnostic samples and 105 follow up samples were sent from the field via Android mobile phones. About 79 treatment cards have been initiated electronically in the DR TB centre and are being updated real time. Paper work and duplication of data is reduced by over 50%.

Dr. T. Rani Samyukta, State TB Officer handing over the TABLET to LT, Visakhapatnam for implementation of ICT application

Bihar

Sky Health Center

In Vaishali district, a SkyHealth center has been established where IT enabled technologies can connect villagers to best city doctors. Zakir heard this from loud speakers rigged onto a rickshaw. He had already spent 4,500 to treatment his son, Rizwan, suffering from persistent cough. Zakir felt new hope when he heard that excellent treatment could be free for people with persistent cough. The owner, Anil, whom Zakir had earlier seen around the village, was now professionally outfitted with special training and equipment by World Health Partners (WHP), a non-profit organization mandated to bring basic health care to rural communities. Anil brought Rizwan to sit in front of what looked like a television, but they later came to find out that this was called a computer. A face appeared, as if by magic, on the screen. This professional-looking young woman asked Rizwan to describe the problems he was facing. Then an older male, professional and confident, appeared on the screen and reviewed Rizwan's history carefully and listened to his breath sounds through the stethoscope which Anil placed on Rizwan's chest. The doctor suspected Rizwan of having tuberculosis and advised him on how to give a sputum test. At the end of the consultation, a paper prescription appeared from a machine. Anil advised Rizwan to return the following day, when a person scheduled to visit the village would collect his sputum and deliver the specimen via WHP's supply chain to the nearest block-level DMC. Everything worked as planned and on the evening of the same day that the sputum was submitted, a message arrived via mobile phone which confirming that Rizwan indeed had TB. Anil, upon receiving the same message via mobile and email, immediately called Rizwan to the centre for a consultation with the city doctor for TB case registration. The doctor, viewing the test report in the electronic medical record, assigned Rizwan to the appropriate treatment category. Through a tie-up with the public sector, WHP arranged for the drug kit to be delivered rapidly to the village. And everything was free, much to the relief of Zakir. Anil also got Rizwan registered on MOTECH, WHP's ICT platform for TB which tracks adherence with alerts and reminders. Rizwan and his DOTS provider, Anil, both received voice-based alerts via mobile phone as reminders to take the medicines regularly. After 6 months of continuous treatment and close follow-up, Rizwan's sputum was sent to the DMC for a repeat test. Much to the happiness of all, it was negative for TB. By that time, Rizwan had also regained his health and was back to leading the life of a normal teenager.

Sky Centre

Rizwan, Tajyabpur Village, Bihar

Chandigarh

Dedicated DOT Provider

Dr Jagdish Saini, a DOT Provider in slum area of Sector-25, Chandigarh. He has been tirelessly giving DOTS to the patients of slum area, who are mostly daily wager laborers and workers in the nearby colonies since Oct. 2003. On an average, he has about 40-45 patients who are taking TB treatment under DOTS strategy from him in the major slum colonies and now he is also giving MDR medicines as well without any single defaulter. He has painstakingly worked hard for the programme and providing DOTS regularly for last 10 years and he has updated knowledge of the programme

Chhattisgarh

Case Study:Jyoti Health Centre & Sarpanch Newal Kujur- an example of CHF –PRI collaboration

Mr. Newal Kujur is the Sarpanch of Gram Panchayat –KARAI in Argasi Lakhanpur Block of Surguja District in Chhattisgarh. He is highly committed to the welfare of his Panchayat. He has made an appreciable difference in its economic, social, education and health status over the past 10 years of his tenure. He conducts monthly meetings on Health issues in collaboration with Sr. Carmela of Jyoti Health Centre- a catholic health facility. They talk about hygiene, sanitation, nutrition, infectious diseases etc. Around 65-70 people, men and women attend these meetings. Not only does he refer TB suspects to the health centre or nearest DMC, he also reaches them there by his motorbike and at times also provides them monetary help. He is so much awed that one positive TB patient can spread infection to 10-15 persons, that he is determined to make his panchayat TB free and has made a systematic plan to do the same, which includes an awareness drive on the occasion of World TB day.

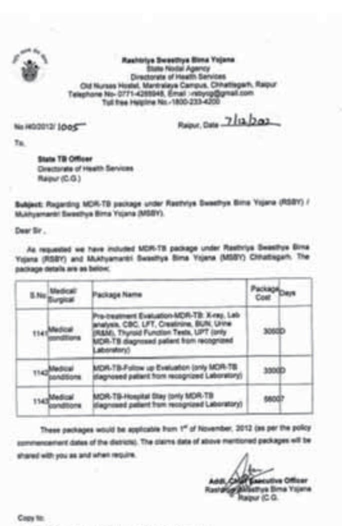
Sarpanch Newal Kujur at Jyoti Health Centre (CHF) after conducting a patient provider meeting

Sarpanch Newal Kujur taking a TB suspect on his Motor-cycle for sputum examination at the DMC

Rashtriya Swasthya Bima Yojna (RSBY) linkage with the RNTCP

Chhattisgarh is the first state in the country which has successfully established RNTCP partnership with Rashtriya Swasthya Bima Yojna (RSBY) through creation of special MDR-TB package, which will absorb cost for all pre-treatment evaluations, admissions, follow-up investigations, ancillary drugs and nutritional support across all RSBY empanelled network hospitals (both private and public) in the state. RSBY MDR-TB Package is applicable for MDR-TB patients who are diagnosed as a 'MDR-TB' case from the RNTCP accredited Intermediate Reference Laboratory Laboratory (IRL), Raipur in Chhattisgarh. Linkages will be established

by the programme with the district linked DR-TB Centre Committee and RSBY empanelled health facilities for close review of such cases and approval for initiation of treatment regimen for MDR-TB (CAT IV drugs). Average hospitalization cost per patient in Chhattisgarh is around Rs 8000/- through RSBY and proposed package for MDR TB patient can be well absorbed in the health coverage ceiling of 30000 INR. Universal Health Scheme is also being implemented by RSBY and the same package for MDR TB will also be included in the Mukhyamantri Swasthya Bima Yojna (MSBY)for everyone in the State (BPL and APL - health insurance coverage up to 30,000 INR). Every beneficiary family is issued a biometric enabled smart card containing their fingerprints and photographs. All the hospitals empanelled under RSBY are IT enabled and connected to the server at the district level. This will ensure a smooth data flow regarding service utilization periodically. Therefore, RSBY linkage with the TB programme can be an opportunity to rationalize TB drugs and improve TB notification in the private sector through existing mechanism in RSBY health insurance scheme for all.


Rashtriya Swasthya Bima Yojana
State Nodal Agency
Directorate of Health Services
Old Nurses Hostel, Mantralaya Campus, Chhattisgarh, Raipur
Telephone No- 0771-4288948, Email :-rsbycg@gmail.com
Toll free Helpline No.-1800-233-4200

No.HO/2012/ 1005 Raipur, Date 7/12/2012

To,

State TB Officer
Directorate of Health Services
Raipur (C.G.)

Subject: Regarding MDR-TB package under Rasthriya Swasthya Bima Yojana (RSBY) / Mukhyamantri Swasthya Bima Yojana (MSBY).

Dear Sir,

As requested we have included MDR-TB package under Rasthriya Swasthya Bima Yojana (RSBY) and Mukhyamantri Swasthya Bima Yojana (MSBY) Chhattisgarh. The package details are as below:

S.No.	Medical/ Surgical	Package Name	Package Cost	Days
1141	Medical conditions	Pre-treatment Evaluation-MDR-TB: X-ray, Lab analysis, CBC, LFT, Creatinine, BUN, Urine (R&M), Thyroid Function Tests, UPT (only MDR-TB diagnosed patient from recognized Laboratory)	30500	
1142	Medical conditions	MDR-TB-Follow up Evaluation (only MDR-TB diagnosed patient from recognized Laboratory)	33000	
1143	Medical conditions	MDR-TB-Hospital Stay (only MDR-TB diagnosed patient from recognized Laboratory)	[illegible]	

These packages would be applicable from 1st of November, 2012 (as per the policy commencement dates of the districts). The claims data of above mentioned packages will be shared with you as and when require.

Addl. Chief Executive Officer
Rashtriya Swasthya Bima Yojana
Raipur (C.G.)

Copy to:
- Dr.D.Kundu, State Consultant-RNTCP Chhattisgarh


राज्य में स्मार्ट कार्ड से अब टीबी का इलाज

Delhi

Delhi Metro Panels display TB Notification and Ban on Serodiagnostics

Notification of TB cases in India is mandatory vide Government of India order dated 7th May 2012. Serodignostic tests have been banned by the Government of India. As a step towards widespread dissemination of this information, Delhi State TB Department initiated extensive outdoor publicity campaign through Newspapers, Delhi Metro, Yahoo India and Dainik Bhaskar home page in both Hindi and English, social networking sites like Facebook, Street plays and school awareness programme. The advertisement also campaigns for Tobacco cessation program apart from health messages on TB.

Messages displayed inside metro train and the metro station regarding ban on sero-diagnosis and notification of Tuberculosis

Messages displayed inside metro train and the metro station regarding ban on sero-diagnosis and notification of Tuberculosis

Gujarat

Ahmedabad has successfully treated a spine-TB patient with special effort by MO-PHC. The patient Lavjibhai Lembabhai Senva was given daily dressing at the site of Lumbar spine from where pus was constantly coming out. But with the best efforts carried out by MO-PHC Zolapur and his staff, resulting in TB Patient survival and on complete treatment brought back happiness in his life. Lavjibhai Lembabhai Senva was declared cured on 3-11-2012.

Spine TB Patient

Jharkhand:

Motivated Sahiya working towards TB Control : An example for others

Ashay Pahariya, 45 years married lady is working as a Sahiya in remote village Dolladih at Seraikella block. After attending sensitization meeting on TB, she became a motivated worker for TB and started regularly visiting PHC and District T.B Centre to know more about T.B and facilities available . She is providing DOTS for the last four years in her locality and helped in curing 15 TB Patients of her village. She is personally doing I.E.C activity in her village and neighboring village also. She either encourages TB suspects for sputum examination or brings him personally to D.M.C for the same. She motivates the T.B patients in local language in an effective manner. Now she is a "Sahiya Saathi" at her panchayat and makes other Sahiyas to know importance of DOTs strategy towards TB control. Most importantly, she never says a patient to come to her home for DOTS, instead she provides home delivery of DOTS. The district RNTCP family salutes this diligent lady for her services.

Ashay Pahariya, Sahiya worker

Jalashwar Lohara, cured TB Patient. Active member of VHND and "TB Forums"

Advocacy by Cured Patient

Mr. Jalashwar Lohara, 35 years old son of late Balku Lohara resident of a remote village Dhobali, Bhandara block, district Loharadaga was diagnosed TB. He was given full course of treatment by DOTS provider (Sahiya) who also ensured timely follow up sputum examinations. He is now an active member of VHND and "TB Forums" in his village & spreads awareness about the availability of free of cost TB care services under RNTCP.

Maresela Marandi, resident of Ripyama panchayat of Godda district was also diagnosed TB and was given full course of treatment by the Community DOTS provider with timely follow up sputum examination and declared cured. She is now a DOTS provider and spreading awareness about DOTS among the people.

Cross Country Race (Run for TB Free India), DHS (TB), Dumka, Jharkhand

The District Rural Health Mission Society – TB Control Programme, Dumka organized a Cross Country Race – "Run for TB Free India" on 22nd December 2012, on the auspicious occasion of 157th Foundation Day of Santhal Pargana, a tribal Division of Jharkhand well known for its tribal culture and heritage. The race was flagged off by the Hon'ble Member State Co-ordination Committee from Ambedakar Chauk, Dumka. Altogether 300 students of local schools and colleges participated in this Race with the theme of TB Awareness. This was followed by mass advocacy

by the DTO, regarding the measures taken by Revised National TB Control Programme to control TB. He stressed upon the need of early identification of TB Suspects, timely sputum examination and early initiation of treatment which is available free of cost by RNTCP.

The winning participants received commendation certificate by the DTO Dumka, Dr. A. M. Soren.

This was one of the initiatives taken by the District TB Office to advocate the programme among the Political representatives, Civil Societies and community.

Meghalaya

At Chokpot DMC, one NSP patient was not taking anti TB drugs and near to default as his house was far away from DMC, difficult to reach, dwelled wild animals and extremists on the way. The DTO, STS and STLS, two Medical Officers and six Multipurpose Health Workers (MPWs), faced many difficulties and braved harsh nature to reached Rongasi Village. They conducted community meeting, TB awareness program, DOT Provider interaction and then immunized children and antenatal mother. The DOT Provider was actually untrained and that is why he could not advise the patient what to do and what not to do. They gave spot training to the DOT Provider. The patient and his family members were very pleased because of their visit. Patient promised to continue his medicine as per advised and could finally be cured

Odisha

Intensive Case finding campaign-Nabarangapur district, Odisha

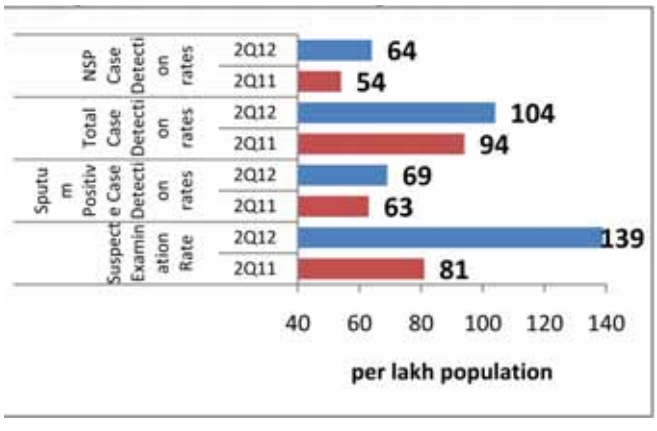
Odisha has traditionally been considered as one of the better performing State as far as the various indicators of RNTCP are concerned. The Treatment Success Rate, which is considered as one of the vital parameters of program performance has always been more than the minimum prescribed norm of 85%. However the Case Detection Rate of the State as a whole has been matter of concern. Traditionally the Tribal districts have performed better than their costal counterparts.

Intervention carried out: 10 districts, with consistently low Case Detection Rates, were identified for this intervention. The objective of this exercise was to ensure that the Case Detection Rates of these ten identified districts improves over the next quarter as result of this Campaign.

Districts identified for this activity in the first phase: Balasore, Bhadrak, Jajpur, Kendrapada, Jagatsinghpur, Cuttack, Puri, Khurda, Nayagarh and Nabrangpur

The situation at Nabarangapur district was unique because, although it surrounded by hilly and Tribal districts with very high case detection rates, Nabarangapur always fared poorly in that indicator. Repeated efforts to improve suspect examination and case detection rates did not bring about desired results. Hence this intervention was carried out in Nabarangapur along with 9 other districts in the 2ndquarter of 2012. To address the problem, it was decided to implement the health camp approach to reach the unreached. For this a total of twenty five campswere conducted at the identified Sector HQ PHC(N) or a centrally located sub centre of identified Sectors over a period of 3 months. To get effective response,extensive miking was carried out in the identified sector a day prior to the camp. ASHA workers screened all households of her village for chest symptomatics. ASHA were provided with sputum containers in advance which were used for collecting the early morning sample by the patient at his / her residence. The ASHA worker, on the day of the camp, accompanied the patient to the camp for screening. The spot sample was collected at the camp & smear was prepared by the LT there and carried to the DMC for staining and examination.

A total of 25 such camps were conducted in the 2nd quarter of 2012 in Nabarangapur district. 817 TB suspects attended these camps as a result of the intensive miking and sensitizations carried out prior to the camps. All of them were screened for TB by the Medical Officer present at the camps and all 817 suspects underwent screening by sputum microscopy. 40 of those whose sputum was examined were found to be suffering from sputum positive Tuberculosis. As a result of this, the Suspect Examination as well as Case detection rates of the district showed considerable improvement as compared to the performance in the corresponding quarter of last year, i.e. 2Q11.



Punjab

Activa Honda with slogans

Mansa district administration used an Activa Honda scooter painted yellow with slogans written on it about the symptoms and remedial measures for TB. The scooter riders will visit across the district and mainly the slum areas, where more TB patients are recorded. Such innovative ideas always attract the onlookers and patients and make people aware about the disease and come to the RNTCP Centers to get help. Mansa had organized workshops to create awareness Generation Amongst Students and Teachers of all the Schools and Colleges with regard to prevention and Control of Tuberculosis.

Active Honda with slogan

Cured Patient, DOT Provider

50 years old Prem Kumar, a cured TB patient at DTC Jalandhar is dedicated to Social Service and Health Care and is actively involved with the project AXSHYA under RNTCP. He is a man with a mission. He as a DOT provider has recorded the highest positively in region while transporting the TB symptomatic samples. Out of 477 suspected patients samples transported by him to DMC (Civil Hospital Jalandhar) 101 got tested positive and put on DOTS in short span of six months (July to December 2012). He collects his samples from Registered Health Care practioners such as (Vaids) etc. He visits his patients regularly and has retrieved a number of interrupted patients back on treatment by effective counseling.

Prem Kumar, 50 years, cured TB patients and now a DOT provider

Rajasthan

PMDT- In Special Community Girl Patient

A girl patient named Reshma (name changed) of Bikaner district after completing her Cat I and Cat II treatment got MDR-TB in LPA. Her father got shocked after knowing that his daughter having MDR-TB. Her Father informed Dr. C.S. Modi, DTO, Bikaner that they have fixed Reshma's marriage after 2 months and now its impossible for them to admit her in DR-TB Centre and start such a long treatment for 18-24 months.

After understanding the consequences of the case and their community problem Dr. C.S. Modi personally handled this case and regularly counseled the patient and her parents to take regular and complete treatment.

Reshma's parents were advised to either post pone her marriage or continue CAT IV treatment after marriage. Reshma's father told that in our community if marriage of Reshma is post poned by our side than her marriage will be dismissed by other side and there will be problem in future in marriage. Reshma's parents got ready for pre treatment evaluation on OPD basis and MDR treatment but without Inj. Kanamycin after marriage. Reshma was also counseled and encouraged by RNTCP staff to disclose about her disease to her husband before marriage, to continue her MDR Treatment after marriage with Kanamycin. Reshma talked to her husband, Her husband got ready to marriage at fixed date. She continue MDR treatment with Inj. Kanamycin after marriage. Reshma was reffered to gynecologist for proper contraception after marriage till MDR TB treatment continued.

She was referred to nearest PHI to start CAT IV treatment Reshma started her treatment and was improving with treatment and become happy. Reshma got married at fixed date, Reshma's husband advised her to stay at her mother house till Inj. Kenamycin completes.

Reshma become sputum culture negative in first follow-up and is very happy with PMDT services. Presently she had completed Inj. Kanamycin and no physical complaints. She assured to complete remaining treatment in time and there were regular follow-up culture in time in future.

Now she is very happy with successful ongoing treatment and says that only due to PMDT my marriage became possible and she is happy in her married life.

Gujarat

Pulmonary Tuberculosis Prevalence Survey Gujarat

The state of Gujarat has conducted a state-widesurvey to estimate point prevalence of bacteriologically positive pulmonary Tuberculosisin the year 2011-12 with intention to measure the performance on Millennium Developmental Goal (MDG) and Indicators.

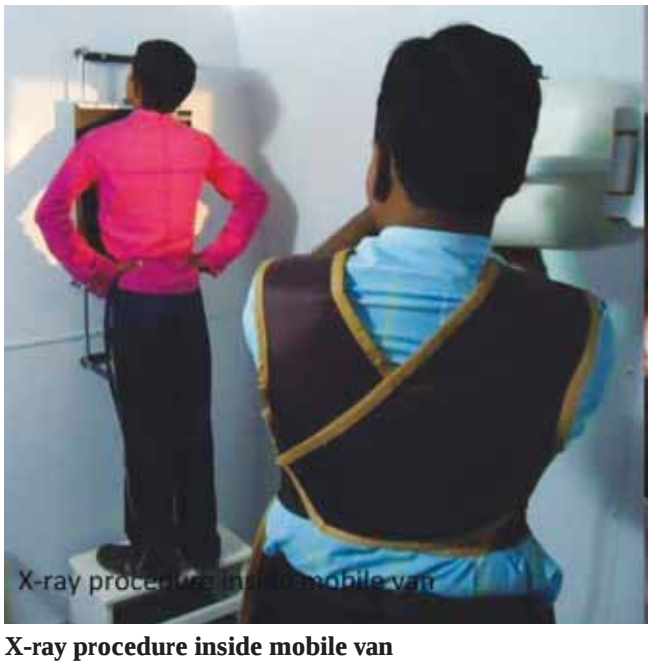
This was a cross sectional study involving cluster sampling. 85 clusters out of total 19781 (18066 rural-villages + 1715 urban-wards) were randomly selected representing entire state, using Probability Proportionate to Size (PPS) cluster sampling method.

At state level six committees were formed to execute survey operations with scientific research methods ensuring participation and support from various stake holders. Two field working units were organized which actually conducted the survey. After an initial pilot survey in Dabhoda village of Gandhinagar district, state-wide survey was initiated from 2nd January 2011. The survey was completely funded from state budget (Government of Gujarat) and took two years starting from training of ground staffto final analysis of the results.

Total 35982 households were visited and a population of 126855 was screened with 96125 eligible participants (15 years and above) for the survey, of which 87530 individuals participated in the survey who were screened for TB symptoms using semi-structured interview & digital chest X-ray. Those subjects with high probability of TB (by symptom screening, previous history of TB and radiological screening) also underwent sputum smear examination and culture in order to determine the prevalence of smear-positive TB, culture-positive TB, symptomatic TB and radiologically proven TB.

Survey field worker taking census and inviting for enrolment

Survey Mobile X-ray Van



X-ray procedure inside mobile van

Digital X-ray image at survey site inside the survey van

Survey team asking the participant on TB symptoms

Medical officer administrating questionnaire for health seeking behaviour from TB suspect

Laboratory technician explaining on sputum collection methodology to TB suspect

Active p articipation from community during TBPS

The preliminary data analysis results are as below:

PARTICULAR	
REGISTRATIONS	n
No. of Cluster Surveyed	85
Number of households visited	35982
Number of participants enrolled	126855
Population eligible (≥15 years of age)	96125
SYMPTOM ELICITATION & X-RAY EXAMINATION	n (%)
Screened for symptoms and ATT history	87530 (91%)
Screened by X-ray	87357 (90.8%)
ELIGIBLE FOR SPUTUM EXAMINATION	n (%)
Based on interview (symptom screening)	4643 (5.3%)
By abnormal X-ray	5319(6.1%)
Total TB suspects detected	9515 (10.8%)
RESULTS *	
TB Prevalence (crude) among aged ≥15 years	
• Prevalence of smear positive PTB	267 (CI: 212–323) per 100,000
• Prevalence of smear negative, culture positive PTB	115 (CI: 84–146) per 100,000
• Bacteriologically positive PTB	382 (CI :314–451) per 100,000

* Individual level analysis is ongoing; CI, 95% Confidence Interval

This survey also aimed in understanding the reasons of accessing or not accessing the health facilities by populations on having symptoms suggestive of Pulmonary TB. It threw light on the practices followed at health facilities and the delay in identification of suspects out of those who reached these facilities but were missed. This knowledge on health seeking behaviour will equip the programme with the better designed future strategies for universal access to TB care.

Annexure (s)

Annexure A:

TB Notification Order vide dated 7th May 2012

Z-28015/2/2012-TB
Government of India
Ministry of Health and Family Welfare

Nirman Bhavan, New Delhi
Dated: 7th May 2012

Notification of TB cases

TB continues to be a major public health problem accounting for substantial morbidity and mortality in the country. Early diagnosis and complete treatment of TB is the corner-stone of TB prevention and control strategy. Inappropriate diagnosis and irregular/incomplete treatment with anti-TB drugs may contribute to complications, disease spread and emergence of Drug Resistant TB.

In order to ensure proper TB diagnosis and case management, reduce TB transmission and address the problems of emergence and spread of Drug Resistant-TB, it is essential to have complete information of all TB cases. Therefore, the healthcare providers shall notify every TB case to local authorities i.e. District Health Officer / Chief Medical Officer of a district and Municipal health Officer of a Municipal Corporation / Municipality every month in a given format (attached)

For the purpose of case notification, a TB case is defined as follows:

- A patient diagnosed with at least one sputum specimen positive for acid fast bacilli, or Culture-positive for Mycobacterium tuberculosis, or RNTCP endorsed Rapid Diagnostic molecular test positive for tuberculosis

OR

- A patiert diagnosed clinically as a case of tuberculosis, without microbiologic confirmation, and initiated on anti-TB drugs.

For the purpose of this notification, healthcare providers will include clinical establishments run or managed by the Government (including local authorities), private or NGC sectors and/or individual practitioners.

For more detailed information, the concerned State TB Officers / District TB Officers, whose details are available on www.tbcindia.nic.in, may be contacted.

Encl: As mentioned

(Manoj Sinha)
Under Secretary to the Government of India

Copy for immediate further necessary action, to:

1) All Principal Secretaries / Secretaries of Health of States / UTs
2) All Directors of Health Services of States / UTs
3) All State TB Officers of States / UTs

With the request to kindly immediately bring this order to the notice of all concerned for compliance, in their respective State / UT

TB Notification Guidance Tool

Sr No	Contents:
1	Background
2	Why should private health facilities notify TB?
3	Objectives
4	Minimum information requirement for TB notification
5	Definitions for TB notification
6	List of RNTCP endorsed TB diagnostics
7	Registration of the Health establishments for TB notification
8	Mechanisms for TB notification
9	Responsibility of the district level nodal officer
10	Responsibility of the Local public health authority
11	Responsibility of the health worker
Annexures	
I	Health Establishment registration form for TB Notification
II	Undertaking for Health establishments not routinely diagnosing / treating Tuberculosis patients
III	Formats for TB notification
IV	List & contact details of Local Health Authority (Nodal Officer) for TB notification

1	Background:	Tuberculosis is a major public health problem in India. Early diagnosis and complete treatment of TB is the corner-stone of TB prevention and control strategy. India's National TB Control programme provides quality assured diagnostic and treatment services to all the TB patients including necessary supportive mechanisms for ensuring treatment adherence and completion. The country has a huge private sector and it is growing at enormous pace. Private sector predominates in health care and TB treatment. Extremely large quantities of anti-TB drugs are sold in the private sector. Non standerdized prescribing practices among some of the private providers with inappropriate and inadequate regimens and unsupervised treatment continues without supporting patient for ensuring treatment adherence and completion with unrestricted access to first and second line TB drugs including without prescription. This frequently leads to treatment interruptions and subsequent drug resistance. Revised National TB Control Programme provides mechanisms to ensure treatment adherence support including Directly Observed Theray (DOT). But a large number of patients are not benefitted with these programme services and leads to non adherence, incomplete, inadequate treatment leading to M/XDR TB, mitigating all the efforts of the programme to prevent emergence and spread of drug resistance. If the TB patients diagnosed and treated under all sectors are reported to public health authorities, the mechanisms available under the programme can be extended to these patients to ensure treatment adherence and completion. The impending epidemic of M/XDR TB can only be prevented to a large extent by this intervention. In order to ensure proper TB diagnosis and case management, reduce TB transmission and address the problems of emergence of spread of Drug Resistant-TB, it is essential to have complete information of all TB cases. Therefore, Govt of India declared Tuberculosis a notifiable disease on 7th May 2012. All public and private health providers shall notify TB cases diagnosed and/or treated by them to the nodal officers for TB notification. This guidance document aims to to minimize variations in notification practice and improve the quality ofdata in the local TB surveillance system.

2.	Why should private health facilities notify TB?	Notification gives an opportunity to support private sector for following standerdized practices in terms of Standard TB Care It helps the patients to get right diagnosis, treatment, Follow up, Contact Tracing Chemoprophylaxis & facilitates social support systems. Complete and accurate data obtained from notification will allow continuouseval-uation of the trend of the disease with better estimation of burden/impact.
3.	Objectives:	1. To establish Tuberculosis surveillance system in the country 2. To ensure proper TB diagnosis and case management and further accelerate reduction of TB transmission 3. To extend mechanisms of TB treatment adherence and contact tracing to patients treated by all health care providers 4. To mitigate the impeding Drug resistant TB epidemic in the country
4.	Minimum information requirement for TB notification	1. TB Case name 2. Age 3. Sex 4. GoI-issued personal unique identification number (Aadhaar, Driving license etc) 5. Detailed address of TB case with pin code 6. Phone number 7. Basis of diagnosis: Microbiologically-confirmed TB case / Clinical TB case 8. Patient category: New / Recurrent TB case / Treatment change 9. Site of disease: Pulmonary / Extra-pulmonary only 10. Rifampicin resistance: Resistant / sensitive / not available (& other drug resistance pattern by laboratories)
5	Definitions for TB notification	Basis of diagnosis: 1. Microbiologically-confirmed TB case – Patient diagnosed with at least one sputum specimen positive for acid fast bacilli, or Culture-positive for Mycobacterium tuberculosis, or RNTCP-approved Rapid Diagnostic molecular test positive for tuberculosis OR 2. Clinical TB case – Patient diagnosed clinically as tuberculosis, without microbiologic confirmation and initiated on anti-TB drugs. Patient type: New TB case – Patient who has never been treated with anti-TB drugs or has been treated with anti-TB drugs for less than one month from any source Recurrent TB case – Patient who has been treated for tuberculosis in the past and been declared successfully treated (cured/treatment completed) at the end of their treatment regimen. Treatment change – Patient returning after interruption, or patients put on a new treatment regimen and due to failure of the current treatment regimen. Site of disease Pulmonary TB case – Patient with TB of the lungs (with or without involvement of any extra-pulmonary locations). Extra-pulmonary TB case – Patient with TB of any organ other than the lungs, such as pleura, lymph notes, intestines, genito-urinary tract, skin, bones and joints, meninges of the brain, etc, diagnosed with microbiological, histological, radiological, or strong clinical evidence.

		Rifampicin resistance: Rifampicin resistant – Patient with a drug susceptibility test result from a RNTCP-certified laboratory or WRD (WHO-endorsed Rapid Diagnostics) drug susceptibility test report showing resistance to rifampicin. Rifampicin sensitive – Patient with a drug susceptibility test result from a RNTCP-certified laboratory or WRD drug susceptibility test report showing sensitivity to rifampicin. Not available – Patient without a drug susceptibility test result from a RNTCP-certified laboratory or WRD drug susceptibility test report.
6	List of RNTCP endorsed TB diagnostics	Smear Microscopy (for AFB): – Sputum smear stained with Zeil-Nelson Staining or – Fluorescence stains and examined under direct or indirect microscopy with or without LED. Culture: – Solid(Lowenstein Jansen) media or – Liquid media (Middle Brook) using manual, semi-automatic or automatic machines e.g. Bactec , MGIT etc. Rapid diagnostic molecular test: – Conventional PCR based Line Probe Assay for MTB complex or – Real-time PCR based Nucleic Acid Amplification Test (NAAT) for MTB complex e.g. GeneXpert [Sputum Smear Microscopy (for AFB): Sputum smear stained with Zeil-Nelson Staining or Fluorescence stains and examined under direct or indirect microscopy. Sputum Culture: Sputum culture on solid (Lowenstein Jansen) media or liquid media (Middle Brook) using manual, semi-automatic or automatic machines e.g. Bactec , MGIT etc. Rapid diagnostic molecular test: Line Probe Assay for MTB or Nucleic Acid Amplification Test (CB-NAAT) **Note:** Diagnosis of TB based on radiology (e.g. X-ray) will be termed as clinical TB]
7	Registration of the Health establishments for TB notification	For operational simplicity, the types of Health establishments will be divided into three categories 1. Laboratories 2. Private practitioner / Clinic (single) 3. Hospital / Clinic / Nursing Home (multi) Laboratories will include those Health Establishments carrying out any of the RNTCP endorsed TB diagnostics Private practitioner / Clinic (single) will include any Health Establishments where TB cases are treated or diagnosed clinically / radiologically and the medical services are provided by single medical practitioner Hospital / Clinic / Nursing Home (multi-practitioners) will include any Health Establishments where TB cases are treated or diagnosed clinically / radiologically&medical services are provided by more than one practitioner Each of the Health Establishment will be registered for TB Notification by submitting a simple registration form mentioning the details of the establishment. This registration form can be availed from the nodal officer for TB Notification

		in the district or can be downloaded from http://tbcindia.nic.in. Alternatively health Establishments can be automatically registered by the respective nodal officers after submission of their first TB notification report to respective nodal officer in the district. Each Health Establishment on receipt of request for registration for TB Notification or submission of first TB notification report will receive the Unique number for further correspondence after verification / confirmation of the submitted details.
8	Mechanisms for TB notification	Route of information transmission: 1. Submission of hard copy of the TB to the Nodal Officer for TB notification o by post o by courier o by hand 2. Submission of the soft copy to the Nodal Officer for TB Notification by authorized Email 3. Submission of information to the Nodal Officer for TB Notification using authorized mobile o by Mobile phone call * o by IVRS(Interactive Voice Response System) * o by SMS * (*will be incorporated in future) 4. Uploading of information directly on the Nikshay portal http://nikshay.gov.in(this website is under construction & such facility may be available from 2013 after the health establishments are registered) This, in future, may include direct online TB cases information transmission from newer diagnostic machines like CB-NAAT or MGIT etc. 5. In States/UTs or districts where the bilateral understanding is established between the Health Establishments and the local public health authorities for convenient local TB notification, the information on TB Notification can be submitted to the local public health authorities (e.g. Medical Officer of the Primary Health Center) as designated by the district nodal authority for TB notification. However, this should be done only in consultation with the concerned district nodal officer for TB notification. **Note:** The list of Nodal Officers is available on http://tbcindia.nic.in/. In case, health care provider is not aware about the contact details of the nodal officer for TB Notification in the district the same may be obtained from the respective District TB Officer / State TB Officer for the updated contact. In case of any grievences, the same may be sent to tbnotification@tbcindia.nic.in& issues regarding electronic reporting data update may be sent to helpdesk.nikshay@tbcindia.nic.inmentioning the name and complete address of the health care facility. Health establishments and medical practitioners not routinely diagnosing / treating TB patients may give an undertaking regarding the same while agreeing to submit the information in future, in case they diagnose or treat any TB case.

9	Responsibility of the district level nodal officer	• Disseminate information regarding TB Notification to all Health Establishments in the district and the professional bodies like IMA • Provide the formats for TB Notification and Health establishment registration form for TB Notification to all Health Establishments in the districts • Ensure that each Health Establishment submitting registration form or submitting its first TB Notification report (whichever is earlier) are visited / their details are confirmed within two weeks from submission • Ensure that all Health Establishments in the districts are registered for TB Notification by Dec 2012 and they are given the Unique ID • Maintain the list of Health Establishments with details and IDs • Ensure that all Health Establishments in the district notify TB cases on timely manner • Capacity building of the local Medical Officers and health staff to undertake public health action for the TB cases notified • Ensure that all TB cases notified by all the Health establishments are entered in the Nikshay portal not later than two weeks from submission of the report • Routinely review the progress in TB notification by all Health Establishments in the district
10	Responsibility of the Local public health authority	• Carry out following activities as directed by and in consultation with the district nodal officer for TB Notification o Disseminate information regarding TB Notification to all Health Establishments in the district and the professional bodies like IMA o Provide the formats for TB Notification and Health establishment registration form for TB Notification to all Health Establishments in the districts o Ensure that each Health Establishment submitting registration form or submitting its first TB Notification report (whichever is earlier) are visited / their details are confirmed within two weeks from submission o Ensure that all Health Establishments in the districts are registered for TB Notification by Dec 2012 and they are given the Unique ID o Ensure that all Health Establishments in the district notify TB cases on timely manner o Capacity building of the health staff to undertake public health action for the TB cases notified o Collect, collate and upward submit the TB Notification reports submitted by the Health Establishments
11	Responsibility of the health worker	• Regularly visit all Health establishments in the area of work and promote understanding and requirement about the TB Notification amongst the staff and medical practitioners in the Health Establishments • Provide the formats for TB Notification and Health establishment registration form for TB Notification to all Health Establishments in the districts • Collect, collate and upward submit the TB Notification reports submitted by the Health Establishments • Ensure that all TB cases notified by the Health establishments are entered in Nikshay • Visit the TB patients notified by the Health Establishments in consultation with them for important and timely public health actions including: o Counselling of TB patients including promotion of treatment adherence & Follow up to ensure treatment completion o TB Contact tracing, screening for symptoms and referral for evaluation if any TB symptomatic is found amongst the TB contacts o Offering INH chemoprophylaxis as per RNTCP policy o Family members counselling o Offering TB treatment under RNTCP, if desired by the patients o Advising on ICTC services, further testing of C&DST, if eligible

Annexure I

Health Establishment Registration Form

(for TB Notification)

1	Name of Health Establishment	
2.	Sector	☐ Public ☐ Private/NGO
3.	Type of Health Establishment	☐Laboratory ☐ Private Practitioner /clinic (single) ☐Hospital / Clinic / Nursing Home (multi)
4	MCI/Hospital/Clinical Registration Number	
5.	Authorized Contact Person	
6.	Designation of Contact Person	
7.	Email	
8.	Land Line Number (with STD Code)	
9.	Mobile Number	
10.	Complete Address	
11.	PIN Code	

For Office Use

Registration Form Received on	
Mode of Receipt	E Mail / Post / By Hand /Fax
Verified By	
Verified On	
HEID Allocated	
State	
District	
Tuberculosis Unit	

Annexure II
Declaration of not diagnosing / treating TB cases

To,

Nodal Officer for TB Notification,
…… District

…… State

Dear Sir,

I had received the information regarding notification of Tuberculosis patients. I undertand the I am expected to report each and every patient who has been either diagnosed as Tuberculosis or prescribed treatment with anti-tuberculosis drugs or both needs to be reported on atleast monthly basis to health system. I have also received the format.

My details are as follows:

1. Name:
2. Qualification:
3. Registration / Licence no.
4. Correspondence address:

5. Contact: Landline (with STD): Mobile:
   Email (if any):
6. I had neither diagnosed nor prescribed anti-tb drugs / treatment or both in last one year and I usually do not manage TB patients.Hence I request to kindly grant exemption from submitting monthly report. I take full responsibility that I will report even if I manage (diagnose / prescribe tb drugs / both) a single patient during any month. If I fail to report such case, I will be responsible for the further action.
7. I had been informed that District TB Officer / health system staff will be making enquiry to the pharmacy shops / community as a surprise check and proposal for actions will be initiated if it is found that the TB patient managed by me / my institute/ health facility / lab / diagnostic centre has not been reported from my side.

Authorised Signature:

Full Name & Stamp:

CC to
Medical Officer, PHC……. /
Medical Superintendent, SDH / RH……. /
Taluka Health Officer/ BHO / BMO ……..)

Annexure III

TB Notification reporting format for **Laboratory**

Period of reporting: From …../……./…… To …../……./……

Name of the Laboratory :……

Registration Number:…… Telephone (with STD):……

Mobile number:……

Complete Address: ……

……

Health Establishment code for TB Notification

...../……

Sr No	Name of TB Patient (surname first)	Father / Husband's name	Age (yrs)	Sex (M/F/O)	GoI issued identification number *	Complete residential address	PIN number	Patient Phone number	Date of TB Diagnosis	Date of sputum collection	Date of result	Type of Test result (smear positive / culture positive / molecular test – LPA Xpert / DST	DST results for each drug tested (R=resistant / S=sensitive/NA=not available) Rif, INH, SM, EMB, Ofx, Km, Eto, Cipro, Capr, etc $							
													Rif	INH	SM	EMB	Ofx	Km	—	—

*** Aadhaar, driving license, voter ID, ration card, PAN no, passport no etc**

Laboratories include those Health Establishments carrying out any of the RNTCP endorsed TB diagnostics

Signature:…… Date: …../……./……

TB Notification reporting format for medical practitioners / Clinics/Hospitals/Nursing homes

Period of reporting: From …../……./…… To …../……./……

Name of the health facility / practitioner::…….(single/Multi)
Registration Number:…… Telephone (with STD): …… Health Establishment Code for TB Notification
Mobile number:…… ……/……
Complete Address: ……..……
……..……..……..……..

Sr No	Name of TB Patient (surname first)	Father / Husband's name	Age (yrs)	Sex (M/F /O)	GoI issued identification number *	Complete residential address	PIN number	Patient Phone number	Date of TB Diagnosis	Date of TB treatment initiation	Site of Disease (P / EP)	Pateint Type (New TB case/ Recurrent TB case/ Treatment change)	Basis of diagnosis (Sputum microscopy / culture / PCR / LPA/ Clinical exam/X-Ray)	Treatment started (No / First line / second line)

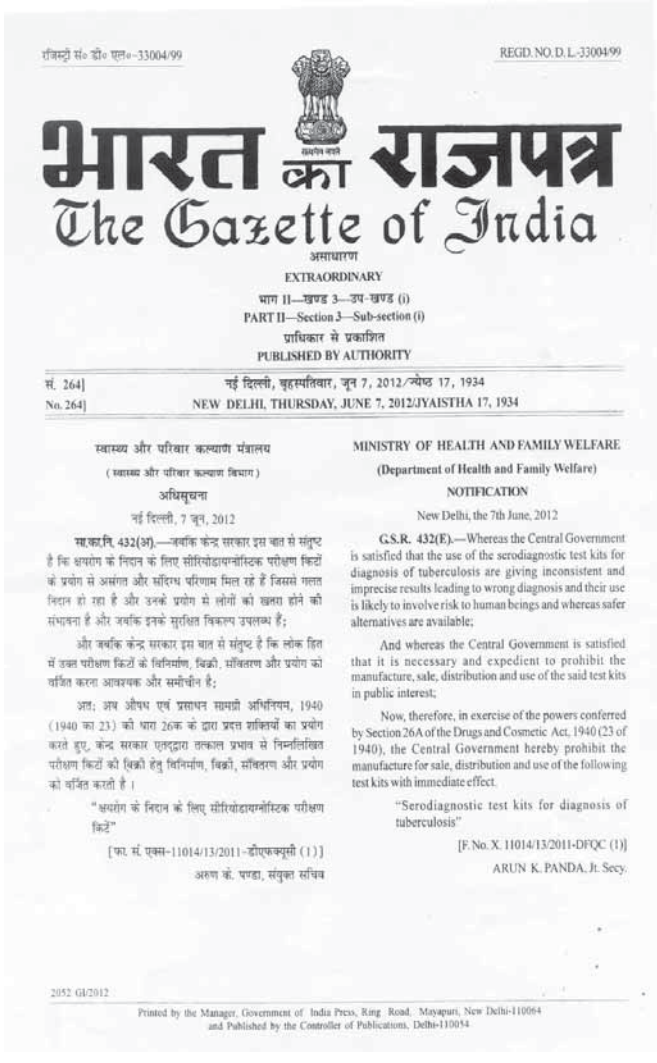
*** Aadhaar, driving license, voter ID, ration card, PAN no, passport no etc**
Private practitioner / Clinic (single) will include any Health Establishments where TB cases are treated or diagnosed clinically / radiologically and the medical services are provided by single medical practitioner
Hospital / Clinic / Nursing Home (multi-practitioners) will include any Health Establishments where TB cases are treated or diagnosed clinically / radiologically & medical services are provided by more than one practitioner

Signature:…… Date: …../……./……

Annexure B:

Govt. of India Gazette

- Vide No. G.S.R. 432 (E) has prohibited the manufacture, sale, distribution and use of the Serodiangostic test kits for tuberculosis in India, and
- Vide No. G.S.R. 433 (E) has prohibited the import of the Serodiangostic test kits for tuberculosis in India.



रजिस्ट्री सं० डी० एल०-33004/99 REGD. NO. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

असाधारण
EXTRAORDINARY
भाग II—खण्ड 3—उप-खण्ड (i)
PART II—Section 3—Sub-section (i)
प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 264] नई दिल्ली, बृहस्पतिवार, जून 7, 2012/ज्येष्ठ 17, 1934
No. 264] NEW DELHI, THURSDAY, JUNE 7, 2012/JYAISTHA 17, 1934

स्वास्थ्य और परिवार कल्याण मंत्रालय
(स्वास्थ्य और परिवार कल्याण विभाग)
अधिसूचना
नई दिल्ली, 7 जून, 2012

सा.का.नि. 432(अ).—जबकि केन्द्र सरकार इस बात से संतुष्ट है कि क्षयरोग के निदान के लिए सीरियोडायग्नोस्टिक परीक्षण किटों के प्रयोग से असंगत और संदिग्ध परिणाम मिल रहे हैं जिससे गलत निदान हो रहा है और उनके प्रयोग से लोगों को खतरा होने की संभावना है और जबकि इनके सुरक्षित विकल्प उपलब्ध हैं;

और जबकि केन्द्र सरकार इस बात से संतुष्ट है कि लोक हित में उक्त परीक्षण किटों के विनिर्माण, बिक्री, संवितरण और प्रयोग को वर्जित करना आवश्यक और समीचीन है;

अतः अब औषध एवं प्रसाधन सामग्री अधिनियम, 1940 (1940 का 23) की धारा 26क के द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, केन्द्र सरकार एतद्द्वारा तत्काल प्रभाव से निम्नलिखित परीक्षण किटों की बिक्री हेतु विनिर्माण, बिक्री, संवितरण और प्रयोग को वर्जित करती है ।

"क्षयरोग के निदान के लिए सीरियोडायग्नोस्टिक परीक्षण किटें"

[फा. सं. एक्स-11014/13/2011-डीएफक्यूसी (1)]
अरुण के. पण्डा, संयुक्त सचिव

MINISTRY OF HEALTH AND FAMILY WELFARE
(Department of Health and Family Welfare)
NOTIFICATION
New Delhi, the 7th June, 2012

G.S.R. 432(E).—Whereas the Central Government is satisfied that the use of the serodiagnostic test kits for diagnosis of tuberculosis are giving inconsistent and imprecise results leading to wrong diagnosis and their use is likely to involve risk to human beings and whereas safer alternatives are available;

And whereas the Central Government is satisfied that it is necessary and expedient to prohibit the manufacture, sale, distribution and use of the said test kits in public interest;

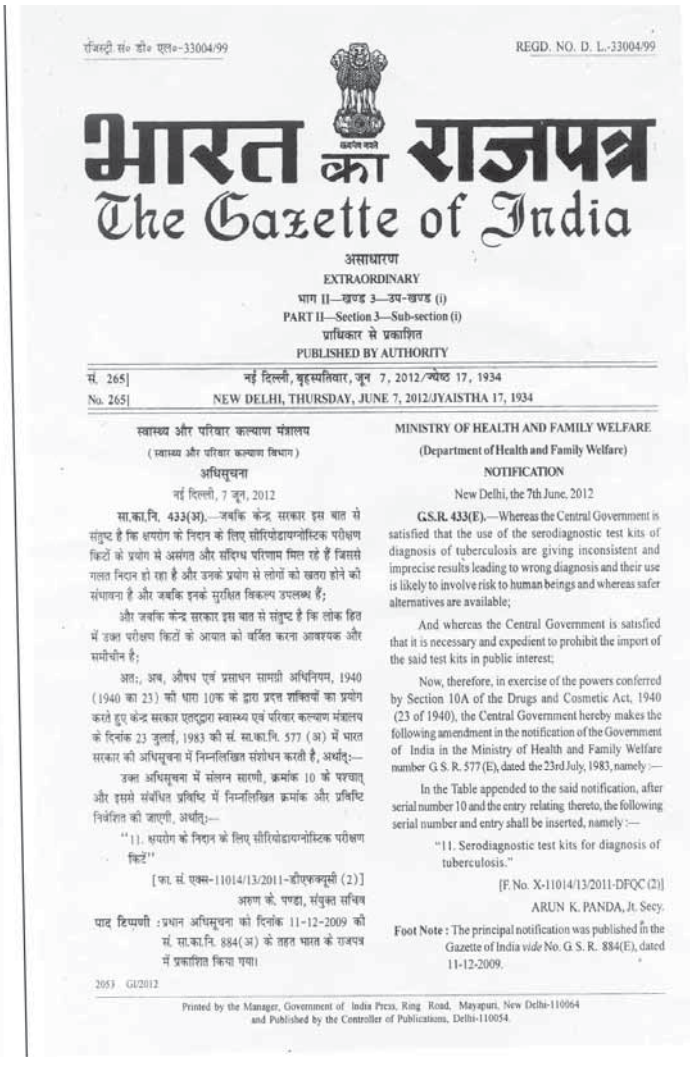
Now, therefore, in exercise of the powers conferred by Section 26A of the Drugs and Cosmetic Act, 1940 (23 of 1940), the Central Government hereby prohibit the manufacture for sale, distribution and use of the following test kits with immediate effect.

"Serodiagnostic test kits for diagnosis of tuberculosis"

[F. No. X. 11014/13/2011-DFQC (1)]
ARUN K. PANDA, Jt. Secy.

2052 GI/2012

Printed by the Manager, Government of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054



रजिस्ट्री सं० डी० एल०-33004/99 REGD. NO. D. L.-33004/99

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स्वास्थ्य और परिवार कल्याण मंत्रालय
(स्वास्थ्य और परिवार कल्याण विभाग)
अधिसूचना
नई दिल्ली, 7 जून, 2012

सा.का.नि. 433(अ).—जबकि केन्द्र सरकार इस बात से संतुष्ट है कि क्षयरोग के निदान के लिए सीरियोडायग्नोस्टिक परीक्षण किटों के प्रयोग से असंगत और संदिग्ध परिणाम मिल रहे हैं जिससे गलत निदान हो रहा है और उनके प्रयोग से लोगों को खतरा होने की संभावना है और जबकि इनके सुरक्षित विकल्प उपलब्ध हैं;

और जबकि केन्द्र सरकार इस बात से संतुष्ट है कि लोक हित में उक्त परीक्षण किटों के आयात को वर्जित करना आवश्यक और समीचीन है;

अतः, अब, औषध एवं प्रसाधन सामग्री अधिनियम, 1940 (1940 का 23) की धारा 10क के द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए केन्द्र सरकार एतद्द्वारा स्वास्थ्य एवं परिवार कल्याण मंत्रालय के दिनांक 23 जुलाई, 1983 की सं. सा.का.नि. 577 (अ) में भारत सरकार की अधिसूचना में निम्नलिखित संशोधन करती है, अर्थात्:—

उक्त अधिसूचना में संलग्न सारणी, क्रमांक 10 के पश्चात् और इससे संबंधित प्रविष्टि में निम्नलिखित क्रमांक और प्रविष्टि निवेशित की जाएगी, अर्थात्:—

"11. क्षयरोग के निदान के लिए सीरियोडायग्नोस्टिक परीक्षण किटें"

[फा. सं. एक्स-11014/13/2011-डीएफक्यूसी (2)]
अरुण के. पण्डा, संयुक्त सचिव

पाद टिप्पणी : प्रधान अधिसूचना को दिनांक 11-12-2009 की सं. सा.का.नि. 884(अ) के तहत भारत के राजपत्र में प्रकाशित किया गया।

MINISTRY OF HEALTH AND FAMILY WELFARE
(Department of Health and Family Welfare)
NOTIFICATION
New Delhi, the 7th June, 2012

G.S.R. 433(E).—Whereas the Central Government is satisfied that the use of the serodiagnostic test kits of diagnosis of tuberculosis are giving inconsistent and imprecise results leading to wrong diagnosis and their use is likely to involve risk to human beings and whereas safer alternatives are available;

And whereas the Central Government is satisfied that it is necessary and expedient to prohibit the import of the said test kits in public interest;

Now, therefore, in exercise of the powers conferred by Section 10A of the Drugs and Cosmetic Act, 1940 (23 of 1940), the Central Government hereby makes the following amendment in the notification of the Government of India in the Ministry of Health and Family Welfare number G.S. R. 577 (E), dated the 23rd July, 1983, namely :—

In the Table appended to the said notification, after serial number 10 and the entry relating thereto, the following serial number and entry shall be inserted, namely :—

"11. Serodiagnostic test kits for diagnosis of tuberculosis."

[F.No. X-11014/13/2011-DFQC (2)]
ARUN K. PANDA, Jt. Secy.

Foot Note : The principal notification was published in the Gazette of India *vide* No. G S. R. 884(E), dated 11-12-2009.

2053 GI/2012

Printed by the Manager, Government of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054.

Annexure C:

List of Laboratories under RNTCP Certification

Sr. No	Name of the States	Sr.No of Laboratory	Name of Laboratory	Type of Technology		
				Solid	LPA	Liquid
1	Andaman &Nicobar	1	RMRCPortBlair	C		
2	AndhraPradesh	2	IRL Hyderabad	C	C	C
		3	Govt Medical College, Vishakapatnam	C	C	
		4	BPHRC, Hyderabad	C	C	
		5	DFIT Lab, Nellore	C	C	
		6	SVIMS Medical College, Tirupati	P		
3	ArunachalPradesh	7	IRL Naharlagun	P		
4	Assam	8	IRL Guwahati (Guwahati Medical College),	P	C	P
5	Bihar	9	RMRC Dibrugarh	C		
		10	IRL Patna	P	C	
		11	RMRI Patna	P		
		12	Central Diagnostics, Patna		P	P
		13	DFIT Lab, Darbhanga	P	P	
6	Chandigarh	14	PGI Chandigarh	C	A	P
7	Chhattisgarh	15	IRL Raipur	C	C	P
8	Delhi	16	LRS, Delhi	C	C	C
		17	IRL Delhi (New Delhi TB Centre)	C	C	P
		18	Department of Medicine, AIIMS	C	C	
		19	Department of Laboratory Medicine), AIIMS		C	P
		20	Department of Microbiology), AIIMS,	P		P
		21	Department of Microbiology, Safdarjung Hospital	P		
9	Goa	22	IRL Goa	P		
10	Gujarat	23	IRL Ahmedabad	C	C	C
		24	Govt Medical College, Jamnagar	C	C	
		25	Govt Medical College, Surat	P		
		26	Microcare, Surat	C		
11	Haryana	27	IRL Karnal	C	C	P
		28	Quest Diagnostics, Gurgaon			P
		29	SRL, Gurgaon			P
12	HimachalPradesh	30	IRL Dharampur	C	P	
		31	Govt Medical College, Tanda	P		
13	Jammu&Kashmir	32	IRL Jammu (Jammu Medical College)	P		
		33	IRL Srinagar	P		
34	Sher-I-Kashmir Institute of Medical Sciences Soura Srinagar	P	P			
14	Jharkhand	35	IRL Ranchi (Itki TB sanatorium)	C	C	P
		36	RIMS, Ranchi			P
15	Karnataka	37	NTI, Bangalore	C	C	C

		38	IRL Bangalore	P	C	P
		39	SRL, Bangalore			P
		40	KIMS, Hubli	P	P	
		41	KMC, Manipal		P	P
		42	JSS Medical college, Mysore	P		
16	Kerala	43	IRL Thiruvananthapuram	C	C	P
		44	Calicut Medical College,Calicut	P		
17	MadhyaPradesh	45	IRL Indore	C	C	P
		46	BMHRC (IRL) Bhopal	C	C	
		47	Choitram Hospital Indore	C		
		48	RMRCT, Jabalpur	C		
18	Maharashtra	49	IRL Nagpur	C	C	C
		50	IRL Pune	C	C	P
		51	PD Hinduja Hospital, Mumbai		C	C
		52	Government Medical College, Aurang-abad	P	P	
		53	SRL, Mumbai			C
		54	JJ hospital Mumbai	C	C	P
		55	KJ Soumiya Medical college, Mumbai	P		
		56	KEM Hospital Mumbai	P		
		57	Sewari TB Hospital, Mumbai	P		
		58	Metropolis Healthcare, Mumbai		P	P
		59	B J Medical College, Pune	P		
		60	MGIMS, Wardha	C		
19	Manipur	61	IRL Imphal, Manipur	P	P	
20	Meghalaya	62	Nazreth Hospital, Shillong		P	P
21	Orissa	63	IRL Cuttack	C	C	P
		64	RMRC Bhubaneswar	C		
22	Puducherry	65	IRL Pondicherry	C	C	P
23	Punjab	66	IRL Patiala	P	P	P
		67	Govt. Medical College, Faridkot	P		
		68	Dayanand Medical College , Ludhiana		P	
		69	SRL Amritsar		P	
24	Rajasthan	70	IRL Ajmer	C	C	P
		71	SMS Jaipur	C	C	C
		72	SN Medical college, Jodhpur	P	P	
		73	DMRC Jodhpur	P		
		74	RNT Medical College, Udaipur	P		
		75	Kota Medical College, Kota	P		
24	Sikkim	76	IRL Gangtok, Sikkim	P	P	
26	TamilNadu	77	NIRT (TRC) Chennai	C	C	C
		78	IRL Chennai	C	C	P
		79	VRF Referral Laboratory, Sankar Neth-ralaya			P
		80	CMC Vellore	C		P
		81	Madurai Medical College, Madurai	P		
		82	PSG Medical College, Coimbatore	P		

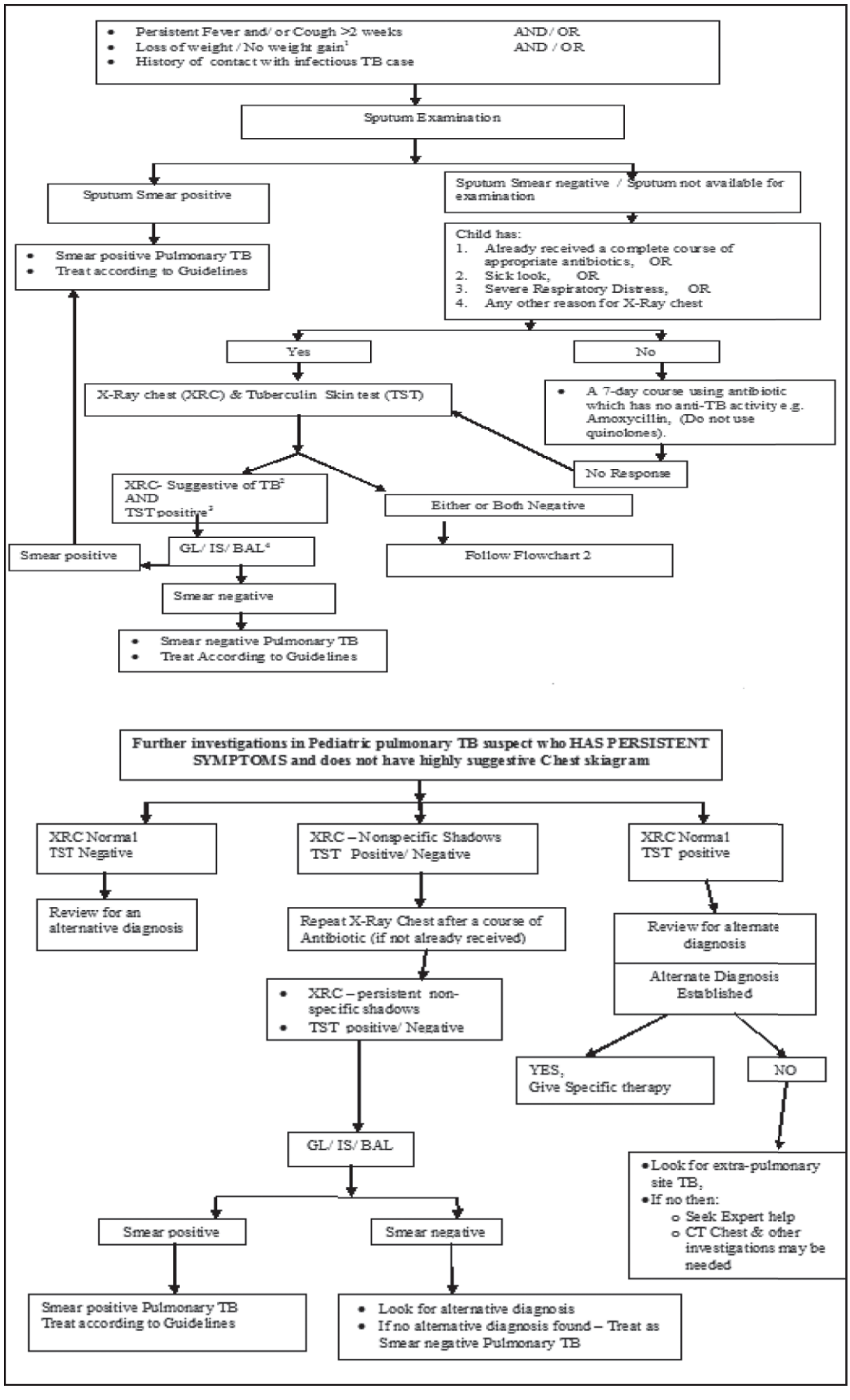
		83	Trichy Medical Colleges, Trichy	P		
27	Uttar Pradesh	84	JALMA, Agra	C	C	C
		85	IRL Lucknow (CSMMU, earlier KGMU)	C	C	
		86	IRL Agra	P	P	P
		87	Sri Ram Murti Medical College, Bareilly			P
		88	IMS,Banaras Health University, Varanasi	P	P	P
		89	MLN Medical College, Allahabad	P		
		90	Subharti Medical college, Meerut		C	P
		91	JN Medical College, Aligarh	P	P	
		92	SGPGIMS., Lucknow			P
		93	RMLIMS, Lucknow			
		94	RIIMS, Etawah	P	P	
28	Uttarakhand	95	IRL Dehradun	C	C	
		96	Microbiology Department IGMC Shimla			P
29	WestBengal	97	IRL Kolkata	C	C	
		98	SRL Kolkata			C
		99	North Bengal Medical college, Siliguri	P	P	P
		100	Bengal TB Association ,Kolkata		P	

Note: The (The UT's of D&N Haveli, Daman & Diu, Lakshadweep and the States of Mizoram and Tripura are linked to their nearest CDST laboratories)
C- RNTCP certified Laboratories; P -Certification in process

AnnexureD:

Diagnostic Algorithm for Paediatric Tuberculosis

Diagnostic algorithm for Paediatric Tuberculosis(Flowchart 1)



Appendix E:

Table: Central Internal Evaluation 2012, Key Findings from Interviews of New Smear Positive Patients

Questions	Male		Female		Total	
Patient aware that he / she is / was undergoing treatment for TB?	n	%	n	%	n	%
Yes	238	[93.0]	126	[92.0]	364	[92.6]
No	14	[5.5]	9	[6.6]	23	[5.9]
Not Recorded	4	[1.6]	2	[1.5]	6	[1.5]
Patient attended any patient provider interaction meeting / community meeting on TB?						
Yes	36	[14.2]	18	[13.3]	54	[13.9]
No	211	[83.4]	116	[85.9]	327	[84.3]
Not Recorded	6	[2.4]	1	[0.7]	7	[1.8]
The predominant presenting symptom?						
Cough	193	[74.5]	99	[71.7]	292	[73.6]
Fever	14	[5.4]	14	[10.1]	28	[7.1]
Haemoptysis	19	[7.3]	6	[4.3]	25	[6.3]
Breathlessness	7	[2.7]	2	[1.4]	9	[2.3]
Chest Pain	6	[2.3]	0	[0.0]	6	[1.5]
Other	1	[0.4]	1	[0.7]	2	[0.5]
Not Recorded	19	[7.3]	13	[9.4]	32	[8.1]
Total	259	[100.0]	138	[100.0]	397	[100.0]
First health care provider, the patient has approached with the symptom?						
Government	129	[50.6]	56	[40.9]	185	[47.2]
Private modern medicine, non-qualified practitioner, Ayush	114	[44.7]	74	[54.0]	188	[48.0]
NGO hospital	2	[0.8]	2	[1.5]	4	[1.0]
Other govt/corporate sector	4	[1.6]	2	[1.5]	6	[1.5]
Not Recorded	6	[2.4]	3	[2.2]	9	[2.3]
Referred the patient for sputum examination?						
Government	164	[64.8]	88	[66.2]	252	[65.3]
Private modern medicine practitioner	49	[19.4]	26	[19.5]	75	[19.4]
NGO hospital	10	[4.0]	8	[6.0]	18	[4.7]
Other govt/corporate sector	18	[7.1]	7	[5.3]	25	[6.5]
non-qualified practitioner, Ayush	4	[1.6]	0	[0.0]	4	[1.0]
Not Recorded	8	[3.2]	4	[3.0]	12	[3.1]
Patient found the location of DMC accessible in time and place?						
Yes	224	[87.8]	122	[89.1]	346	[88.3]
No	26	[10.2]	14	[10.2]	40	[10.2]
Not Recorded	5	[2.0]	1	[0.7]	6	[1.5]
Did the patient have to pay for sputum examination at the DMC?						
Yes	4	[1.6]	0	[0.0]	4	[1.0]
No	242	[96.0]	132	[97.8]	374	[96.6]
Not Recorded	6	[2.4]	3	[2.2]	9	[2.3]

Does the patient give past history of anti-TB treatment (> 1 month)?						
Yes	35	[12.2]	10	[6.9]	45	[10.4]
No	219	[76.0]	125	[86.2]	344	[79.4]
Not Recorded	34	[11.8]	10	[6.9]	44	[10.2]
Did the patient mention that the staff visited his residence to verify the home address, prior to start of treatment?						
Yes	186	[64.8]	112	[76.2]	298	[68.7]
No	95	[33.1]	34	[23.1]	129	[29.7]
Not Recorded	5	[1.7]	1	[0.7]	6	[1.4]
Does the patient know the correct duration of treatment for his TB?						
Yes	239	[82.7]	117	[79.6]	356	[81.7]
No	44	[15.2]	29	[19.7]	73	[16.7]
Not Recorded	6	[2.1]	1	[0.7]	7	[1.6]
Does the patient have to pay to travel to DOT centre?						
Yes	32	[11.1]	24	[16.4]	56	[12.9]
No	254	[88.2]	122	[83.6]	376	[86.6]
Not Recorded	2	[0.7]	0	[0.0]	2	[0.5]
Did the patient find the location and timing of the DOT centre convenient?						
Yes	249	[86.8]	129	[87.8]	378	[87.1]
No	34	[11.8]	18	[12.2]	52	[12.0]
Not Recorded	4	[1.4]	0	[0.0]	4	[0.9]
Did the patient take at least 20 of 24 doses under direct observation in the IP?						
Yes	179	[62.8]	102	[69.4]	281	[65.0]
No	61	[21.4]	34	[23.1]	95	[22.0]
Not Recorded	45	[15.8]	11	[7.5]	56	[13.0]
Did the patient have to pay for TB drugs after being registered in the RNTCP?						
Yes	16	[5.6]	8	[5.4]	24	[5.5]
No	266	[93.0]	138	[93.2]	404	[93.1]
Not Recorded	4	[1.4]	2	[1.4]	6	[1.4]
Is the patient take 1st weekly dose under supervision in the CP?						
Yes	142	[50.4]	85	[58.6]	227	[53.2]
No	66	[23.4]	33	[22.8]	99	[23.2]
Not Recorded	74	[26.2]	27	[18.6]	101	[23.7]
Is the patient aware of cough etiquette?						
Yes	199	[69.6]	118	[80.8]	317	[73.4]
No	73	[25.5]	21	[14.4]	94	[21.8]
Not Recorded	14	[4.9]	7	[4.8]	21	[4.9]
Has the patient any other co-morbidities						
Diabetes Mellitus	106	[37.6]	63	[44.4]	169	[39.9]
HIV	27	[9.6]	5	[3.5]	32	[7.5]

COPD	19	[6.7]	6	[4.2]	25	[5.9]
Other	11	[3.9]	4	[2.8]	15	[3.5]
None	101	[35.8]	47	[33.1]	148	[34.9]
Not Recorded	16	[5.7]	17	[12.0]	33	[7.8]
Smoking status						
Non-smoker	79	[28.3]	58	[40.8]	137	[32.5]
Past-smoker	180	[64.5]	73	[51.4]	253	[60.1]
Current Smoker	9	[3.2]	0	[0.0]	9	[2.1]
Not Recorded	11	[3.9]	11	[7.7]	22	[5.2]
Has the patient been offered HIV counselling and testing?						
Yes	143	[50.5]	65	[44.8]	208	[48.6]
No	117	[41.3]	59	[40.7]	176	[41.1]
Not Applicable	14	[4.9]	18	[12.4]	32	[7.5]
Not Recorded	9	[3.2]	3	[2.1]	12	[2.8]
Does the patient know his HIV status?						
Yes	124	[44.8]	58	[40.8]	182	[43.4]
No	102	[36.8]	55	[38.7]	157	[37.5]
Not Recorded	51	[18.4]	29	[20.4]	80	[19.1]

Annexure F:

List of RNTCP - Priority Operational Research Needs

In the current context the following Operational Research Needs need immediate address:

1. Design and evaluate interventions to minimize missed opportunities in diagnosis of treatment of pulmonary TB under RNTCP.
2. Design and evaluate interventions to prevent initial default in RNTCP.
3. Design and evaluate interventions to ensure early treatment of TB patients 'Referral for Treatment' in RNTCP.
4. Design and evaluate interventions for active case finding in high risk groups (clinically and socially vulnerable populations).
5. Design and evaluate interventions to prevent treatment interruptions and default especially in tribal, slum populations and hard to reach areas.
6. Design and evaluate interventions to minimize missed opportunities in diagnosis and initiation of treatment of pulmonary TB in private sector.
7. Design and evaluate interventions to improve treatment outcome in private sector.
8. Design and evaluate interventions for early diagnosis of pediatric TB under RTNCP.

Priority Operational Research Needs:

S. No.	Thematic Area	Sub-Serial No.	Sequential Serial No.	Research Need/Topic
1	TB Case Finding and Diagnosis for ensuring EARLY detection of ALL TB cases in the community.	1.1	1.	Review of the diagnostic algorithm for diagnosis of smear negative PTB under RNTCP.
		1.2	2.	Assessment of the skills of PHI-Medical Officers in X-Ray reading and the impact of capacity building of MOs in X-ray reading skills on detection of smear negative TB under RNTCP.
		1.3	3.	Evaluation of the effect of front loading of Chest X-rays within the diagnostic algorithm for smear negative PTB in specific situations, for example patients reporting at medical colleges/hospitals with history of a full course of antibiotics for the present episode of illness
		1.4	4.	Design and evaluate interventions to minimize missed opportunities and time lag in diagnosis of extra pulmonary TB under RNTCP
		1.5	5.	Design and evaluate algorithms for early case findings using new diagnostic tools such as the CB-NAAT etc.
		1.6	6.	Evaluation of the impact of contact tracing on total case finding and the effectiveness of interventions for implementation of contact tracing systematically under the RNTCP.
2	TB Treatment, Case Holding and Factors influencing treatment outcomes	2.1	7.	Incidence of acquired drug resistance, relapse and long term mortality (2.5 years) among patients treated with intermittent regimen under RNTCP v/s daily regimen.

		2.2	8.	Design and evaluate interventions to link with existing social welfare schemes in order to improve treatment adherence
		2.3	9.	Role of Ethambutol in the Continuation Phase of Category I in preventing failures and relapses in the background of high INH resistance prevalent in the country
		2.4	10.	Feasibility and effectiveness of using Fixed Dose Combinations for treatment of TB under RNTCP.
3	Diagnosis and Management of Pediatric TB	3.1	11.	Evaluation and validation of the diagnostic algorithm (new) for pediatric TB under RNTCP
		3.2	12.	Experiences and Outcomes among pediatric TB patients treated with pediatric PWB's under RNTCP.
		3.3	13.	Feasibility study of involving family members as DOT providers for pediatric TB cases and comparison of treatment outcomes when the DOT provider is not a family member.
		3.4	14.	Design and evaluate interventions for chemoprophylaxis among childhood contacts of adults suffering from TB
		3.5	15.	Assess the effectiveness/feasibility of intensified TB case finding in high-risk populations like malnourished children (Anganwadis, Nutritional rehabilitation centres)
		3.6	16.	Role of the private sector in all aspects of the management of childhood TB and the extent to which existing public/private partnerships are aware of childhood TB and its particular problems.
		3.7	17.	Evaluate the treatment of drug-resistant TB in children and determine the most effective regimens (fully oral regimen?).
		3.8	18.	Role of ultrasound in diagnosis of Intrathoracic Lymphadenopathy among pediatric age group
		3.9	19.	Pharmacokinetic studies with newly revised RNTCP dosage schedule and second line drugs– all ages, HIV positive and neg, types of TB
4	Involvement of NGO/PP for Universal Access	4.1	20.	Enablers and Barriers for uptake of the PP/NGO schemes under RNTCP among the NGOs and the Private Practitioners.
		4.2	21.	Evaluate quality of TB diagnosis and care in hospitals – district level public, medical colleges and corporate hospitals
		4.3	22.	Effect of ISTC dissemination on knowledge, attitudes and practices of proper TB care among private practitioners.
		4.4	23.	Design and evaluate interventions to involve providers of alternative systems of medicine in the referral of TB suspects and their effectiveness.
		4.5	24.	Study on private providers perspective on notification of TB

		4.6	25.	Assessment of the landscape of diagnostic practices – both clinical and laboratory among the private sector in India
		4.7	26.	Private provider perspective on the compensation for services rendered under RNTCP and the effect of incentivization for involvement of NGOs and private sector in RNTCP.
5	Programmatic Management of Drug Resistant TB services	5.1	27.	Determinants of default in DR-TB patients including the patients and providers perspective under the RNTCP.
		5.2	28.	Design and evaluate interventions to prevent Treatment interruptions and default in DR-TB patients under RNTCP.
		5.3	29.	Analysis of factors associated with poor culture-conversion in DR-TB cases registered on treatment under RNTCP.
		5.4	30.	Design and evaluate interventions to prevent delay in initiation of treatment in MDR-TB cases diagnosed by using rapid molecular diagnostic tests under the RNTCP.
		5.5	31.	Treatment Outcomes in HIV-infected patients with Multidrug-resistant and Extensively Drug-resistant Tuberculosis.
		5.6	32.	RCT of drug regimen for non-RIF Poly-resistant TB cases.
		5.7	33.	Assessment of the proportion of patients with FQ resistance among primary MDR TB patients.
		5.8	34.	Assessment of the risk factor of FQ resistance at diagnosis on poor outcome in patients on Category IV regimens.
		5.9	35.	What is the percentage of Non-Tubercular Mycobacteria among culture positive MDR suspects?
		5.10	36.	What is the feasibility of processing extra-pulmonary specimens for C&DST under RNTCP?
		5.11	37.	What is the percentage of MDR/XDR among contacts of MDR/XDR cases?
6	TB-HIV and TB-Diabetes Collaborative Activities	6.1	38.	Design and evaluate the optimum algorithms to rule out TB in HIV infected patients
		6.2	39.	Study to assess the loss of TB suspects and the reasons therein when referred for sputum microscopy from ICTCs to DMC.
		6.3	40.	Reasons for delay in initiation of ART in TB-HIV co-infected patients.
		6.4	41.	Evaluation of the implementation of Airborne Infection Control guidelines at ART centres
		6.5	42.	Comparison of TB treatment outcome among non-diabetic, controlled diabetic and uncontrolled diabetic TB cases.
		6.6	43.	Is Diabetes Mellitus a risk factor for relapse among treated TB patients?

		6.7	44.	Incremental yield of diagnosing TB cases by screening all HIV infected patients with TB symptoms by Xpert TB at ART centres
		6.8	45.	Feasibility and effectiveness of daily therapy in comparison to intermittent therapy in TB-HIV co-infected patients under RNTCP.
		6.9	46.	To study TB treatment outcomes among TB/HIV cases on Rifabutin and 2nd line or alternative first line ART drugs
		6.10	47.	Prevalence of hyperglycemia in TB patients and does it persists after completion of ATT
		6.11	48.	Impact of modified ICTC counseling tool for diagnosis of TB among PLHIV
7	Health Systems Strengthening for improving the Efficiency and Effectiveness of RNTCP.	7.1	49.	Effective alignment of Tuberculosis Units of RNTCP with the Block Level of the Health Systems in the States - issues and possible interventions.
		7.2	50.	Knowledge, Attitude and Practices among the district hospital staff, about RNTCP for strengthening their active involvement in RNTCP.
		7.3	51.	Feasibility study on involvement of SIHFW & RHFW training centres for RNTCP trainings.
		7.4	52.	Feasibility study as regards physical and human resources, on decentralization of DMCs at all PHCs and its effect on proficiency of the laboratory and increase in TB suspect examination rate etc.
		7.5	53.	Evaluation of the impact of infection control measures on the incidence of TB infection among health care workers.
8	RNTCP Programme Management including Human Resource Management; Supervision; Financial Management and Procurement & Supply Management.	8.1	54.	Evaluate implementation of RNTCP policies and guidelines
		8.2	55.	Design and evaluate strategies for 'motivation' of all Health care personnel for efficient implementation of RNTCP policies and guidelines
		8.3	56.	Determinants and Impact of health manpower availability (full time/part-time), transfers, delayed recruitment/placement and training status on RNTCP performance including PMDT, TB/HIV, Pediatric TB at various levels of programme implementation.
		8.4	57.	Study of the effect of Zero based budgeting in districts on overall financial management.

9	'Advocacy, Communication and Social Mobilization' Activities for enhancing RNTCP reach.	9.1	58.	Impact and effectiveness of RNTCP sensitizations and its various approaches adopted for involvement of political fraternity including MPs, MLAs, Zila Parishads and Panchayati Raj Institutions etc… in terms of the Knowledge, Attitude and Practices regarding RNTCP and also their involvement in RNTCP.
		9.2	59.	Qualitative (focus groups) and quantitative (pre- and post-intervention) evaluation of the effectiveness of communication methods and messages used in RNTCP, to promote client demand.
		9.3	60.	Testing innovative interventions to increase public visibility of TB diagnosis and treatment facilities.
		9.4	61.	Qualitative evaluation of the effectiveness of use of 'patients charter' and other tools to promote advocacy and involve local communities for the fight against TB.
10	Surveillance, Impact Assessment and Evaluation	10.1	6.2	Inventory studies to find out the extent of under-reporting of TB patients by RNTCP
		10.2	63.	Trends in TB Incidence, Prevalence and Mortality
		10.3	64.	Comparison of effectiveness of different interventions for increasing TB case notification in India.
		10.4	65.	Develop and test simple methods to evaluate the quality of RNTCP supervision and the usefulness of current instruments

Case Finding and Treatment Outcome Performance, 1999-2012

Every quarter, Central TB Division receives aggregate case-finding, programme management, sputum conversion, and treatment outcome information for patients registered under the programme from over 2,700 Tuberculosis Units nationwide. RNTCP follows the global method of cohort analysis for describing case finding and treatment outcomes. Timely data collection and dissemination are hallmarks of the RNTCP surveillance and data management systems. The data from the quarterly reports are analyzed and disseminated in the public domain as quarterly performance reports before the end of thesubsequentquarterand asanannual report. For the purpose of describing the notification in this section, the data from the reports of the 4 quarters in a calendar year have been added and is presented in the form of annual data. Though the programme was formally initiated in the year 1997 and the quarterly reporting mechanism was in place since inception, the data presented below extend from the year 1999, when approximately about 10% of the country's population was covered onwards. The rapid pace of DOTS expansion over the past decade complicates longitudinal data analysis in a number of ways. District-by-district scale-up of RNTCP services over several years changes the denominator of population covered every quarter. Basic demographic characteristics of implementing districts differed over the expansion years, as well as the expected evolution of services and TB epidemiology in areas implementing RNTCP over longer time periods.

For the purposes of this analysis, districts implementing RNTCP less than one year during the initial yearof implementation were attributed to cover a population proportionate to the number of days in the first year that services were available in each district. The rates presented in this section are all per 100,000 populations after adjusting for the number of days of implementation by individual districts till year 2006. Also the population of the districts is based on 2001 census and 2011 Census India for these two years and estimated for the rest of the years based on these two Censuses. Though the population in the tables is complete population of services covered as on 31st December of that year.

Sputum Microscopy Services and TB Suspect Examination

Over the 13 year analysis period, the population covered increased from 139 million to 1.23 billion

populations (Table 1). Smear microscopy services are reported independently of case notification results. As expected from service expansion, the absolute number of TB suspects examined by smear microscopy annually has increased manifold, from 0.96 million to 7.8 million. Over the same time period, the rate of TB suspect examination increased by 50%, from 421 per 100,000 population covered by RNTCP services to 640 per 100,000 population in 2012. Similarly, the rate of sputum smear positive cases diagnosed by microscopy has increased by 20%, from 62 to 79 per 100,000 population in year 2011 but has decreased to 76 per 100,000 in year 2012 [Figure 1]. The average number of suspects examined for every sputum smear positive case diagnosed has gradually increased about 1.3% per year, from 2001 to 2012, the number of suspects examined per smear positive case diagnosedhas increased by 28% from 6.4 to 8.4 suspects (Figure 2) still suggesting that yield is progressively decreasing per unit case finding activity. Total and sputum smear positive case notification is also shown in Table 1. An average difference of 11.3% [Range 8–15%] was observed between the rate of sputum-positive cases diagnosed and the sputum-positive case notification rate.

Table 1: TB Case finding activities and notification rates (1999 - 2011)

Year	Total population of India covered under RNTCP (millions)	Sputum Microscopy Services				Case Notification			
		Suspects examined		Sputum smear positive cases diagnosed		Total TB cases notified		Total sputum smear positive cases notified	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate
1999	139	n/a		n/a		1,33,918	101	61,103	46
2000	241	9,56,113	421	1,48,610	65	2,40,835	106	1,31,100	58
2001	441	20,46,039	517	2,86,789	73	4,68,360	118	2,52,878	64
2002	528	25,07,455	524	3,56,409	75	6,19,259	129	3,27,519	68
2003	761	39,55,395	576	5,55,250	81	9,06,638	132	4,73,378	69
2004	920	51,28,852	599	7,11,661	83	11,88,545	139	6,15,343	72
2005	1058	56,84,860	569	7,62,619	76	12,94,550	129	6,76,542	68
2006	1105	62,16,509	566	8,34,628	76	14,00,340	127	7,46,149	68
2007	1,138	64,83,312	570	8,79,741	77	14,74,605	130	7,90,463	69
2008	1,156	68,17,390	590	9,11,821	79	15,17,363	131	8,15,254	71
2009	1,174	72,47,895	617	9,30,453	79	15,33,309	131	8,25,397	70
2010	1,192	75,50,522	633	939062	79	15,22,147	128	8,31,429	70
2011	1,210	78,75,158	651	953032	79	15,15,872	125	8,44,920	70
2012	1,228	78,67,194	640	933905	76	14,67,585	119	8,17,234	67

Population is total covered at the year end of each year till 2006,
Estimated population based on 2001 & 2011 Census
Rates are adjusted for the number of days of implementation till 2006

Figure 1: Rate of TB suspect examined and Smear positive TB cases diagnosed per 100,000 population

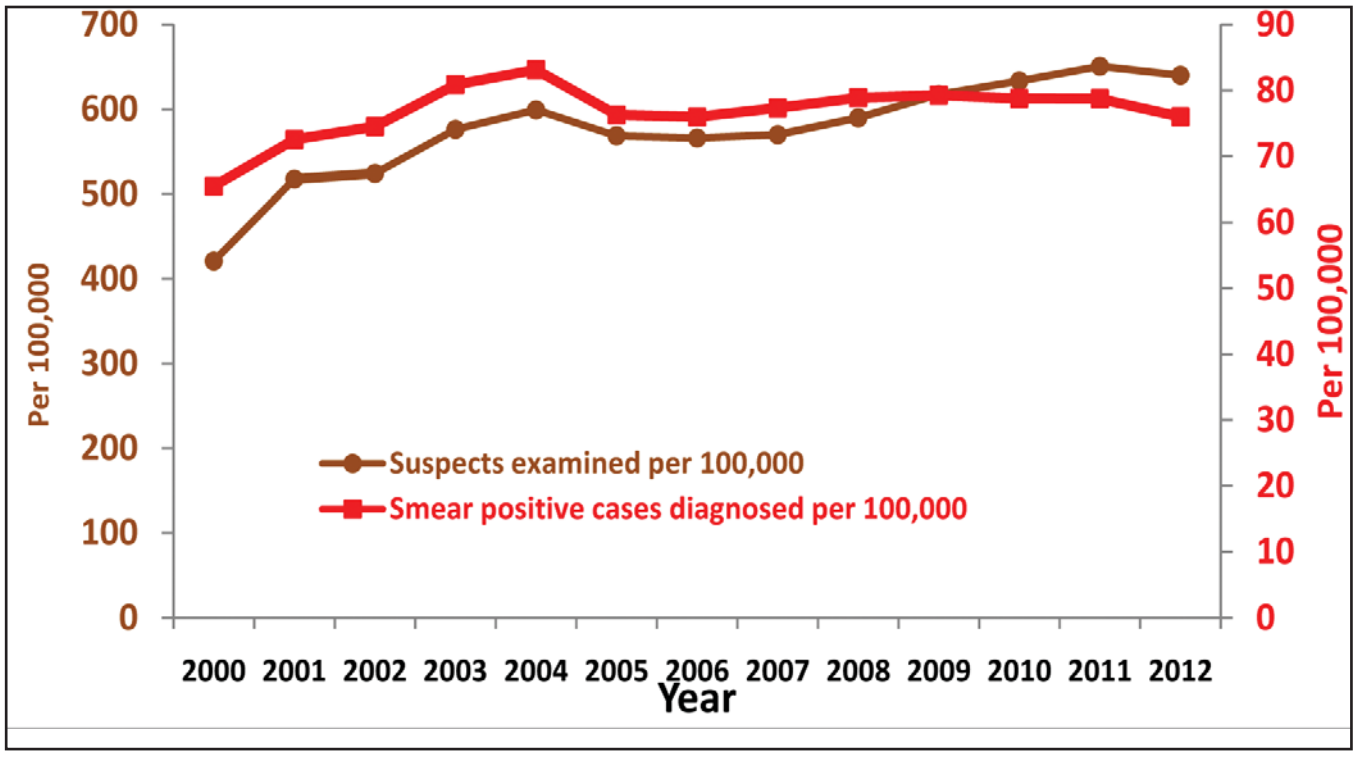
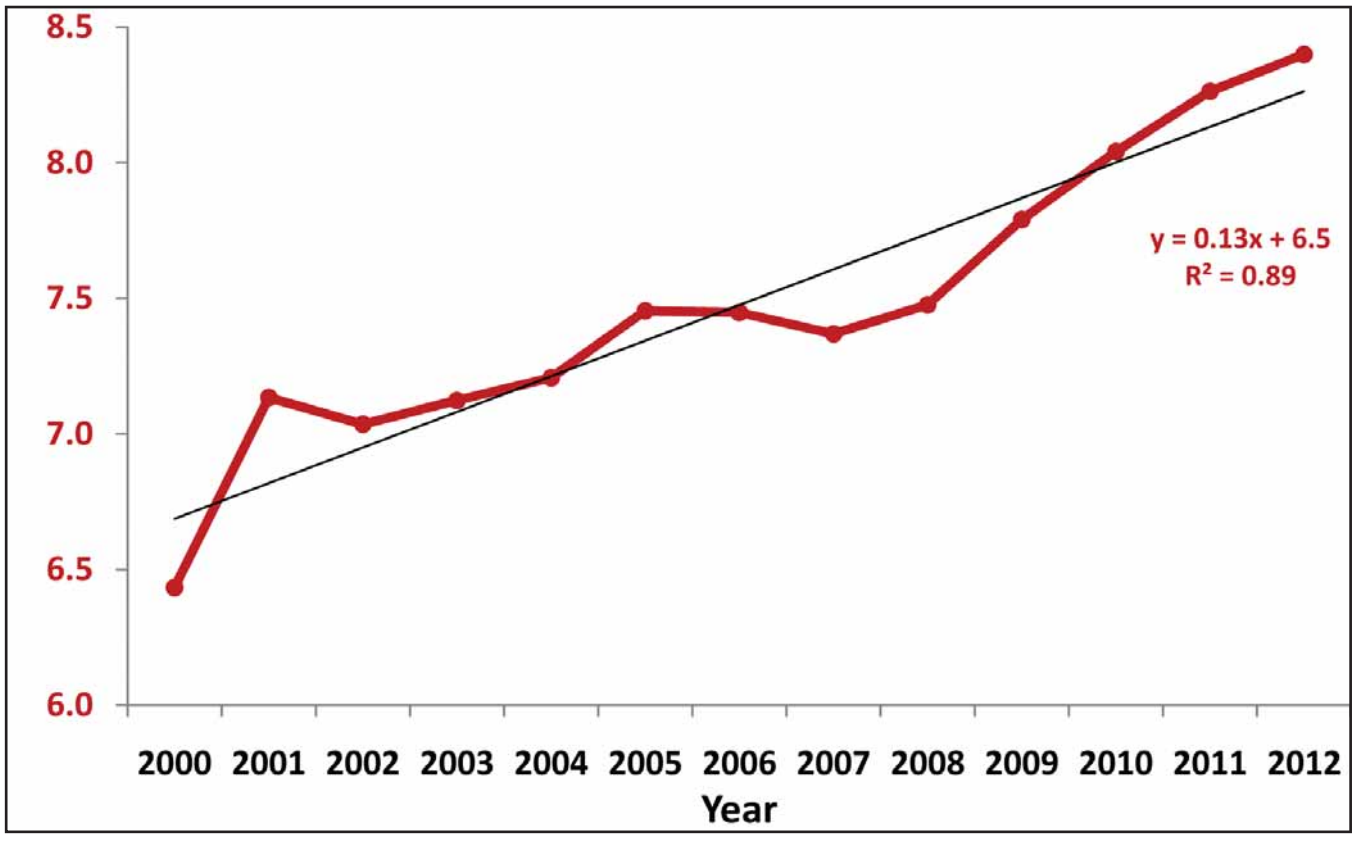


Figure 2: Trends in suspects examined per Smear positive TB case diagnosed (1999-2012)



Notification Rates of TB Cases

Overall, case notification has increased over the 13 year analysis period, and the notification rates of most types of TB cases has steadily increased or remained stable, with the exceptions of new smear-negative (Table 2 and Figure 3) and "treatment after default" later suggesting overall improvement in programme though indirectly (Table 2 and Figure 4). The total case notification rate has increased from 101 cases per 100,000 population in 1999 to 125 per 100,000 population in 2011 but has decreased to 119 per 100,000 population in 2012 (Table 1). The NSP case notification rate has increased from 39 cases per 100,000 population in 1999 to 53 per 100,000 population in the year 2008, and has remained at 53/100,000 till 2011 but has decreased to 51 per 100,000 population in year 2012. The NSN notification rates have shown a decreasing trend from 45 per 100,000 population in 2004 to 26 per 100,000 population in 2012 (Table 2 and Figure 3), and continues to fall. Some of the arguments for this are increased efforts to get the sputum examined and bacilli demonstrated with increasing availability and application of quality sputum smear microscopy services expanded under the programme.

The notification rate of re-treatment cases has increased by 40% over the past 13 years, from 18 per 100,000 population in 1999 to 25 per 100,000 population in 2012. The increase in retreatment notification rates appears to be driven largely by increases in the notification rates of the 'relapse' and 'others' types of re-treatment cases. The 're-treatment others' notification rate has almost doubled from 4 per 100,000 population in 1999 to 8 per 100,000 population in 2012. The notification rate of failure-type re-treatment cases has remained almost stable from 2002 to 2011 at the rate of 2 cases per 100,000 population. In 2012, the notification rate of failure-type re-treatment cases is 1 case per 100,000 population. The "Treatment after default" notification rates have declined from 10/100,000 population in 2001 to 5/100,000 population in 2011 **(Table 2 and Figure 4).**

Table 2: Notification rates of different types of TB under RNTCP, 1999:2011 (Numbers & notification rates per 100,000 population)

Year	Population covered (millions)	New smear positive		New smear negative		New extra-pulmonary		Re-treatment Relapse		Re-treatment Treatment after default		Re-treatment Failure		Re-treatment Others		Total case notification	
		Num-ber	Rate	Num-ber	Rate	Num-ber	Rate	Num-ber	Rate	Num-ber	Rate	Num-ber	Rate	Num-ber	Rate	Number	Rate
1999	139	51,627	39	42,180	32	16,015	12	7,334	6	9,326	7	1,401	1	5,541	4	1,33,918	101
2000	241	93,359	41	73,714	32	28,004	12	12,511	6	20,288	9	3,183	1	9,115	4	2,40,835	106
2001	441	1,83,970	47	1,46,145	37	52,373	13	23,122	6	38,400	10	6,195	2	18,450	5	4,68,360	118
2002	528	2,43,529	51	1,95,798	41	72,288	15	34,143	7	40,767	9	8,684	2	24,578	5	6,19,259	129
2003	761	3,58,490	52	2,91,062	42	1,09,777	16	46,577	7	54,353	8	11,560	2	35,983	5	9,06,638	132
2004	920	4,65,616	54	3,81,656	45	1,44,182	17	62,251	7	67,657	8	16,296	2	51,929	6	11,88,545	139
2005	1058	5,07,089	51	3,92,679	39	1,70,783	17	75,054	8	72,021	7	17,710	2	59,845	6	12,94,550	129
2006	1105	5,54,914	51	4,01,384	37	1,83,719	17	90,153	8	76,699	7	19,496	2	74,270	7	14,00,340	127
2007	1,138	5,92,262	52	3,98,707	35	2,06,701	18	96,781	9	77,397	7	19,012	2	83,746	7	14,74,605	130
2008	1,156	6,16,027	53	3,90,260	34	2,20,185	19	1,04,210	9	76,583	7	18,434	2	89,995	8	15,17,363	131
2009	1,174	6,24,617	53	3,84,113	33	2,33,026	20	1,08,361	9	73,549	6	18,870	2	88,976	8	15,33,309	131
2010	1,192	6,30,165	53	3,66,381	31	2,31,121	19	1,10,691	9	72,110	6	18,463	2	91,708	8	15,22,147	128
2011	1,210	6,42,321	53	3,40,203	28	2,26,965	19	1,12,508	9	72,787	6	17,304	1	101832	8	15,15,872	125
2012	1,228	6,29,589	51	3,17,616	26	2,34,029	19	1,06,463	9	64,782	5	16,400	1	96567	8	14,67,585	119

Population is total covered at the year end of each year till 2006,
Estimated population based on 2001 & 2011 Census
Rates are adjusted for the number of days of implementation till 2006

Figure 3: Trends in Type of TB case notification rate (1999-2012)

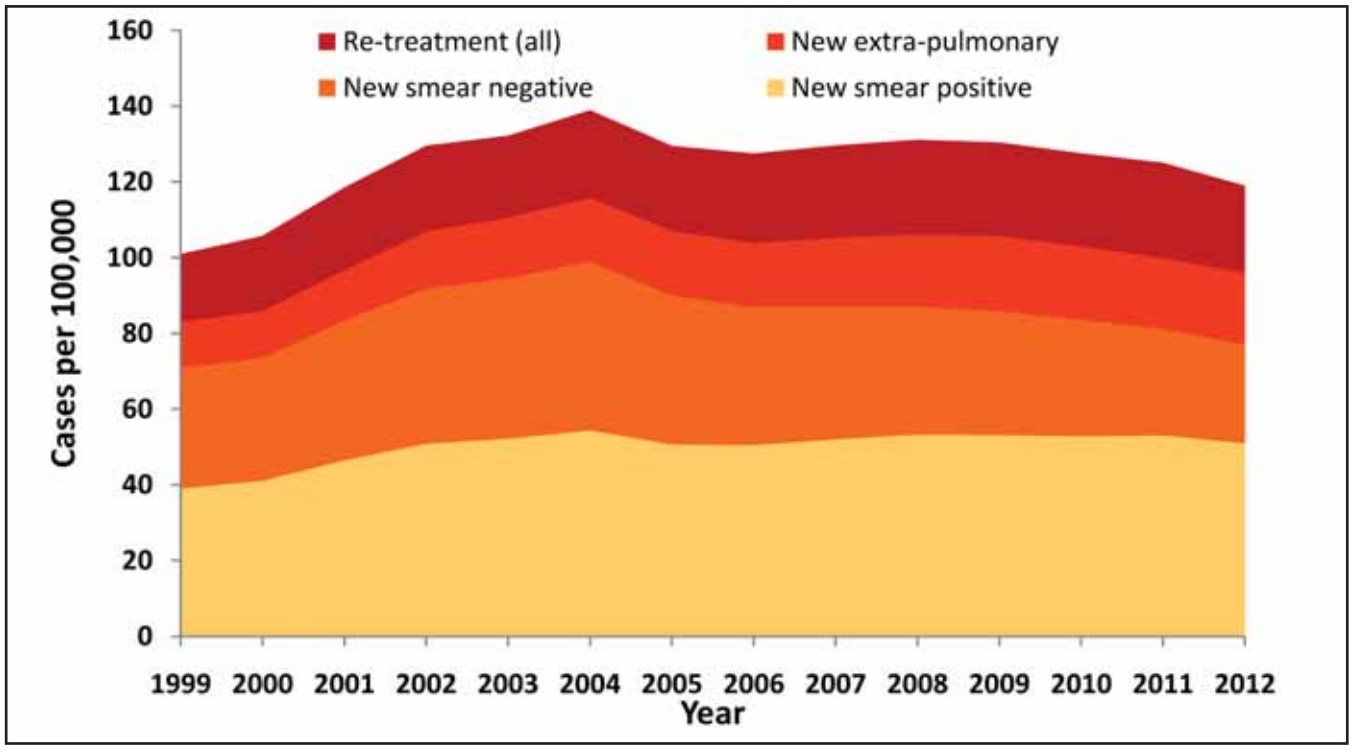
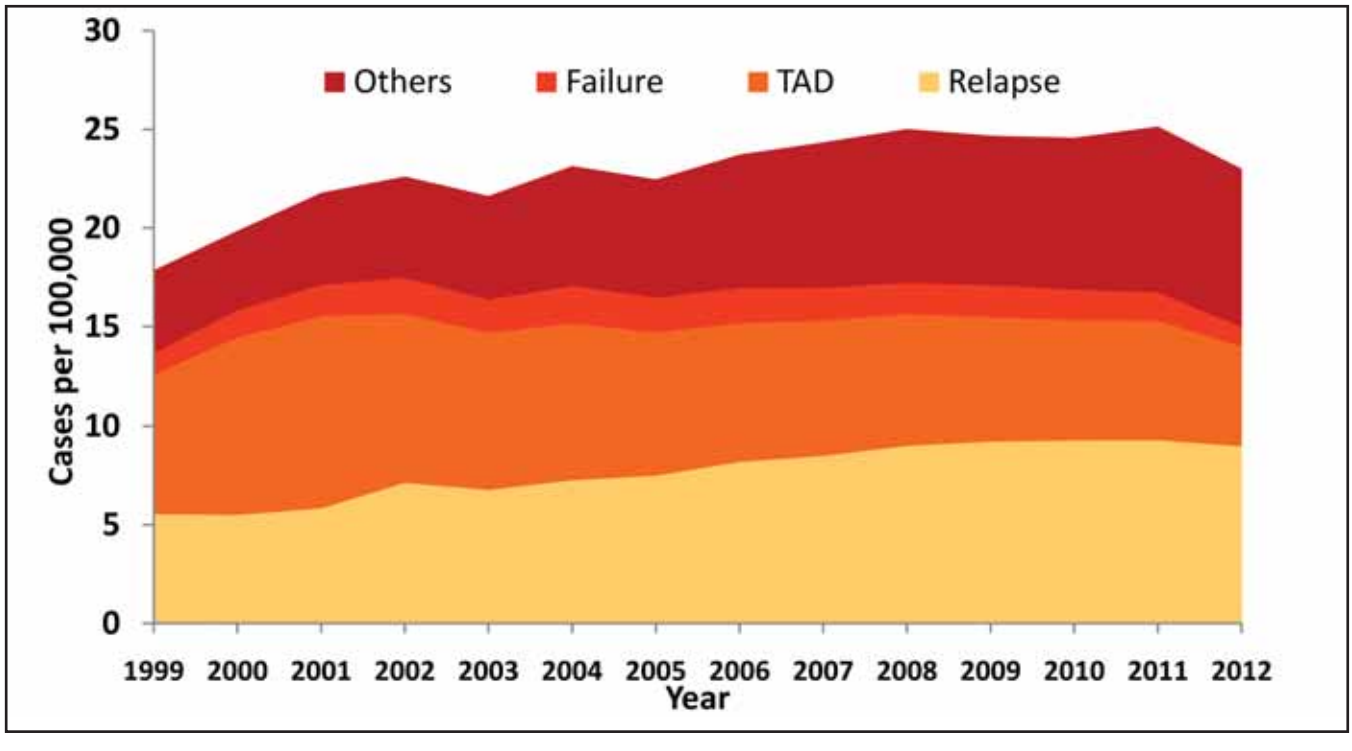


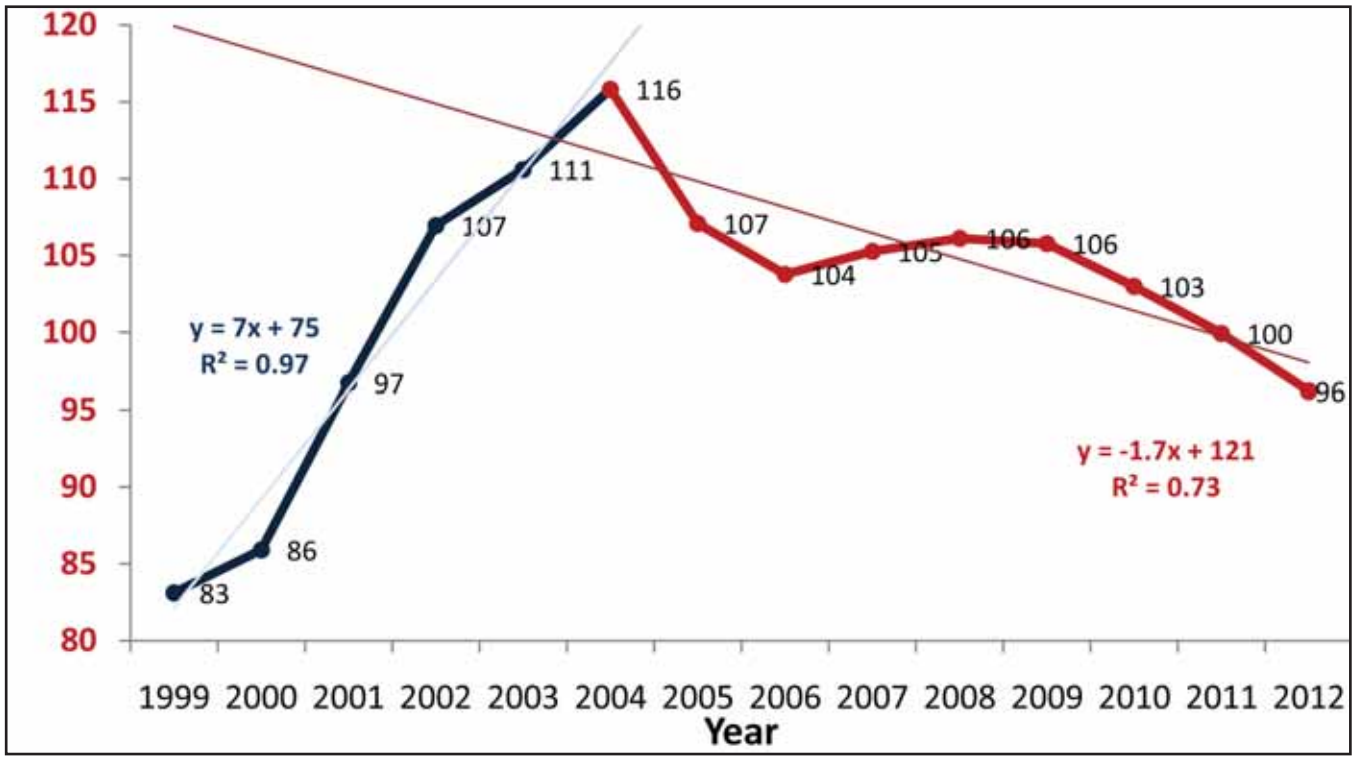
Figure 4: Trends in Type of re-treatment TB case notification rate (1999-2012)



All New (incident) TB Case Notification

The number and rate of all new (incident) cases notified in the country has steadily increased at the rate of 7% annually for several years initially in the implementation of the programme starting from 83 per 100,000 population in 1999 to 116 per 100,000 population in 2004, with almost 40% increase in half a decade (Figure 5). The decline began after complete coverage in the country, and the all new (incident) TB case notification rate has decreased from 116 per 100,000 population in 2004 to 96 per 100,000 population in year 2012 showing a decline of 20%, almost 2% annually.

Figure 5: Trend in incident TB case notification rate (1999-2012)



Treatment Outcomes of Notified TB Cases

Treatment outcomes of pulmonary sputum-positive cases notified under RNTCP is summarized in Table 3. Among NSP cases, the treatment success rate has been > 85% since the year 2001. The death rate and failure rate has been about 5% and 2% respectively. The default rates has decreased from 9% for the cohort of TB patients registered in 1999 to 5% for the cohort of patients registered in 2011. Among smear positive re-treatment cases the treatment success rate has been > 68% since implementation. The death rate has shown increase from 7% to 8%, failure rate about 6%. High default rates > 15% has been an area of concern among the re-treatment cases. The treatment success rate has been relatively less favorable among re-treatment TAD cases and failure cases (Table 4) when compared to the treatment success rate among other smear positive TB cases (NSP and relapse).

Death rates among re-treatment cases have been higher when compared to the death rates among new smear positive TB cases (Table 3 and Table 4). Among re-treatment cases, the death rates among failure cases has been consistently higher by about 1-2% when compared to the death rates among other types of re-treatment cases.

Table 3: Treatment outcomes among notified new TB cases, 1999–2011

Year	New smear positive				New smear negative				New Extra Pulmonary			
	Success	Death	Failure	Default	Success	Death	Failure	Default	Success	Death	Failure	Default
1999	82%	5%	3%	9%	85%	4%	1%	9%	91%	2%	0%	6%
2000	84%	4%	3%	8%	86%	3%	1%	9%	91%	2%	0%	7%
2001	85%	5%	3%	7%	86%	4%	1%	8%	91%	2%	0%	6%
2002	87%	4%	3%	6%	87%	4%	1%	7%	92%	2%	0%	5%
2003	86%	5%	2%	6%	87%	4%	1%	7%	92%	2%	0%	5%
2004	86%	4%	2%	7%	87%	4%	1%	8%	92%	2%	0%	5%
2005	86%	5%	2%	7%	87%	4%	1%	8%	91%	2%	0%	6%
2006	86%	5%	2%	6%	87%	4%	1%	8%	90%	3%	0%	5%
2007	87%	5%	2%	6%	87%	3%	1%	8%	91%	2%	0%	5%
2008	87%	4%	2%	6%	88%	3%	1%	7%	92%	3%	0%	4%
2009	87%	4%	2%	6%	88%	3%	1%	7%	92%	2%	0%	4%
2010	88%	4%	2%	6%	89%	3%	1%	7%	93%	3%	0%	4%
2011	88%	4%	2%	5%	89%	3%	0%	7%	93%	2%	0%	4%

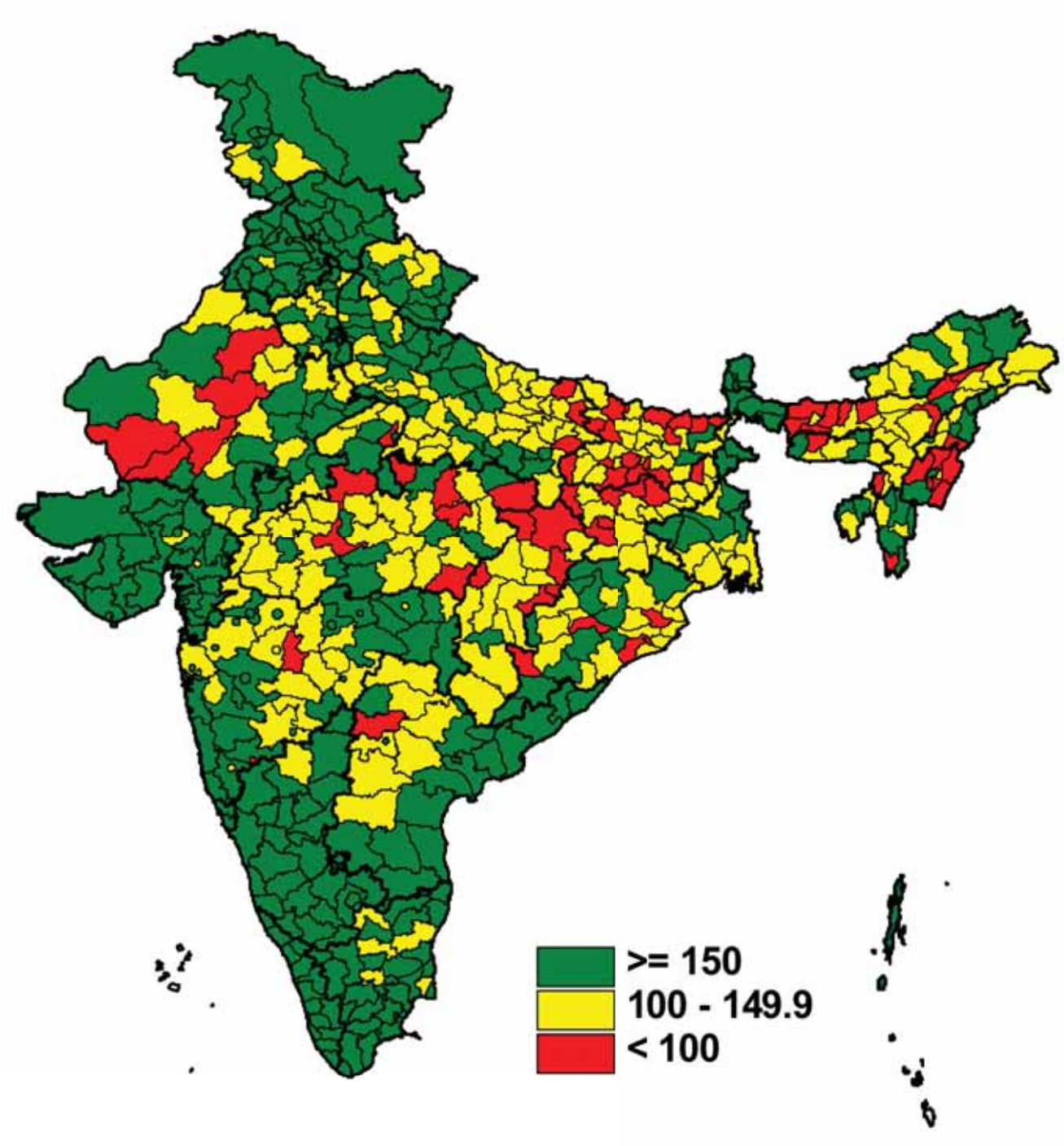
The year shown is the year of registration

Table 4: Treatment outcomes among notified smear-positive re-treatment TB cases, 1999–2011

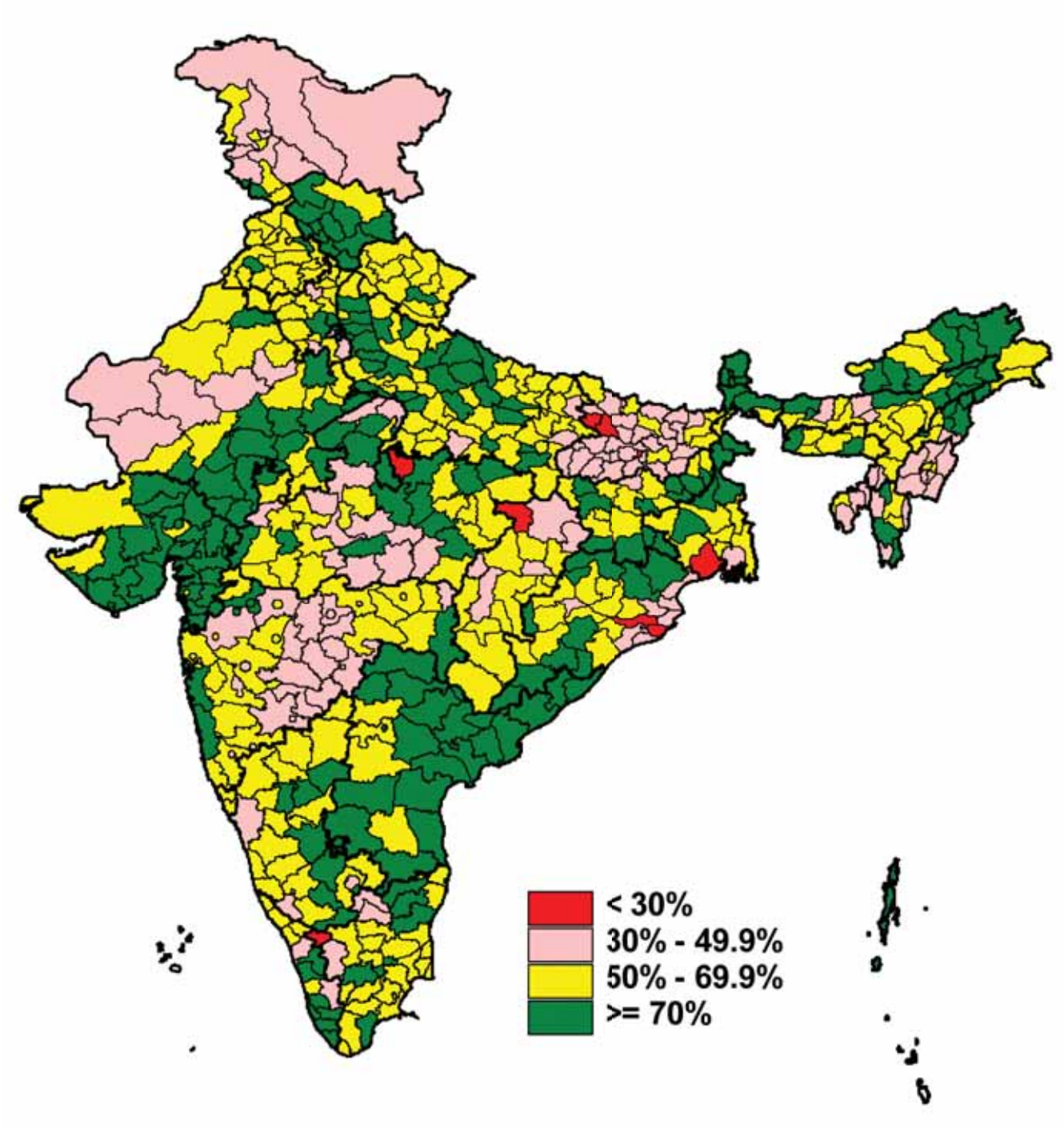
Year	Relapse				Failure				Treatment After Default				Total Smear positive Re-treatment			
	Success	Death	Failure	Default	Success	Death	Failure	Default	Success	Death	Failure	Default	Success	Death	Failure	Default
1999	73%	7%	6%	13%	61%	7%	13%	17%	65%	7%	6%	21%	68%	7%	6%	18%
2000	73%	7%	6%	14%	57%	9%	14%	19%	69%	7%	5%	17%	69%	7%	6%	16%
2001	74%	7%	6%	12%	59%	9%	15%	16%	71%	7%	5%	16%	71%	7%	6%	15%
2002	75%	7%	6%	12%	60%	8%	15%	16%	71%	7%	5%	16%	72%	7%	6%	14%
2003	75%	7%	5%	12%	60%	9%	14%	16%	69%	8%	5%	18%	70%	8%	6%	15%
2004	74%	7%	5%	13%	62%	8%	13%	16%	69%	7%	4%	18%	71%	7%	6%	16%
2005	73%	7%	5%	14%	59%	8%	14%	18%	67%	8%	4%	20%	69%	7%	6%	17%
2006	73%	7%	5%	14%	58%	9%	14%	18%	66%	8%	4%	19%	69%	8%	6%	16%
2007	74%	7%	4%	12%	60%	9%	13%	16%	68%	8%	4%	18%	70%	8%	5%	15%
2008	75%	7%	5%	12%	59%	9%	14%	16%	68%	8%	4%	17%	71%	8%	5%	14%
2009	75%	7%	5%	12%	58%	10%	16%	15%	68%	8%	4%	17%	71%	8%	6%	14%
2010	75%	7%	5%	12%	57%	10%	15%	16%	68%	8%	4%	18%	71%	8%	5%	14%
2011	75%	7%	5%	11%	55%	10%	15%	16%	68%	8%	4%	17%	71%	8%	5%	14%

The year shown is the year of registration

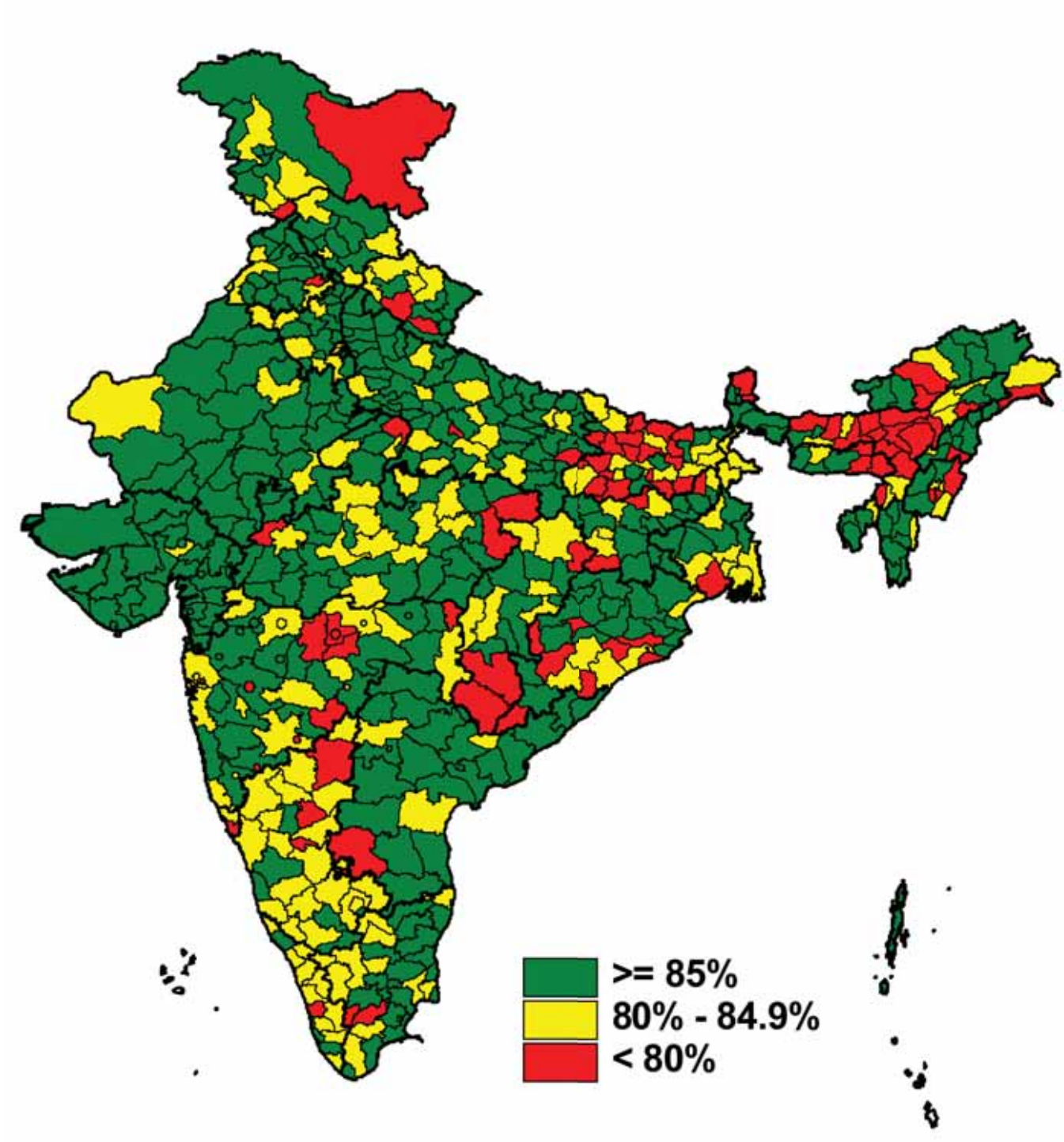
TB Suspects examined per 100,000 Population per Quarter, by Districts, India 2012



Annual New Smear Positive Case Detection rate by District, India 2012



Cure Rate of New Smear Positive Cases by District, India 2011



State and District wise Annualized Performance 2012

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012)

State	Population (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous	Annual smear positive case notification rate (reported by RNTCP DMCs)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) * 4 / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate
Andaman & Nicobar	3.8	4084	268	-11%	349	12	-6%	92	88	844	222	70	56	59	36
Andhra Pradesh	853	551137	162	-3%	77230	7	-2%	91	74	108727	128	59	27	17	25
Arunachal Pradesh	14	10808	191	-1%	1231	9	16%	87	74	2357	167	57	38	31	40
Assam	316	137110	108	-6%	21901	6	-3%	69	59	35788	113	49	27	16	21
Bihar	1061	438271	103	7%	45836	10	11%	43	38	73537	69	31	19	5	14
Chandigarh	11	19579	458	10%	2458	8	7%	230	121	2807	263	92	31	89	51
Chhattisgarh	260	118727	114	6%	13535	9	5%	52	48	27160	104	42	37	13	12
Dadar & Nagar Haveli	3.6	2710	190	-2%	357	8	-15%	100	62	415	116	43	24	19	30
Daman & Diu	2.5	3139	311	-1%	214	15	4%	85	39	330	131	30	43	17	40
Delhi	170	167680	246	0%	24523	7	0%	144	118	52006	306	82	50	103	70
Goa	15	15300	261	2%	1284	12	3%	88	64	1950	133	48	17	38	29
Gujarat	614	435019	177	0%	58906	7	3%	96	79	72554	118	58	12	16	31
Haryana	258	177159	172	-4%	25088	7	-2%	97	80	38036	147	54	25	28	40
Himachal Pradesh	69	74401	269	4%	8043	9	1%	116	102	13615	197	73	31	47	45
Jammu & Kashmir	128	92423	181	-8%	8246	11	3%	64	59	12662	99	47	14	22	17
Jharkhand	337	154965	115	-3%	22364	7	3%	66	61	36666	109	53	31	7	17
Karnataka	619	506483	204	-5%	45579	11	-2%	74	58	67572	109	45	22	20	22
Kerala	335	368524	275	6%	15182	24	3%	45	39	25917	77	33	16	18	10
Lakshadweep	0.6	1130	437	18%	11	103	8%	17	19	20	31	17	2	9	3
Madhya Pradesh	739	432680	146	8%	53655	8	12%	73	62	89545	121	49	36	15	21
Maharashtra	1139	762225	167	6%	76171	10	5%	67	58	136045	119	45	25	22	27
Manipur	28	11996	108	-10%	1183	10	5%	43	39	2744	99	31	30	22	16
Meghalaya	30	24500	202	6%	2619	9	8%	86	69	5114	168	52	31	45	38
Mizoram	11	8324	188	-4%	777	11	-7%	70	65	2337	211	51	51	72	36
Nagaland	20	14926	187	2%	1755	9	11%	88	80	3525	177	60	39	38	39
Orissa	424	226305	133	5%	29728	8	3%	70	61	49191	116	52	25	22	16
Pondicherry	13	22829	449	-1%	2690	8	1%	211	63	1430	112	50	15	28	19
Punjab	280	200211	179	9%	24432	8	6%	87	77	39569	141	56	23	31	31
Rajasthan	699	408593	146	-5%	67378	6	6%	96	78	100966	145	57	37	22	29
Sikkim	6.1	7574	309	9%	782	10	-1%	127	115	1832	299	81	56	90	72
Tamil Nadu	732	606788	207	-12%	48775	12	-17%	67	58	79576	109	46	26	20	17
Tripura	37	21176	143	2%	1798	12	11%	49	44	2557	69	38	11	12	9
Uttar Pradesh	2032	1215516	150	-6%	178274	7	2%	88	80	271678	134	64	30	16	24
Uttarakhand	103	72125	175	-1%	10492	7	-1%	102	77	15239	148	54	31	28	35
West Bengal	923	552777	150	-7%	61059	9	-1%	66	59	93274	101	48	15	19	19
Grand Total	**12285**	**7867194**	**160**	**-2%**	**933905**	**8**	**2%**	**76**	65	**1467585**	**119**	**51**	**26**	**19**	**23**

Estimated New Smear Positive cases / lakh population based on ARTI data for North Zone (Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Uttar Pradesh, Uttarakhand) is 95; East Zone (Andaman & Nicobar, Arunachal Pradesh, Assam, Bihar, Jharkhand, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, West Bengal) is 75; South Zone (Andhra Pradesh, Karnataka, Lakshdweep, Puducherry, Tamil Nadu) is 75 and West Zone (Chhattisgarh, Dadra & Nagar Haveli, Daman & Diu, Goa, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan) is 80; Orissa is 85, Kerala is 50

1 Projected population based on census population of 2011 is used for calculation of case-detection rate. 1 lakh = 100,000 population

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

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

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012)

State	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients	3 month conversion rate of retreatment patients	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer		Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)
Andaman & Nicobar	22	51	7%	89%	74%	336	95%	307	87%	268	92%	242	29%	48%	1%	0%		
Andhra Pradesh	17	4039	5%	91%	74%	58840	91%	63331	97%	46056	84%	90879	84%	88%	10%	8%	94%	66%
Arunachal Pradesh	21	291	16%	87%	70%	1024	94%	1083	99%	891	92%	755	32%	61%	0%	0%		
Assam	11	1357	5%	87%	67%	16730	88%	18089	95%	11323	78%	12331	34%	31%	1%	0%	61%	78%
Bihar	7	4553	8%	86%	71%	35162	86%	39761	98%	24209	78%	54885	75%	21%	4%	0%	29%	58%
Chandigarh	35	220	10%	88%	74%	1223	90%	1335	99%	982	94%	401	14%	95%	1%	1%	88%	63%
Chhattisgarh	6	1254	5%	89%	71%	11093	88%	11879	95%	7611	81%	14349	53%	31%	2%	0%	0%	16%
Dadar & Nagar Haveli	20	16	5%	91%	67%	209	94%	216	97%	154	90%	61	15%	60%	2%	0%	0%	0%
Daman & Diu	11	10	4%	80%	72%	82	80%	103	100%	70	73%	100	30%	83%	2%	2%	100%	100%
Delhi	39	5622	14%	89%	71%	18633	91%	20428	99%	15395	94%	3967	8%	73%	2%	1%	68%	84%
Goa	18	120	8%	87%	69%	850	88%	900	93%	736	97%	320	16%	96%	5%	4%	100%	83%
Gujarat	21	2989	6%	91%	70%	44970	92%	47686	97%	37071	91%	42139	58%	92%	5%	4%	98%	83%
Haryana	29	1682	6%	90%	74%	18947	89%	20149	94%	14357	86%	12604	33%	66%	1%	0%	80%	60%
Himachal Pradesh	32	635	6%	92%	80%	7021	97%	7075	97%	5170	91%	2808	21%	56%	1%	0%	84%	72%
Jammu & Kashmir	14	779	7%	90%	75%	7495	96%	7577	98%	6496	91%	1230	10%	18%	1%	0%	33%	44%
Jharkhand	9	1626	5%	91%	79%	18207	87%	20606	99%	13190	73%	26462	72%	34%	2%	0%	7%	83%
Karnataka	15	4925	9%	88%	62%	32148	87%	35605	96%	23201	81%	35167	52%	94%	13%	10%	99%	83%
Kerala	7	2973	13%	83%	66%	12045	88%	12557	92%	7884	77%	16294	63%	82%	2%	1%	83%	95%
Lakshadweep	2	2	11%	86%	100%	12	100%	12	100%	15	136%	5	25%	0%		0%		
Madhya Pradesh	14	8680	12%	91%	72%	41482	89%	44870	96%	29800	78%	54039	60%	41%	1%	0%	12%	82%
Maharashtra	14	7386	7%	90%	64%	59667	88%	65322	97%	44242	83%	49508	36%	80%	10%	7%	98%	74%
Manipur	9	168	7%	87%	73%	1040	95%	1022	93%	821	81%	1653	60%	60%	10%	5%	71%	52%
Meghalaya	22	593	15%	84%	61%	2067	91%	2152	95%	1379	84%	2967	58%	17%	1%	0%	50%	33%
Mizoram	16	294	15%	92%	68%	735	99%	736	99%	520	92%	411	18%	73%	13%	6%	91%	37%
Nagaland	23	383	14%	90%	74%	1367	82%	1465	88%	1149	78%	1728	49%	70%	8%	4%	91%	58%
Orissa	10	2337	6%	89%	69%	21781	83%	25832	98%	14864	73%	37409	76%	44%	3%	0%	54%	55%
Pondicherry	16	87	7%	89%	83%	669	80%	725	86%	678	95%	0	0%	96%	2%	2%	100%	100%
Punjab	23	1888	6%	90%	75%	20893	94%	21968	99%	16376	93%	12115	31%	83%	1%	1%	86%	78%
Rajasthan	22	4078	5%	91%	76%	46140	83%	53164	96%	41241	81%	14824	15%	35%	1%	0%	60%	67%
Sikkim	44	137	10%	84%	63%	701	92%	730	96%	499	93%	721	39%	27%	1%	0%		
Tamil Nadu	13	4132	6%	90%	70%	35859	83%	41635	97%	26981	82%	21300	27%	88%	7%	5%	86%	70%
Tripura	7	50	2%	89%	72%	1359	83%	1607	98%	1214	80%	1100	43%	58%	1%	1%	87%	93%
Uttar Pradesh	17	13693	6%	91%	78%	145693	89%	160400	98%	120411	83%	191222	70%	28%	1%	0%	18%	52%
Uttarakhand	25	839	7%	89%	74%	7337	90%	7897	97%	5160	85%	9061	59%	54%	1%	0%	83%	76%
West Bengal	13	3600	5%	88%	66%	45320	81%	53088	95%	38706	84%	22765	24%	54%	2%	1%	88%	79%
Grand Total	**15**	**81489**	**7%**	**90%**	**72%**	**717137**	**88%**	**791312**	**97%**	**559120**	**83%**	**735822**	**50%**	**56%**	**5%**	**2%**	**92%**	**74%**

Estimated New Smear Positive cases / lakh population based on ARTI data for North Zone (Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Uttar Pradesh, Uttarakhand) is 95; East Zone (Andaman & Nicobar, Arunachal Pradesh, Assam, Bihar, Jharkhand, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, West Bengal) is 75; South Zone (Andhra Pradesh, Karnataka, Lakshdweep, Puducherry, Tamil Nadu) is 75 and West Zone (Chhattisgarh, Dadra & Nagar Haveli, Daman & Diu, Goa, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan) is 80; Orissa is 85, Kerala is 50

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

Composite Indicators of Performance

State	Human Resource		Financial Management		Drugs & Logistics		Case Finding Efforts		Quality of Services		Composite Score	
	Absolute Score	Score in Percentage	Absolute Score	Score in Percentage	Absolute Score	Score in Percentage	Absolute Score	Score in Percentage	Absolute Score	Score in Percentage	Absolute Score	Score in Percentage
Andaman & Nicobar	0	0%	0	0%	0	0%	0	0%	51	44%	43	17%
Andhra Pradesh	48	74%	15	77%	13	63%	13	44%	77	67%	166	66%
Arunachal Pradesh	42	65%	18	88%	17	85%	11	36%	70	60%	161	64%
Assam	49	75%	18	91%	12	61%	6	19%	56	48%	143	57%
Bihar	36	55%	10	49%	8	42%	2	7%	68	59%	124	50%
Chandigarh	56	87%	20	100%	20	100%	10	33%	79	69%	185	74%
Chhattisgarh	42	64%	10	50%	14	68%	6	20%	63	55%	137	55%
Dadar & Nagar Haveli	50	77%	10	50%	16	80%	10	33%	38	33%	124	50%
Daman & Diu	46	71%	20	100%	20	100%	19	62%	50	43%	154	62%
Delhi	43	66%	16	81%	16	79%	17	57%	61	53%	157	63%
Goa	52	81%	10	50%	16	80%	10	33%	66	57%	154	62%
Gujarat	49	75%	20	100%	16	80%	15	52%	69	60%	170	68%
Haryana	48	74%	19	93%	12	61%	8	27%	60	52%	147	59%
Himachal Pradesh	48	73%	20	100%	17	83%	10	34%	72	62%	166	67%
Jammu & Kashmir	47	72%	18	89%	16	80%	8	27%	62	54%	151	60%
Jharkhand	45	69%	13	67%	17	83%	6	20%	69	60%	150	60%
Karnataka	53	81%	14	68%	13	65%	8	28%	57	50%	145	58%
Kerala	48	74%	18	89%	17	84%	14	48%	70	61%	167	67%
Lakshadweep	28	43%	20	100%	20	100%	0	0%	68	59%	136	54%
Madhya Pradesh	48	73%	12	62%	12	59%	9	32%	65	56%	147	59%
Maharashtra	35	54%	16	79%	13	64%	12	39%	74	64%	164	66%
Manipur	42	65%	1	6%	11	56%	4	14%	71	62%	129	52%
Meghalaya	50	76%	19	93%	18	89%	8	27%	60	52%	154	62%
Mizoram	55	85%	19	94%	14	70%	11	37%	76	66%	175	70%
Nagaland	50	77%	17	86%	14	69%	8	26%	76	66%	166	66%
Orissa	48	73%	15	73%	10	49%	6	20%	63	55%	142	57%
Pondicherry	55	85%	20	100%	20	100%	20	67%	57	49%	172	69%
Punjab	50	77%	10	48%	17	84%	10	34%	69	60%	155	62%
Rajasthan	43	66%	18	91%	14	71%	13	42%	57	50%	148	59%
Sikkim	54	83%	20	100%	19	95%	11	35%	72	63%	176	70%
Tamil Nadu	47	72%	18	89%	13	65%	12	41%	60	52%	150	60%
Tripura	50	77%	15	75%	14	70%	3	8%	69	60%	151	60%
Uttar Pradesh	40	62%	5	27%	13	63%	4	13%	65	56%	129	51%
Uttarakhand	46	70%	14	69%	13	66%	13	42%	54	47%	139	56%
West Bengal	48	75%	18	89%	13	64%	8	27%	65	56%	152	61%
National Average	**44**	**68%**	**14**	**71%**	**13**	**67%**	**9**	**30%**	**65**	**57%**	**149**	**59%**

Human Resource Score out of 65; Financial Mangement Score out of 20;Drugs & Logistics Score out of 20; Case Finding Efforts out of 30; Quality of Service Score out of 115

Composite Score is out of 250 which is sum of (Human Resource)+(Financial Management)+(Drugs&Logistics)+(Case Finding Efforts)+(Quality of Service)

Treatment Outcome of New cases for 2011

Implementing states	New Smear Positive[1]								New Smear Negative[2]							New Extra Pulmonary[2]						
	Regist-ered	Cure	Comp-leted	Died	Failure	Defaulted	Trans out	Switched to Cat IV	Regist-ered	Comp-leted	Died	Failure	Defaulted	Trans out	Switched to Cat IV	Regist-ered	Comp-leted	Died	Failure	Defaulted	Trans out	Switched to Cat IV
Andaman & Nicobar	268	85%	1%	4%	4%	3%	1%	0%	246	91%	4%	0%	4%	2%	0%	266	89%	4%	0%	5%	1%	0%
Andhra Pradesh	50426	87%	2%	4%	2%	4%	0%	0%	25135	91%	4%	0%	4%	0%	0%	13659	94%	3%	0%	3%	1%	0%
Arunachal Pradesh	850	85%	2%	3%	3%	6%	0%	0%	461	87%	3%	0%	8%	2%	0%	384	94%	1%	0%	5%	0%	0%
Assam	15878	79%	4%	4%	2%	9%	1%	0%	9740	82%	3%	0%	14%	1%	0%	5139	89%	2%	0%	8%	1%	0%
Bihar	33480	78%	10%	3%	1%	7%	1%	0%	21917	90%	2%	0%	7%	1%	0%	4958	90%	2%	0%	4%	5%	0%
Chandigarh	893	87%	0%	3%	5%	2%	3%	0%	249	96%	0%	0%	1%	2%	0%	880	97%	1%	0%	1%	1%	0%
Chhattisgarh	10295	82%	7%	4%	1%	8%	0%	0%	9879	86%	4%	0%	10%	1%	0%	3558	94%	2%	0%	3%	1%	0%
Dadar & Nagar Haveli	168	81%	1%	6%	1%	11%	1%	0%	80	78%	5%	0%	18%	0%	0%	82	94%	1%	0%	4%	1%	0%
Daman & Diu	87	90%	0%	6%	0%	3%	1%	0%	109	78%	6%	0%	17%	0%	0%	45	98%	2%	0%	0%	0%	0%
Delhi	13768	85%	0%	3%	4%	5%	2%	1%	8955	92%	2%	1%	4%	1%	0%	16945	97%	1%	0%	2%	1%	0%
Goa	718	82%	1%	5%	5%	5%	1%	0%	288	92%	5%	0%	2%	0%	0%	550	96%	3%	0%	1%	0%	0%
Gujarat	35539	88%	0%	5%	2%	5%	1%	0%	7864	89%	5%	1%	5%	0%	0%	9725	93%	3%	0%	4%	1%	0%
Haryana	13804	85%	1%	4%	3%	6%	1%	0%	6837	88%	3%	1%	8%	0%	0%	6766	94%	1%	0%	4%	0%	0%
Himachal Pradesh	4748	88%	2%	4%	3%	4%	0%	0%	2214	91%	3%	1%	4%	0%	0%	3259	93%	4%	0%	2%	1%	0%
Jammu & Kashmir	6764	86%	3%	3%	2%	3%	3%	0%	1771	89%	2%	0%	5%	3%	0%	2609	91%	2%	0%	4%	3%	0%
Jharkhand	18294	86%	5%	3%	1%	4%	0%	0%	10965	89%	2%	0%	7%	2%	0%	2528	94%	2%	0%	4%	0%	0%
Karnataka	28767	82%	1%	6%	3%	7%	1%	0%	14861	85%	6%	0%	7%	1%	0%	12704	88%	5%	0%	5%	2%	0%
Kerala	10747	82%	2%	5%	5%	5%	1%	0%	6061	92%	3%	0%	4%	1%	0%	6021	91%	3%	0%	5%	1%	0%
Lakshadweep	8	100%	0%	0%	0%	0%	0%	0%	0							4	100%	0%	0%	0%	0%	0%
Madhya Pradesh	36114	86%	3%	4%	2%	5%	1%	0%	27446	90%	2%	0%	7%	1%	0%	9697	93%	2%	0%	4%	2%	0%
Maharashtra	52212	85%	1%	6%	2%	5%	1%	0%	28939	87%	5%	0%	7%	1%	0%	23764	92%	3%	0%	4%	1%	0%
Manipur	1050	82%	2%	4%	3%	10%	0%	0%	819	89%	2%	1%	8%	0%	0%	677	94%	1%	0%	4%	0%	0%
Meghalaya	1663	80%	3%	4%	5%	7%	1%	0%	1132	90%	2%	0%	7%	1%	0%	1208	90%	2%	0%	5%	2%	0%
Mizoram	445	98%	1%	4%	5%	3%	0%	0%	537	103%	4%	0%	4%	0%	0%	692	102%	3%	0%	3%	0%	0%
Nagaland	1279	89%	2%	2%	3%	4%	1%	0%	798	93%	2%	0%	5%	0%	0%	799	95%	1%	1%	3%	0%	0%
Orissa	21617	83%	4%	5%	1%	6%	1%	0%	11565	86%	5%	0%	7%	1%	0%	8732	91%	4%	0%	5%	1%	0%
Pondicherry	649	85%	0%	6%	4%	6%	0%	0%	286	93%	5%	0%	2%	0%	0%	364	96%	1%	0%	2%	0%	0%
Punjab	15626	86%	2%	4%	2%	4%	2%	0%	6846	89%	4%	1%	5%	2%	0%	8215	95%	2%	0%	2%	1%	0%
Rajasthan	42932	87%	2%	4%	2%	5%	0%	0%	27773	90%	3%	0%	6%	0%	0%	14766	94%	2%	0%	4%	0%	0%
Sikkim	474	84%	0%	3%	9%	2%	1%	1%	345	88%	5%	5%	1%	1%	0%	435	96%	2%	0%	1%	1%	0%
Tamil Nadu	32058	85%	1%	5%	2%	7%	0%	0%	20023	92%	4%	0%	4%	0%	0%	15260	96%	2%	0%	2%	0%	0%
Tripura	1540	86%	1%	4%	2%	5%	1%	0%	477	88%	7%	0%	5%	0%	0%	436	91%	5%	0%	4%	1%	0%
Uttar Pradesh	136681	86%	4%	3%	1%	5%	1%	0%	63853	90%	2%	0%	7%	1%	0%	32288	94%	1%	0%	4%	1%	0%
Uttarakhand	5430	83%	3%	3%	2%	7%	1%	0%	3222	87%	2%	0%	8%	2%	0%	2364	92%	2%	0%	5%	1%	0%
West Bengal	46206	84%	2%	4%	3%	7%	1%	0%	17829	86%	5%	1%	7%	1%	0%	16577	90%	4%	0%	5%	1%	0%
Grand Total	**641478**	**85%**	**3%**	**4%**	**2%**	**5%**	**1%**	**0%**	**339522**	**89%**	**3%**	**0%**	**7%**	**1%**	**0%**	**226356**	**93%**	**2%**	**0%**	**4%**	**1%**	**0%**

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

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

Outcome of Smear Positive Retreatment cases for India 2011 (excluding "Others")

Outcome of Smear Positive Retreatment cases for India
Fourth quarter 2011 (excluding "Others")

Type of retreatment case	No. registered	Cured	Success	Died	Failure	Defaulted	Transferred out	Switched to Cat IV
Relapse	112209	69%	75%	7%	5%	11%	1%	1%
Failure	17283	48%	55%	10%	15%	16%	1%	3%
Treatment after default	72449	59%	68%	8%	4%	17%	3%	1%
Total	**201941**	**64%**	**71%**	**8%**	**5%**	**14%**	**2%**	**1%**

State-wise outcome of Smear Positive Retreatment cases Fourth quarter 2011 (excluding "Others")

Implementing states	Relapse								Failure								TAD							
	No. registered	Cured	Success	Died	Failure	Defaulted	Transferred out	Switched to Cat IV	No. registered	Cured	Success	Died	Failure	Defaulted	Transferred out	Switched to Cat IV	No. registered	Cured	Success	Died	Failure	Defaulted	Transferred out	Switched to Cat IV
Andaman & Nicobar	62	79%	81%	5%	8%	6%	0%	0%	18	39%	39%	28%	28%	6%	0%	0%	15	40%	60%	13%	7%	13%	7%	0%
Andhra Pradesh	8245	73%	77%	8%	6%	8%	0%	1%	1678	51%	58%	11%	16%	11%	1%	3%	6239	65%	72%	9%	6%	11%	1%	1%
Arunachal Pradesh	202	79%	82%	1%	7%	6%	2%	0%	40	48%	48%	10%	25%	10%	3%	3%	98	70%	79%	6%	8%	4%	1%	2%
Assam	2021	57%	68%	7%	4%	19%	1%	0%	440	36%	46%	10%	16%	25%	2%	2%	1341	47%	58%	9%	4%	24%	4%	0%
Bihar	2804	67%	80%	5%	4%	10%	1%	0%	515	46%	61%	7%	12%	19%	1%	0%	4493	61%	79%	5%	3%	12%	1%	0%
Chandigarh	246	79%	79%	4%	7%	7%	4%	0%	39	59%	59%	5%	21%	8%	5%	3%	87	60%	60%	9%	15%	9%	7%	0%
Chhattisgarh	858	67%	82%	6%	3%	18%	0%	0%	137	44%	61%	9%	7%	20%	1%	1%	608	51%	68%	8%	2%	23%	2%	0%
Dadar & Nagar Haveli	28	79%	79%	7%	4%	4%	7%	0%	6	50%	50%	0%	17%	33%	0%	0%	23	43%	48%	13%	0%	35%	0%	4%
Daman & Diu	20	75%	75%	0%	0%	20%	0%	5%	3	33%	33%	33%	33%	0%	0%	0%	3	67%	67%	0%	33%	0%	0%	0%
Delhi	4119	73%	74%	6%	5%	8%	2%	4%	695	50%	51%	7%	9%	10%	4%	16%	2077	66%	67%	8%	4%	14%	3%	4%
Goa	150	73%	74%	7%	10%	7%	0%	1%	37	59%	59%	5%	8%	11%	3%	11%	87	47%	48%	13%	3%	30%	3%	1%
Gujarat	8679	68%	69%	9%	6%	13%	1%	1%	797	45%	45%	13%	15%	20%	1%	5%	5785	61%	62%	10%	5%	20%	2%	2%
Haryana	4389	69%	75%	6%	5%	13%	0%	0%	749	52%	59%	6%	13%	20%	1%	1%	2372	61%	71%	7%	4%	17%	1%	0%
Himachal Pradesh	1683	76%	83%	7%	5%	5%	0%	0%	218	55%	59%	9%	21%	9%	1%	0%	240	53%	67%	9%	6%	17%	1%	0%
Jammu & Kashmir	1304	76%	82%	4%	5%	5%	4%	0%	162	57%	62%	8%	17%	10%	3%	0%	349	60%	66%	8%	5%	14%	7%	0%
Jharkhand	1640	70%	79%	6%	4%	9%	2%	0%	254	50%	60%	8%	12%	14%	4%	2%	1349	69%	78%	5%	3%	11%	3%	0%
Karnataka	4619	63%	67%	10%	7%	15%	1%	0%	1132	42%	45%	13%	19%	20%	1%	1%	3823	47%	51%	13%	6%	25%	4%	0%
Kerala	1113	71%	74%	8%	9%	7%	1%	1%	610	60%	64%	3%	16%	13%	1%	3%	615	47%	54%	9%	7%	26%	3%	1%
Lakshadweep	1	100%	100%	0%	0%	0%	0%	0%	0								4	50%	50%	50%	0%	0%	0%	0%
Madhya Pradesh	5909	67%	77%	7%	4%	11%	2%	0%	1013	46%	59%	9%	13%	16%	1%	2%	4521	55%	68%	8%	3%	17%	3%	0%
Maharashtra	9852	62%	67%	10%	6%	14%	2%	2%	1466	37%	40%	12%	17%	19%	2%	9%	4489	49%	53%	13%	4%	24%	4%	2%
Manipur	122	75%	77%	7%	11%	6%	0%	0%	40	55%	55%	5%	18%	20%	3%	0%	80	56%	69%	4%	13%	15%	0%	0%
Meghalaya	289	67%	70%	9%	8%	11%	1%	0%	153	30%	35%	8%	31%	22%	4%	0%	142	40%	47%	7%	14%	25%	7%	0%
Mizoram	137	77%	85%	5%	2%	9%	1%	3%	24	42%	58%	4%	25%	13%	4%	8%	27	56%	56%	4%	4%	33%	4%	0%
Nagaland	274	66%	84%	3%	7%	6%	0%	0%	80	44%	76%	6%	13%	5%	0%	0%	151	81%	86%	3%	5%	7%	0%	0%
Orissa	2169	61%	75%	7%	3%	14%	1%	0%	341	47%	60%	8%	9%	16%	1%	5%	1764	47%	62%	8%	3%	21%	7%	0%
Pondicherry	120	72%	72%	3%	10%	13%	0%	1%	33	45%	48%	6%	21%	15%	0%	9%	85	71%	71%	15%	6%	8%	0%	0%
Punjab	4774	70%	77%	8%	4%	8%	3%	0%	407	54%	60%	9%	14%	13%	3%	1%	1243	59%	66%	9%	3%	16%	6%	0%
Rajasthan	11413	71%	80%	6%	3%	10%	0%	0%	1234	55%	64%	9%	10%	13%	0%	2%	7348	65%	75%	7%	3%	14%	0%	0%
Sikkim	148	68%	68%	6%	17%	3%	1%	4%	58	26%	26%	9%	33%	12%	0%	21%	25	84%	84%	4%	4%	0%	4%	4%
Tamil Nadu	5063	64%	70%	9%	5%	15%	1%	0%	761	41%	47%	13%	19%	18%	1%	2%	3706	53%	60%	9%	3%	26%	1%	0%
Tripura	181	83%	85%	4%	4%	6%	1%	1%	49	59%	61%	8%	14%	14%	0%	2%	32	47%	47%	9%	3%	38%	3%	0%
Uttar Pradesh	20964	74%	82%	5%	2%	10%	1%	0%	1944	58%	66%	8%	10%	15%	1%	0%	14886	66%	76%	6%	2%	13%	4%	0%
Uttarakhand	1604	66%	74%	5%	5%	12%	3%	0%	143	46%	53%	11%	20%	15%	1%	0%	779	56%	62%	6%	4%	18%	9%	0%
West Bengal	7007	69%	72%	8%	7%	11%	1%	0%	2007	46%	49%	11%	20%	15%	2%	3%	3563	52%	56%	11%	6%	24%	3%	0%
Grand Total	**112209**	**69%**	**75%**	**7%**	**5%**	**11%**	**1%**	**1%**	**17283**	**48%**	**55%**	**10%**	**15%**	**16%**	**1%**	**3%**	**72449**	**59%**	**68%**	**8%**	**4%**	**17%**	**3%**	**1%**

Programme infrastructure,Staffing and Training status in 2012

Implementing states	Total no. of reporting units (Districts / DTC)	Implementing district details		Involvement of Other sectors			Number of key staff in position						In Place and trained in RNTCP	
		No. of TB Units	No. of DMCs	NGO	PP	Medical College	DTO	2nd MO	MO-TC	STS	STLS	LT	MO	Para Staff
Andaman & Nicobar	1	3	13	0	0	0	0	1	3	3	3	34	100%	94%
Andhra Pradesh	24	180	931	109	108	34	18	23	167	173	175	875	73%	79%
Arunachal Pradesh	14	14	34	11	0	0	14	0	6	13	14	38	70%	58%
Assam	24	73	343	25	0	4	23	8	50	69	69	428	82%	67%
Bihar	38	182	730	176	5	7	24	29	158	138	148	665	73%	82%
Chandigarh	1	3	17	6	76	2	1	0	3	3	3	17	100%	100%
Chhattisgarh	18	66	321	16	78	3	18	3	55	63	63	358	86%	87%
Dadar & Nagar Haveli	1	1	5	0	7	0	1	0	1	1	1	5	100%	89%
Daman & Diu	2	2	4	0	3	0	2	1	2	2	2	4	100%	100%
Delhi	26	42	196	69	57	8	24	13	19	46	39	183	91%	66%
Goa	2	4	20	2	69	1	2	0	4	3	4	20	99%	96%
Gujarat	30	144	745	142	4759	14	17	13	138	137	136	694	97%	96%
Haryana	21	50	244	27	42	4	19	9	48	47	49	230	78%	69%
Himachal Pradesh	12	44	179	3	42	2	12	2	34	40	42	171	76%	82%
Jammu & Kashmir	14	42	172	7	8	5	15	13	35	40	42	232	83%	94%
Jharkhand	24	71	294	29	4	2	23	9	54	65	74	423	82%	83%
Karnataka	31	127	643	61	107	40	26	6	124	125	127	639	79%	81%
Kerala	14	73	463	106	34	23	13	9	48	78	70	582	81%	65%
Lakshadweep	1	1	9	3	0	0	1	0	0	1	1	18	50%	100%
Madhya Pradesh	50	154	753	73	150	11	49	10	130	131	143	756	83%	84%
Maharashtra	78	287	1405	299	7269	41	53	57	243	275	271	1328	71%	84%
Manipur	9	13	54	78	11	2	9	6	4	13	17	60	69%	61%
Meghalaya	7	13	57	22	0	1	6	1	7	12	12	52	90%	69%
Mizoram	8	9	30	194	2	0	8	2	9	8	9	29	70%	92%
Nagaland	11	13	44	39	4	0	11	0	3	14	13	46	82%	58%
Orissa	31	109	549	48	0	5	28	8	98	107	86	480	81%	87%
Pondicherry	1	4	25	3	0	9	1	0	4	4	5	23	71%	94%
Punjab	20	65	284	59	264	12	19	7	53	53	54	276	87%	68%
Rajasthan	34	152	830	136	160	9	33	9	123	143	136	793	85%	80%
Sikkim	4	5	20	2	1	1	4	0	1	5	5	27	94%	93%
Tamil Nadu	31	142	800	96	86	33	24	22	109	138	135	733	82%	93%
Tripura	4	10	55	2	0	2	4	1	8	10	10	63	92%	94%
Uttar Pradesh	74	398	1854	157	92	24	67	40	370	367	351	1941	67%	58%
Uttarakhand	13	30	147	12	7	4	12	4	22	29	29	139	61%	64%
West Bengal	19	206	828	163	46	11	19	9	187	186	190	841	74%	65%
Grand Total	**692**	2732	**13098**	**2175**	**13491**	**314**	**600**	**315**	**2320**	**2542**	**2528**	**13203**	**78%**	**79%**

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Andaman & Nicobar	Andaman †	4	4084	268	-11%	349	12	-6%	92	88	844	222	70	56
Andhra Pradesh	Adilabad †	28	12954	117	4%	2405	5	-2%	87	87	3965	144	71	37
Andhra Pradesh	Anantapur	41	25856	157	-7%	3813	7	-5%	93	67	4746	115	54	25
Andhra Pradesh	Bhadrachalam	8	7836	232	8%	1443	5	-1%	171	153	1906	225	115	46
Andhra Pradesh	Chittoor	42	27218	162	-6%	4278	6	-6%	102	66	4560	109	54	17
Andhra Pradesh	Cuddapah	29	19447	167	-2%	2064	9	1%	71	69	3568	123	50	28
Andhra Pradesh	East Godavari	52	41958	202	-9%	4418	9	-8%	85	73	7563	146	62	40
Andhra Pradesh	Guntur	49	38931	198	-1%	5608	7	3%	114	88	7306	148	68	33
Andhra Pradesh	Hyderabad	40	39791	246	-7%	5894	7	-2%	146	72	6848	170	57	32
Andhra Pradesh	Karimnagar	38	21336	139	-5%	3195	7	-7%	83	71	4207	110	53	22
Andhra Pradesh	Khammamh	20	14211	180	5%	2428	6	8%	123	105	3009	153	80	25
Andhra Pradesh	Krishna	46	27567	151	-4%	3748	7	0%	82	69	5147	113	54	21
Andhra Pradesh	Kurnool	41	23618	145	-1%	3350	7	-8%	82	69	5449	134	53	35
Andhra Pradesh	Mahbubnagar	41	19508	120	1%	2818	7	10%	69	64	4112	101	50	19
Andhra Pradesh	Medak	31	11894	97	-5%	1829	7	-4%	60	62	2828	93	50	13
Andhra Pradesh	Nalgonda	35	15721	112	1%	3150	5	2%	90	73	4000	114	56	20
Andhra Pradesh	Nellore	30	19180	161	-11%	2696	7	-6%	90	70	3471	116	52	25
Andhra Pradesh	Nizamabad	26	20823	203	-4%	1841	11	10%	72	68	2579	100	59	20
Andhra Pradesh	Prakasam	34	20445	150	-3%	2738	7	0%	80	75	4227	124	59	30
Andhra Pradesh	Rangareddi	53	22247	104	6%	3889	6	6%	73	63	6050	113	49	18
Andhra Pradesh	Srikakulam	27	20512	189	5%	2075	10	4%	76	71	3702	136	62	42
Andhra Pradesh	Visakhapatnam	43	32628	189	0%	3920	8	-1%	91	75	5896	137	65	31
Andhra Pradesh	Vizianagaram	24	18533	196	-8%	2308	8	-5%	98	89	3681	156	72	31
Andhra Pradesh	Warangal	35	19983	141	-4%	3604	6	-6%	102	79	4090	115	55	19
Andhra Pradesh	West Godavari	40	28940	183	0%	3718	8	-2%	94	90	5817	147	73	35
Arunachal Pradesh	Changlang #	2	825	137	-28%	69	12	3%	46	60	166	110	48	23
Arunachal Pradesh	Dibang Valley	1	390	154	-16%	52	8	-1%	82	76	66	104	62	14
Arunachal Pradesh	East Kameng †	1	452	141	-16%	71	6	22%	89	91	194	242	60	59
Arunachal Pradesh	East Siang †	1	882	218	6%	80	11	23%	79	75	177	175	57	42
Arunachal Pradesh	Kurung Kumey	1	326	89	294%	18	18	34%	20	32	63	69	24	16

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Andaman & Nicobar	Andaman †	59	36	22	51	7%	89%	74%	87%	69%	336	95%	307	87%	268	92%	242	29%
Andhra Pradesh	Adilabad †	52	23	81	129	4%	92%	70%	90%	74%	2312	92%	2496	99%	1535	87%	3881	98%
Andhra Pradesh	Anantapur	61	21	61	160	4%	86%	67%	82%	63%	2469	87%	2712	96%	1862	80%	4210	89%
Andhra Pradesh	Bhadrachalam	52	52	163	27	2%	85%	67%	89%	77%	1153	87%	1257	95%	484	54%	1302	68%
Andhra Pradesh	Chittoor	73	19	53	112	3%	90%	71%	87%	68%	2623	92%	2805	99%	1866	82%	3874	85%
Andhra Pradesh	Cuddapah	59	30	81	76	3%	92%	69%	91%	77%	1835	90%	1958	96%	1485	84%	3251	91%
Andhra Pradesh	East Godavari	83	23	47	304	5%	93%	80%	92%	79%	3492	92%	3704	97%	3146	91%	6832	90%
Andhra Pradesh	Guntur	67	30	81	156	3%	94%	84%	92%	81%	4097	94%	4340	99%	3662	90%	6197	85%
Andhra Pradesh	Hyderabad	200	30	67	611	11%	92%	73%	89%	68%	2820	95%	2908	98%	2445	93%	3533	52%
Andhra Pradesh	Karimnagar	30	27	85	71	2%	91%	71%	90%	75%	2541	89%	2729	96%	1964	86%	3573	85%
Andhra Pradesh	Khammamh	51	36	119	53	2%	90%	71%	86%	73%	1884	87%	2130	99%	1100	66%	2770	92%
Andhra Pradesh	Krishna	55	24	68	136	3%	91%	70%	90%	72%	2890	89%	3101	96%	2372	82%	1318	26%
Andhra Pradesh	Kurnool	55	31	79	218	5%	90%	75%	85%	66%	2607	88%	2974	100%	1704	72%	5205	96%
Andhra Pradesh	Mahbubnagar	44	21	64	147	4%	89%	76%	85%	71%	2485	92%	2605	97%	1898	80%	3842	93%
Andhra Pradesh	Medak	53	17	55	138	6%	88%	67%	84%	64%	1778	92%	1847	96%	1216	86%	2683	95%
Andhra Pradesh	Nalgonda	64	22	70	120	4%	91%	71%	91%	77%	2260	88%	2411	94%	1664	77%	3681	92%
Andhra Pradesh	Nellore	32	31	81	75	3%	90%	66%	87%	60%	1965	91%	2160	100%	1682	90%	3470	100%
Andhra Pradesh	Nizamabad	29	15	43	70	3%	89%	71%	89%	70%	1649	92%	1739	97%	1488	89%	2498	97%
Andhra Pradesh	Prakasam	29	28	76	109	3%	85%	58%	87%	63%	2245	85%	2618	99%	1829	88%	4227	100%
Andhra Pradesh	Rangareddi	99	21	60	357	7%	91%	76%	88%	75%	3178	93%	3366	98%	2497	90%	5190	86%
Andhra Pradesh	Srikakulam	55	19	39	184	6%	95%	86%	93%	78%	1598	82%	1804	93%	1226	76%	3275	88%
Andhra Pradesh	Visakhapatnam	95	17	46	288	6%	94%	81%	90%	78%	3006	91%	3267	99%	2614	92%	5285	90%
Andhra Pradesh	Vizianagaram	103	28	72	201	7%	93%	86%	91%	77%	1890	89%	2060	97%	1575	81%	3441	93%
Andhra Pradesh	Warangal	40	31	104	83	3%	92%	79%	89%	78%	2631	91%	2775	96%	1919	87%	4090	100%
Andhra Pradesh	West Godavari	50	26	68	214	4%	96%	88%	94%	89%	3432	96%	3565	100%	2823	88%	3251	56%
Arunachal Pradesh	Changlang #	64	23	72	9	7%	88%	87%	84%	79%	81	82%	96	97%	72	85%	111	67%
Arunachal Pradesh	Dibang Valley	38	19	63	4	7%	95%	100%	100%	100%	48	98%	49	100%	63	100%	16	24%
Arunachal Pradesh	East Kameng †	130	91	140	30	25%	81%	55%	91%	69%	76	100%	76	100%	50	96%	7	4%
Arunachal Pradesh	East Siang †	170	34	83	14	10%	94%	76%	90%	72%	77	97%	74	94%	86	96%	58	33%
Arunachal Pradesh	Kurung Kumey	48	16	31	16	33%	86%	91%	100%	0%	21	72%	29	100%	9	100%	6	10%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Andaman & Nicobar	Andaman †	48%	1%	0%			0	0%	0	0%	0	0%	0	0%	51	44%	51	44%
Andhra Pradesh	Adilabad †	85%	5%	2%	99%	57%	39	60%	20	100%	20	100%	5	15%	87	76%	171	68%
Andhra Pradesh	Anantapur	93%	7%	8%	100%	93%	30	47%	20	100%	12	60%	13	44%	64	55%	139	56%
Andhra Pradesh	Bhadrachalam	76%	5%	1%	88%	88%	47	73%	10	50%	12	60%	5	17%	71	62%	145	58%
Andhra Pradesh	Chittoor	83%	11%	8%	99%	91%	53	82%	10	50%	20	100%	16	52%	51	45%	150	60%
Andhra Pradesh	Cuddapah	88%	7%	4%	100%	65%	51	78%	20	100%	0	0%	11	36%	76	66%	157	63%
Andhra Pradesh	East Godavari	86%	18%	14%	87%	49%	52	80%	10	50%	12	60%	12	38%	67	59%	153	61%
Andhra Pradesh	Guntur	87%	14%	11%	100%	72%	58	89%	20	100%	16	80%	10	33%	76	66%	180	72%
Andhra Pradesh	Hyderabad	92%	6%	5%	100%	89%	47	72%	10	50%	12	60%	10	33%	80	69%	159	64%
Andhra Pradesh	Karimnagar	88%	9%	6%	100%	54%	57	87%	20	100%	12	60%	6	20%	74	65%	169	68%
Andhra Pradesh	Khammamh	69%	7%	4%	90%	68%	49	76%	10	50%	12	60%	15	50%	69	60%	155	62%
Andhra Pradesh	Krishna	90%	17%	14%	99%	49%	42	65%	10	50%	12	60%	5	17%	67	58%	136	55%
Andhra Pradesh	Kurnool	93%	10%	6%	99%	70%	55	85%	20	100%	12	60%	5	17%	99	86%	191	76%
Andhra Pradesh	Mahbubnagar	82%	4%	4%	97%	83%	37	57%	20	100%	12	60%	10	33%	86	75%	165	66%
Andhra Pradesh	Medak	96%	10%	6%	93%	89%	53	82%	20	100%	16	80%	26	87%	74	64%	190	76%
Andhra Pradesh	Nalgonda	92%	8%	5%	100%	71%	36	55%	20	100%	8	40%	18	60%	84	73%	166	66%
Andhra Pradesh	Nellore	92%	11%	9%	100%	65%	54	83%	20	100%	12	60%	7	24%	71	62%	164	66%
Andhra Pradesh	Nizamabad	82%	6%	5%	98%	75%	35	54%	10	50%	16	80%	15	50%	79	69%	156	62%
Andhra Pradesh	Prakasam	89%	16%	11%	100%	54%	55	84%	20	100%	8	40%	17	57%	66	58%	166	66%
Andhra Pradesh	Rangareddi	94%	10%	8%	100%	81%	53	82%	10	50%	12	60%	19	64%	71	62%	166	66%
Andhra Pradesh	Srikakulam	79%	9%	9%	99%	23%	55	85%	10	50%	12	60%	17	56%	86	75%	180	72%
Andhra Pradesh	Visakhapatnam	84%	11%	7%	100%	88%	53	82%	20	100%	16	80%	18	61%	94	82%	202	81%
Andhra Pradesh	Vizianagaram	94%	8%	6%	98%	82%	55	84%	10	50%	12	60%	20	67%	81	71%	178	71%
Andhra Pradesh	Warangal	91%	4%	3%	96%	95%	57	87%	20	100%	12	60%	20	67%	79	69%	188	75%
Andhra Pradesh	West Godavari	82%	16%	12%	53%	51%	31	48%	10	50%	16	80%	16	53%	83	72%	155	62%
Arunachal Pradesh	Changlang #	30%	0%	0%			48	75%	20	100%	16	80%	5	17%	74	64%	163	65%
Arunachal Pradesh	Dibang Valley	100%	0%	0%			36	56%	20	100%	16	80%	10	33%	85	74%	167	67%
Arunachal Pradesh	East Kameng †	51%	0%	0%			44	68%	20	100%	12	60%	0	0%	78	68%	154	62%
Arunachal Pradesh	East Siang †	88%	1%	0%			54	83%	20	100%	16	80%	10	33%	73	63%	173	69%
Arunachal Pradesh	Kurung Kumey	95%	0%	0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Arunachal Pradesh	Lohit #	2	856	126	-19%	117	7	11%	69	65	188	111	50	21
Arunachal Pradesh	Lower Subansiri †	1	466	138	-16%	42	11	19%	50	50	104	123	38	31
Arunachal Pradesh	Papum Pare †	2	3497	486	10%	443	8	17%	246	132	676	376	92	106
Arunachal Pradesh	Tawang †	1	331	162	-8%	25	13	31%	49	57	74	145	45	29
Arunachal Pradesh	Tirap # †	1	949	208	0%	97	10	8%	85	85	236	206	71	41
Arunachal Pradesh	Upper Siang †	0	374	260	-4%	31	12	4%	86	83	48	133	75	8
Arunachal Pradesh	Upper Subansiri †	1	548	161	15%	61	9	33%	72	57	104	122	45	27
Arunachal Pradesh	West Kameng †	1	379	107	-21%	60	6	3%	68	66	108	122	57	34
Arunachal Pradesh	West Siang †	1	533	116	25%	65	8	20%	57	68	153	134	52	15
Assam	Barpeta	19	5935	76	-13%	773	8	2%	40	38	1546	80	31	21
Assam	Bongaigaon	11	5762	137	-5%	861	7	-8%	82	63	1009	96	55	16
Assam	Cachar	18	8254	117	-5%	1066	8	0%	61	49	2059	117	43	38
Assam	Darrang	9	3076	84	-44%	386	8	11%	42	38	650	71	31	16
Assam	Dhemaji	7	2440	87	-14%	510	5	-23%	73	71	756	108	57	24
Assam	Dhubri	20	6771	86	-8%	1198	6	-5%	61	56	1982	100	46	26
Assam	Dibrugarh	13	7482	139	-1%	1837	4	-18%	136	96	2521	187	80	23
Assam	Goalpara	10	3863	94	-8%	618	6	-9%	60	56	958	94	48	21
Assam	Golaghat	11	3622	84	-20%	614	6	-13%	57	50	1292	120	43	37
Assam	Hailakandi	7	3117	117	-13%	265	12	12%	40	35	506	76	29	20
Assam	Jorhat	11	7003	158	-3%	851	8	-6%	77	68	1445	131	56	25
Assam	Kamrup	30	15425	130	-2%	2421	6	8%	81	64	3567	120	45	24
Assam	Karbi Anglong †	10	4020	103	-2%	653	6	2%	67	58	1227	125	49	45
Assam	Karimganj	12	4635	94	-7%	535	9	-2%	43	35	975	79	31	22
Assam	Kokrajhar	11	3701	86	-17%	730	5	6%	68	64	1180	109	57	32
Assam	Lakhimpur	11	3086	73	-12%	636	5	-6%	60	56	997	95	48	22
Assam	Marigaon	10	3976	102	-8%	513	8	-10%	53	46	913	94	37	28
Assam	Nagaon	29	11757	103	-10%	1495	8	1%	52	42	2480	87	38	28
Assam	Nalbari	14	4750	87	-1%	637	7	3%	47	47	1192	87	39	22
Assam	North Cachar Hills †	2	1081	125	-14%	142	8	4%	66	58	224	103	42	29
Assam	Sibsagar	12	4964	106	-3%	947	5	-4%	81	77	1709	147	62	24

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Arunachal Pradesh	Lohit #	54	26	64	3	2%	88%	83%	83%	83%	103	92%	112	100%	121	100%	15	8%
Arunachal Pradesh	Lower Subansiri †	90	32	71	26	34%	74%	53%	68%	77%	42	89%	47	100%	40	89%	7	7%
Arunachal Pradesh	Papum Pare †	264	112	196	91	19%	74%	57%	79%	65%	241	95%	254	100%	146	86%	350	52%
Arunachal Pradesh	Tawang †	180	26	55	12	20%	83%	100%	88%	100%	30	100%	30	100%	31	94%	25	34%
Arunachal Pradesh	Tirap # †	248	30	66	32	16%	95%	76%	94%	87%	92	92%	100	100%	81	91%	107	45%
Arunachal Pradesh	Upper Siang †	133	8	33	6	13%	91%	4800%	96%	80%	30	100%	30	100%	25	93%	7	15%
Arunachal Pradesh	Upper Subansiri †	104	25	57	13	16%	90%	69%	84%	81%	46	92%	49	98%	55	100%	18	17%
Arunachal Pradesh	West Kameng †	63	15	36	19	20%	95%	90%	95%	2%	59	100%	59	100%	56	81%	28	26%
Arunachal Pradesh	West Siang †	77	29	63	16	13%	92%	75%	94%	70%	78	100%	78	100%	56	88%	0	0%
Assam	Barpeta	31	20	33	29	2%	85%	64%	81%	62%	611	80%	763	100%	410	66%	83	5%
Assam	Bongaigaon	33	18	47	14	2%	90%	66%	86%	69%	641	92%	649	93%	454	78%	202	20%
Assam	Cachar	95	12	28	88	5%	89%	71%	85%	61%	761	87%	861	98%	516	74%	945	46%
Assam	Darrang	39	13	30	15	3%	88%	62%	81%	62%	319	89%	358	100%	322	66%	307	47%
Assam	Dhemaji	40	18	57	17	3%	88%	67%	87%	62%	455	91%	497	100%	293	83%	304	40%
Assam	Dhubri	18	24	45	48	3%	88%	66%	90%	62%	896	80%	994	88%	499	58%	1255	63%
Assam	Dibrugarh	235	25	73	222	10%	91%	73%	89%	73%	1243	94%	1192	90%	780	87%	727	29%
Assam	Goalpara	34	16	34	35	4%	90%	58%	84%	66%	534	92%	580	100%	421	92%	426	44%
Assam	Golaghat	89	18	31	44	4%	86%	84%	79%	60%	491	89%	516	94%	338	76%	384	30%
Assam	Hailakandi	57	12	28	13	3%	88%	83%	82%	64%	168	70%	241	100%	161	69%	128	25%
Assam	Jorhat	106	24	57	93	8%	474%	1394%	82%	54%	724	94%	774	100%	418	76%	515	36%
Assam	Kamrup	74	33	81	103	4%	86%	68%	81%	54%	1735	89%	1893	98%	1215	85%	849	24%
Assam	Karbi Anglong †	43	20	41	15	1%	86%	61%	80%	60%	540	93%	572	98%	301	67%	468	38%
Assam	Karimganj	49	14	19	31	4%	87%	78%	79%	59%	367	83%	436	99%	262	78%	415	43%
Assam	Kokrajhar	11	18	29	20	2%	84%	67%	81%	62%	583	84%	615	88%	491	76%	445	38%
Assam	Lakhimpur	38	14	34	51	6%	91%	69%	87%	62%	548	92%	592	99%	342	75%	768	77%
Assam	Marigaon	28	22	40	20	3%	79%	61%	75%	54%	390	86%	417	91%	190	75%	130	14%
Assam	Nagaon	36	12	19	53	2%	87%	74%	85%	71%	958	79%	1122	93%	900	85%	473	19%
Assam	Nalbari	38	17	35	17	2%	87%	62%	85%	69%	582	89%	656	100%	341	62%	497	42%
Assam	North Cachar Hills †	17	29	78	7	4%	79%	82%	81%	69%	118	89%	127	96%	39	44%	89	40%
Assam	Sibsagar	133	28	66	105	8%	86%	64%	79%	60%	763	83%	827	90%	463	75%	728	43%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Arunachal Pradesh	Lohit #	85%	1%	0%			39	60%	10	50%	20	100%	7	23%	72	63%	148	59%
Arunachal Pradesh	Lower Subansiri †	50%	0%	0%			53	82%	10	50%	16	80%	30	100%	48	42%	157	63%
Arunachal Pradesh	Papum Pare †	54%	1%	0%			49	76%	20	100%	16	80%	10	33%	41	36%	136	55%
Arunachal Pradesh	Tawang †	84%	0%	0%			31	47%	10	50%	20	100%	5	17%	80	70%	146	58%
Arunachal Pradesh	Tirap # †	62%	0%	0%			51	78%	20	100%	16	80%	15	50%	85	74%	187	75%
Arunachal Pradesh	Upper Siang †	17%	0%	0%			48	73%	20	100%	16	80%	30	100%	78	68%	192	77%
Arunachal Pradesh	Upper Subansiri †	73%	0%	0%			48	73%	20	100%	20	100%	0	0%	58	50%	146	58%
Arunachal Pradesh	West Kameng †	51%	0%	0%			45	69%	20	100%	20	100%	0	0%	66	57%	151	60%
Arunachal Pradesh	West Siang †	62%	0%	0%			49	75%	20	100%	16	80%	20	67%	66	57%	171	68%
Assam	Barpeta	64%	0%	0%			52	80%	20	100%	8	40%	12	41%	51	45%	144	57%
Assam	Bongaigaon	66%	1%	0%	100%	100%	53	82%	10	50%	12	60%	10	33%	44	38%	130	52%
Assam	Cachar	25%	2%	1%	42%	89%	55	84%	20	100%	16	80%	5	17%	41	36%	137	55%
Assam	Darrang	43%	1%	0%			47	73%	20	100%	12	60%	10	33%	48	42%	137	55%
Assam	Dhemaji	44%	0%	0%			58	89%	20	100%	16	80%	5	17%	65	57%	164	65%
Assam	Dhubri	28%	0%	0%	100%	0%	55	85%	20	100%	16	80%	5	17%	67	58%	163	65%
Assam	Dibrugarh	20%	0%	0%			52	79%	20	100%	12	60%	2	5%	60	52%	145	58%
Assam	Goalpara	35%	0%	0%			48	73%	20	100%	12	60%	10	33%	55	48%	145	58%
Assam	Golaghat	40%	1%	0%	83%	50%	48	73%	20	100%	12	60%	13	42%	60	52%	152	61%
Assam	Hailakandi	21%	2%	0%			42	64%	20	100%	16	80%	0	0%	41	36%	119	47%
Assam	Jorhat	41%	1%	0%	100%	100%	55	84%	20	100%	12	60%	9	30%	67	59%	163	65%
Assam	Kamrup	28%	1%	0%	100%	100%	52	80%	10	50%	4	20%	20	67%	45	39%	131	52%
Assam	Karbi Anglong †	15%	1%	0%	0%	0%	46	70%	20	100%	16	80%	0	0%	50	44%	132	53%
Assam	Karimganj	29%	0%	0%	100%	100%	53	82%	20	100%	12	60%	5	17%	56	48%	146	58%
Assam	Kokrajhar	26%	0%	0%	25%	50%	47	73%	20	100%	12	60%	8	25%	66	58%	153	61%
Assam	Lakhimpur	12%	0%	0%			58	89%	10	50%	8	40%	0	0%	70	61%	146	59%
Assam	Marigaon	41%	0%	0%			44	67%	20	100%	12	60%	0	0%	44	39%	120	48%
Assam	Nagaon	25%	1%	0%	80%	100%	50	77%	20	100%	12	60%	0	0%	46	40%	128	51%
Assam	Nalbari	29%	0%	0%			54	83%	20	100%	20	100%	5	17%	63	55%	162	65%
Assam	North Cachar Hills †	61%	0%	0%			49	76%	20	100%	8	40%	0	1%	50	43%	127	51%
Assam	Sibsagar	11%	2%	0%	0%	100%	56	87%	10	50%	16	80%	3	8%	70	61%	155	62%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Assam	Sonitpur	20	10358	133	-5%	1997	5	-8%	102	89	3036	155	76	36
Assam	Tinsukia	13	7977	149	1%	1681	5	-2%	126	99	2394	179	84	24
Assam	Udalguri	8	4055	120	89%	535	8	3%	63	56	1170	139	47	56
Bihar	Araria #	29	8738	76	-4%	985	9	11%	34	30	1527	53	26	18
Bihar	Arwal	7	4097	143	19%	391	10	6%	55	43	492	69	36	17
Bihar	Aurangabad #	26	10493	102	8%	967	11	5%	38	33	1397	54	26	13
Bihar	Banka #	21	9315	112	16%	687	14	22%	33	34	1352	65	31	20
Bihar	Begusarai #	30	13592	113	-1%	1408	10	17%	47	43	2535	84	33	30
Bihar	Bhagalpur #	31	19742	159	3%	1685	12	22%	54	42	2850	92	34	30
Bihar	Bhojpur #	28	12191	110	56%	952	13	38%	34	28	1406	51	24	12
Bihar	Buxar	17	8510	122	27%	848	10	-2%	49	46	1180	68	34	14
Bihar	Darbhanga #	40	16918	106	-2%	2315	7	-4%	58	51	3291	82	41	13
Bihar	Gaya #	45	11811	66	0%	1502	8	-3%	34	29	3853	86	25	33
Bihar	Gopalganj #	26	12504	120	13%	939	13	22%	36	33	1449	55	24	11
Bihar	Jamui #	18	5741	80	25%	608	9	4%	34	32	1230	69	26	25
Bihar	Jehanabad #	11	4565	99	-7%	544	8	6%	47	44	973	85	34	27
Bihar	Kaimur #	17	5232	79	9%	543	10	11%	33	30	845	51	22	13
Bihar	Katihar #	31	14327	114	3%	2062	7	6%	66	58	2266	72	49	7
Bihar	Khagaria #	17	7103	105	9%	571	12	21%	34	30	860	51	26	13
Bihar	Kishanganj #	17	6435	93	0%	785	8	6%	45	43	1085	63	37	12
Bihar	Lakhisarai #	10	3699	90	-3%	394	9	-14%	39	36	692	68	26	17
Bihar	Madhepura #	20	10372	127	-3%	870	12	6%	43	39	960	47	32	5
Bihar	Madhubani #	46	16424	90	-3%	1868	9	2%	41	34	2242	49	29	10
Bihar	Munger #	14	7156	129	-5%	760	9	2%	55	52	1282	92	42	25
Bihar	Muzaffarpur #	49	21617	111	6%	2309	9	17%	47	43	5021	103	33	37
Bihar	Nalanda #	29	10096	86	19%	1070	9	21%	36	32	1512	52	29	15
Bihar	Nawada #	23	6476	71	19%	737	9	15%	33	31	1005	44	25	8
Bihar	Paschim Champaran	40	16591	103	24%	2041	8	16%	51	46	2270	57	39	6
Bihar	Patna	59	25446	108	4%	2819	9	13%	48	32	5626	95	24	35
Bihar	Purba Champaran #	52	18311	88	38%	2246	8	5%	43	38	2892	56	32	10

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Assam	Sonitpur	66	28	67	135	5%	80%	54%	81%	63%	1662	92%	1750	97%	995	83%	991	33%
Assam	Tinsukia	179	27	71	167	8%	93%	78%	88%	71%	1243	92%	1209	89%	972	91%	544	23%
Assam	Udalguri	41	25	41	15	2%	88%	72%	82%	17%	398	83%	448	93%	200	92%	658	56%
Bihar	Araria #	7	8	17	113	9%	89%	73%	86%	70%	668	77%	858	99%	618	79%	140	9%
Bihar	Arwal	11	13	30	20	5%	85%	70%	96%	83%	284	91%	312	100%	185	79%	329	67%
Bihar	Aurangabad #	15	12	33	79	7%	87%	72%	79%	66%	762	86%	883	100%	555	88%	975	70%
Bihar	Banka #	8	13	15	42	4%	82%	57%	86%	76%	641	90%	711	99%	267	57%	1324	98%
Bihar	Begusarai #	15	16	43	201	10%	91%	80%	92%	88%	1240	93%	1328	100%	918	70%	2202	87%
Bihar	Bhagalpur #	38	18	33	277	12%	87%	71%	85%	70%	1234	94%	1316	100%	1126	90%	2742	96%
Bihar	Bhojpur #	16	10	18	56	5%	81%	67%	82%	72%	617	77%	726	91%	379	75%	430	31%
Bihar	Buxar	9	17	48	50	6%	85%	79%	84%	77%	762	94%	765	94%	351	85%	979	83%
Bihar	Darbhanga #	49	17	44	255	10%	93%	79%	87%	69%	1953	95%	2057	100%	1345	92%	2758	84%
Bihar	Gaya #	14	17	19	146	5%	72%	67%	93%	93%	1087	83%	1215	93%	499	70%	3023	78%
Bihar	Gopalganj #	16	16	37	75	7%	92%	81%	90%	86%	827	95%	869	99%	689	89%	1392	96%
Bihar	Jamui #	10	16	25	65	7%	80%	71%	79%	71%	475	83%	571	100%	163	57%	1107	90%
Bihar	Jehanabad #	18	20	44	76	10%	87%	79%	86%	72%	470	91%	506	98%	365	85%	833	86%
Bihar	Kaimur #	5	14	31	34	6%	84%	61%	83%	78%	467	93%	487	97%	296	79%	412	49%
Bihar	Katihar #	16	13	39	160	9%	85%	67%	83%	68%	1486	81%	1827	100%	1445	100%	1926	85%
Bihar	Khagaria #	8	9	19	60	8%	80%	64%	86%	81%	434	82%	526	100%	325	76%	639	74%
Bihar	Kishanganj #	16	9	25	55	6%	88%	61%	89%	72%	660	88%	752	100%	478	74%	902	83%
Bihar	Lakhisarai #	17	20	41	53	11%	70%	57%	79%	57%	331	88%	372	99%	172	82%	218	32%
Bihar	Madhepura #	5	9	30	39	5%	92%	87%	94%	83%	764	96%	799	100%	608	86%	1628	170%
Bihar	Madhubani #	8	7	21	97	5%	86%	71%	85%	73%	1522	96%	1572	99%	812	66%	1937	86%
Bihar	Munger #	36	17	45	93	9%	87%	66%	88%	76%	623	84%	739	100%	396	69%	1052	82%
Bihar	Muzaffarpur #	50	20	39	318	8%	87%	69%	86%	73%	1573	75%	2069	98%	955	59%	3752	75%
Bihar	Nalanda #	8	5	12	85	6%	88%	65%	93%	85%	859	92%	891	95%	690	86%	1302	86%
Bihar	Nawada #	5	10	25	48	6%	93%	79%	94%	88%	671	95%	682	97%	515	88%	839	83%
Bihar	Paschim Champaran	7	9	30	79	4%	92%	75%	94%	80%	1513	81%	1783	96%	1168	82%	1506	66%
Bihar	Patna	62	21	34	578	13%	89%	65%	89%	84%	1596	84%	1706	89%	1293	78%	492	9%
Bihar	Purba Champaran #	9	10	25	123	5%	82%	63%	94%	88%	1770	89%	1978	99%	825	72%	1820	63%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Assam	Sonitpur	23%	0%	0%			52	80%	20	100%	8	40%	7	23%	68	59%	155	62%
Assam	Tinsukia	56%	0%	0%	100%	75%	52	80%	20	100%	8	40%	4	13%	49	42%	132	53%
Assam	Udalguri	22%	0%	0%	0%	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Bihar	Araria #	33%	3%	0%	0%	0%	26	40%	20	100%	0	0%	0	0%	37	32%	83	33%
Bihar	Arwal	23%	3%	0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Bihar	Aurangabad #	13%	6%	0%			47	73%	10	50%	4	20%	0	0%	49	43%	111	44%
Bihar	Banka #	19%	2%	0%			47	72%	20	100%	0	0%	0	0%	73	63%	140	56%
Bihar	Begusarai #	35%	1%	0%	0%	100%	32	48%	20	100%	4	20%	0	0%	79	69%	135	54%
Bihar	Bhagalpur #	38%	4%	1%	52%	87%	38	58%	0	0%	16	80%	0	0%	67	59%	121	49%
Bihar	Bhojpur #	12%	2%	0%			31	47%	20	100%	4	20%	10	33%	39	34%	104	42%
Bihar	Buxar	49%	1%	0%			37	57%	0	0%	8	40%	0	0%	72	63%	117	47%
Bihar	Darbhanga #	38%	9%	1%	27%	82%	50	76%	10	50%	8	40%	5	17%	88	76%	160	64%
Bihar	Gaya #	0%	0%	0%			36	56%	10	50%	4	20%	10	33%	73	63%	133	53%
Bihar	Gopalganj #	29%	8%	1%	10%	48%	36	56%	20	100%	4	20%	0	0%	90	79%	151	60%
Bihar	Jamui #	17%	8%	0%	50%	67%	33	51%	0	0%	8	40%	0	0%	72	62%	112	45%
Bihar	Jehanabad #	15%	13%	1%	43%	43%	37	56%	10	50%	8	40%	0	0%	70	61%	125	50%
Bihar	Kaimur #	15%	5%	0%			23	35%	10	50%	8	40%	0	0%	50	44%	91	36%
Bihar	Katihar #	36%	4%	0%	56%	78%	35	54%	20	100%	4	20%	0	0%	60	53%	119	48%
Bihar	Khagaria #	66%	3%	1%	0%	100%	38	59%	10	50%	12	60%	0	0%	87	76%	147	59%
Bihar	Kishanganj #	46%	4%	0%	0%	0%	35	54%	10	50%	8	40%	5	18%	62	54%	120	48%
Bihar	Lakhisarai #	50%	1%	0%	33%	0%	35	53%	10	50%	12	60%	0	0%	74	64%	130	52%
Bihar	Madhepura #	24%	2%	0%	0%	67%	20	31%	10	50%	8	40%	0	0%	57	50%	96	38%
Bihar	Madhubani #	35%	9%	0%	100%	100%	23	35%	10	50%	8	40%	0	0%	79	69%	120	48%
Bihar	Munger #	28%	2%	0%	0%	50%	39	60%	10	50%	12	60%	10	33%	65	56%	136	54%
Bihar	Muzaffarpur #	4%	3%	1%	0%	8%	48	73%	10	50%	8	40%	0	0%	68	59%	133	53%
Bihar	Nalanda #	9%	2%	0%			26	40%	10	50%	12	60%	0	0%	63	55%	111	44%
Bihar	Nawada #	20%	1%	0%	75%	50%	40	62%	10	50%	12	60%	0	0%	84	73%	146	58%
Bihar	Paschim Champaran	18%	1%	0%	0%	33%	38	59%	10	50%	16	80%	4	15%	74	65%	143	57%
Bihar	Patna	3%	3%	0%	33%	67%	40	62%	10	50%	8	40%	10	33%	57	50%	125	50%
Bihar	Purba Champaran #	31%	4%	0%	67%	67%	39	61%	0	0%	4	20%	15	50%	92	80%	150	60%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Bihar	Purnia #	33	20489	153	-1%	2271	9	7%	68	59	2861	86	50	19
Bihar	Rohtas	30	16429	136	11%	1405	12	21%	46	42	1956	65	34	15
Bihar	Saharsa #	19	6451	83	-16%	586	11	3%	30	28	1078	56	27	21
Bihar	Samastipur #	43	20831	120	16%	2206	9	18%	51	44	3505	81	35	20
Bihar	Saran #	40	11935	74	15%	1059	11	20%	26	25	1921	48	19	12
Bihar	Sheikhpura #	6	2899	112	-16%	210	14	-15%	32	27	457	70	20	26
Bihar	Sheohar	7	2180	81	-10%	225	10	-2%	34	32	808	120	23	63
Bihar	Sitamarhi #	35	15659	112	6%	1814	9	14%	52	49	2837	81	42	19
Bihar	Siwan	34	12949	95	0%	1159	11	23%	34	30	2308	68	22	22
Bihar	Supaul #	23	6550	72	-2%	617	11	3%	27	27	948	42	23	9
Bihar	Vaishali #	36	14397	101	4%	1378	10	8%	39	33	2765	77	24	27
Chandigarh	Chandigarh	11	19579	458	10%	2458	8	7%	230	121	2807	263	92	31
Chhattisgarh	Bastar †	12	5987	124	25%	782	8	13%	65	49	1556	129	40	54
Chhattisgarh	Bijapur-CG	3	2091	201		268	8		103	146	589	226	128	50
Chhattisgarh	Bilaspur	27	11897	110	1%	1475	8	-4%	54	50	2844	105	46	32
Chhattisgarh	Dantewada †	8	3264	102	-20%	561	6	0%	70	62	731	91	54	20
Chhattisgarh	Dhamtari	8	3481	107	5%	461	8	3%	57	52	774	95	47	31
Chhattisgarh	Durg	34	17060	125	12%	1516	11	-5%	44	41	4031	118	36	47
Chhattisgarh	Janjgir	17	6925	105	-17%	637	11	6%	39	39	1543	93	35	40
Chhattisgarh	Jashpur †	9	3511	101	47%	415	8	18%	48	35	561	65	32	19
Chhattisgarh	Kanker †	8	5563	182	8%	512	11	8%	67	63	932	122	54	45
Chhattisgarh	Kawardha #	8	3187	95	55%	300	11	33%	36	34	449	54	29	12
Chhattisgarh	Korba	12	6837	139	5%	644	11	10%	52	49	1464	119	44	46
Chhattisgarh	Koriya #	7	2556	95	-5%	180	14	17%	27	25	544	81	22	40
Chhattisgarh	Mahasamund	11	3636	86	-8%	539	7	-15%	51	50	1022	97	46	33
Chhattisgarh	Narayanpur	1	818	181		133	6		118	105	226	200	88	61
Chhattisgarh	Raigarh	15	5701	94	15%	948	6	-1%	62	57	1696	111	54	46
Chhattisgarh	Raipur	41	19239	116	7%	2306	8	8%	56	48	4072	98	41	30
Chhattisgarh	Rajnandgaon	16	8368	133	12%	998	8	12%	64	63	1811	116	54	30
Chhattisgarh	Surguja # †	24	8606	89	-9%	860	10	15%	36	32	2315	96	30	46

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Bihar	Purnia #	11	14	36	179	7%	90%	80%	92%	86%	1779	90%	1936	98%	1415	85%	2717	95%
Bihar	Rohtas	7	13	31	79	5%	86%	68%	89%	76%	1165	91%	1274	100%	913	83%	1638	84%
Bihar	Saharsa #	6	6	6	41	4%	96%	75%	96%	91%	490	89%	549	100%	367	71%	785	73%
Bihar	Samastipur #	35	16	38	254	9%	86%	75%	91%	82%	1624	84%	1926	100%	1083	72%	2516	72%
Bihar	Saran #	14	12	24	86	6%	76%	63%	76%	64%	860	86%	999	100%	466	75%	1635	85%
Bihar	Sheikhpura #	7	14	39	31	8%	83%	58%	82%	62%	158	82%	185	96%	98	84%	457	100%
Bihar	Sheohar	23	25	35	64	10%	87%	59%	85%	72%	163	75%	216	100%	114	80%	799	99%
Bihar	Sitamarhi #	34	11	30	226	9%	84%	68%	87%	74%	1367	79%	1586	92%	768	66%	2331	82%
Bihar	Siwan	5	23	34	98	6%	86%	72%	93%	92%	860	84%	1016	100%	565	69%	2062	89%
Bihar	Supaul #	5	9	17	25	3%	83%	75%	96%	96%	524	86%	606	100%	380	86%	844	89%
Bihar	Vaishali #	10	18	35	193	9%	88%	70%	89%	77%	883	74%	1168	98%	602	67%	2442	88%
Chandigarh	Chandigarh	355	51	139	220	10%	88%	74%	87%	72%	1223	90%	1335	99%	982	94%	401	14%
Chhattisgarh	Bastar †	53	22	41	60	5%	75%	60%	79%	56%	527	87%	596	98%	253	83%	886	57%
Chhattisgarh	Bijapur-CG	45	38	80	17	3%					167	43%	221	58%	48	1600%	117	20%
Chhattisgarh	Bilaspur	69	10	18	111	4%	93%	63%	93%	76%	1190	87%	1327	97%	835	77%	1954	69%
Chhattisgarh	Dantewada †	19	12	35	17	3%	74%	71%	62%	59%	371	74%	403	80%	104	42%	445	61%
Chhattisgarh	Dhamtari	27	10	24	22	3%	91%	80%	86%	59%	376	87%	431	100%	235	73%	638	82%
Chhattisgarh	Durg	99	11	22	279	8%	85%	68%	85%	62%	1251	89%	1385	98%	682	78%	2047	51%
Chhattisgarh	Janjgir	31	10	14	47	3%	94%	90%	91%	85%	587	91%	642	100%	548	82%	870	56%
Chhattisgarh	Jashpur †	29	5	17	7	1%	79%	83%	86%	81%	250	80%	251	80%	124	91%	319	57%
Chhattisgarh	Kanker †	38	14	37	36	4%	91%	63%	89%	60%	430	89%	479	100%	307	78%	261	28%
Chhattisgarh	Kawardha #	20	8	21	15	4%	94%	73%	87%	74%	239	84%	277	97%	171	86%	243	54%
Chhattisgarh	Korba	64	13	21	97	7%	94%	78%	94%	68%	540	89%	605	100%	455	85%	1092	75%
Chhattisgarh	Koriya #	42	8	15	22	5%	93%	68%	84%	68%	153	88%	166	96%	133	90%	262	48%
Chhattisgarh	Mahasamund	38	9	21	57	6%	88%	67%	87%	62%	514	96%	536	100%	287	74%	901	88%
Chhattisgarh	Narayanpur	117	22	81	18	9%	317%	95%	0%	4950%	109	89%	122	100%	50	167%	132	58%
Chhattisgarh	Raigarh	17	7	16	43	3%	92%	76%	92%	78%	847	96%	884	100%	492	79%	293	17%
Chhattisgarh	Raipur	63	12	31	195	5%	91%	75%	89%	79%	1893	94%	1805	90%	1615	93%	1219	30%
Chhattisgarh	Rajnandgaon	64	15	38	92	6%	90%	58%	86%	68%	917	92%	997	100%	684	87%	1101	61%
Chhattisgarh	Surguja # †	32	12	11	119	6%	93%	82%	92%	79%	732	93%	752	95%	588	72%	1569	68%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Bihar	Purnia #	43%	1%	0%	0%	67%	36	55%	10	50%	0	0%	7	23%	75	65%	128	51%
Bihar	Rohtas	18%	1%	0%	100%	100%	44	68%	10	50%	0	0%	0	0%	57	50%	111	44%
Bihar	Saharsa #	12%	0%	0%			42	64%	0	0%	12	60%	0	0%	85	74%	139	55%
Bihar	Samastipur #	18%	7%	0%	0%	100%	31	48%	0	0%	12	60%	5	17%	69	60%	117	47%
Bihar	Saran #	2%	35%	1%	100%	100%	28	43%	10	50%	16	80%	0	0%	74	64%	127	51%
Bihar	Sheikhpura #	41%	3%	0%	0%	100%	42	64%	20	100%	12	60%	0	0%	59	51%	132	53%
Bihar	Sheohar	26%	4%	0%			44	68%	10	50%	4	20%	0	0%	49	42%	107	43%
Bihar	Sitamarhi #	6%	13%	0%	0%	33%	31	47%	0	0%	8	40%	0	0%	78	67%	116	46%
Bihar	Siwan	1%	62%	0%			37	57%	10	50%	12	60%	0	0%	59	51%	118	47%
Bihar	Supaul #	23%	2%	0%			40	61%	0	0%	20	100%	0	0%	82	72%	142	57%
Bihar	Vaishali #	21%	3%	0%	89%	67%	20	30%	10	50%	12	60%	0	0%	45	39%	86	35%
Chandigarh	Chandigarh	95%	1%	1%	88%	63%	56	87%	20	100%	20	100%	10	33%	79	69%	185	74%
Chhattisgarh	Bastar †	27%	1%	1%	0%	55%	-7	-11%	0	0%	0	0%	10	33%	36	31%	39	16%
Chhattisgarh	Bijapur-CG	0%		0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Chhattisgarh	Bilaspur	34%	3%	0%			53	82%	10	50%	20	100%	10	33%	60	52%	153	61%
Chhattisgarh	Dantewada †	34%	0%	0%			52	81%	10	50%	16	80%	10	33%	62	54%	151	60%
Chhattisgarh	Dhamtari	41%	1%	0%	0%	0%	55	85%	20	100%	16	80%	0	0%	76	66%	168	67%
Chhattisgarh	Durg	25%	4%	0%			56	87%	10	50%	8	40%	5	17%	45	39%	124	50%
Chhattisgarh	Janjgir	9%	1%	0%			55	85%	10	50%	8	40%	0	0%	78	68%	151	61%
Chhattisgarh	Jashpur †	27%	0%	0%			49	75%	10	50%	20	100%	20	67%	50	44%	149	60%
Chhattisgarh	Kanker †	56%	1%	0%			51	78%	10	50%	12	60%	0	0%	57	49%	130	52%
Chhattisgarh	Kawardha #	43%	4%	0%			29	44%	10	50%	16	80%	5	17%	77	67%	137	55%
Chhattisgarh	Korba	58%	1%	0%	0%	0%	41	63%	10	50%	8	40%	10	33%	89	78%	158	63%
Chhattisgarh	Koriya #	8%	5%	0%			57	88%	0	0%	16	80%	10	33%	61	53%	144	58%
Chhattisgarh	Mahasamund	57%	2%	0%			56	86%	10	50%	20	100%	0	0%	62	54%	148	59%
Chhattisgarh	Narayanpur	27%	3%	0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Chhattisgarh	Raigarh	28%	0%	0%			52	79%	20	100%	16	80%	10	33%	51	44%	148	59%
Chhattisgarh	Raipur	25%	3%	1%	0%	4%	47	73%	10	50%	12	60%	5	17%	46	40%	120	48%
Chhattisgarh	Rajnandgaon	49%	4%	1%	0%	28%	50	77%	10	50%	20	100%	0	0%	79	69%	159	64%
Chhattisgarh	Surguja # †	19%	1%	0%			15	23%	10	50%	8	40%	0	0%	80	70%	113	45%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Dadar & Nagar Haveli	Dadra & Nagar Haveli # †	4	2710	190	-2%	357	8	-15%	100	62	415	116	43	24
Daman & Diu	Daman	2	2557	322	7%	183	14	9%	92	41	296	149	31	51
Daman & Diu	Diu	1	582	269	-25%	31	19	-9%	57	31	34	63	26	13
Delhi	Bijwasan	5	1750	88		202	9		40	56	731	146	39	22
Delhi	BJRM Chest Clinic	5	5005	246	3%	634	8	5%	124	116	1319	259	81	46
Delhi	BSA Chest Clinic	5	3080	154	12%	446	7	15%	89	93	1373	274	66	62
Delhi	CD Chest Clinic	5	3151	157	5%	420	8	7%	84	63	1043	208	42	56
Delhi	DDU Chest Clinic	9	10560	293	14%	1165	9	10%	129	122	3357	373	88	67
Delhi	DFIT Chest Clinic	9	7474	197	24%	1173	6	3%	124	117	2579	272	87	38
Delhi	GTB Chest Clinic	8	8546	285	-15%	1408	6	-6%	188	121	2272	303	85	45
Delhi	Gulabi Bagh	6	5835	260	51%	854	7	-8%	152	115	1560	278	88	37
Delhi	Hedgewar Chest Clinic	5	3915	204	-2%	528	7	1%	110	91	1163	242	66	32
Delhi	Jhandewalan	6	3714	168	-13%	553	7	-2%	100	95	1525	275	55	40
Delhi	Karawal Nagar	7	5283	177	-4%	975	5	4%	130	140	3015	403	102	67
Delhi	Kingsway Camp	8	6531	210	26%	857	8	20%	110	103	1862	240	71	41
Delhi	LN Chest Clinic	5	5623	312	3%	699	8	-6%	155	73	955	212	49	34
Delhi	LRS	10	8183	206	1%	1522	5	-7%	153	139	3214	323	98	47
Delhi	MNCH Chest Clinic	5	3513	176	-19%	626	6	-12%	125	159	2063	413	108	77
Delhi	Moti Nagar	6	7557	315	-17%	1017	7	0%	170	114	1791	299	80	42
Delhi	Narela	7	7172	270	-8%	1026	7	0%	154	119	1866	281	83	46
Delhi	NDMC	6	14328	598	20%	1968	7	0%	328	108	1802	301	74	47
Delhi	Nehru Nagar	11	10282	239	3%	1662	6	8%	154	134	3708	345	90	61
Delhi	Patparganj	8	9517	312	0%	1547	6	-6%	203	176	3121	409	121	49
Delhi	R.K.Mission	7	6040	216	11%	865	7	-5%	124	108	1833	262	77	54
Delhi	RTRM Chest Clinic	5	5767	288	-5%	722	8	7%	144	108	1163	233	75	37
Delhi	SGM Chest Clinic	7	7991	274	-14%	1016	8	2%	140	122	2731	375	85	91
Delhi	Shahdra	6	6453	272	-15%	1091	6	-14%	184	137	2261	381	98	61
Delhi	SPM Marg	5	3688	184	8%	441	8	20%	88	63	866	173	45	28
Delhi	SPMH Chest Clinic	6	6722	276	0%	1106	6	-2%	182	178	2833	465	117	37
Goa	North Goa	8	10700	325	4%	749	14	6%	91	62	1109	135	47	18

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Dadar & Nagar Haveli	Dadra & Nagar Haveli # †	75	30	79	16	5%	91%	67%	82%	63%	209	94%	216	97%	154	90%	61	15%
Daman & Diu	Daman	77	47	48	6	3%	76%	70%	89%	68%	65	76%	86	100%	54	68%	92	31%
Daman & Diu	Diu	44	13	22	4	15%	100%	100%	93%	75%	17	100%	17	100%	16	100%	8	24%
Delhi	Bijwasan	211	33	79	73	13%	90%	75%			267	91%	213	73%	0		21	3%
Delhi	BJRM Chest Clinic	305	56	144	135	13%	93%	71%	91%	76%	546	92%	596	100%	509	100%	316	24%
Delhi	BSA Chest Clinic	374	52	109	123	11%	86%	79%	85%	61%	421	90%	468	100%	364	97%	0	0%
Delhi	CD Chest Clinic	274	40	91	74	9%	87%	79%	83%	68%	326	100%	326	100%	255	97%	15	1%
Delhi	DDU Chest Clinic	565	76	147	326	12%	91%	81%		83%	959	85%	1123	100%	924	2008%	165	5%
Delhi	DFIT Chest Clinic	330	65	132	265	13%	88%	70%	89%	75%	1017	89%	1088	96%	850	116%	1456	56%
Delhi	GTB Chest Clinic	416	70	165	252	14%	88%	68%	83%	71%	868	92%	943	100%	591	87%	250	11%
Delhi	Gulabi Bagh	408	51	126	158	12%	88%	72%	86%	68%	593	89%	669	100%	586	100%	0	0%
Delhi	Hedgewar Chest Clinic	373	50	116	134	15%	86%	65%	83%	66%	440	96%	457	100%	314	95%	9	1%
Delhi	Jhandewalan	382	80	171	180	17%	92%	69%	84%	62%	485	89%	542	100%	457	100%	78	5%
Delhi	Karawal Nagar	619	79	170	369	15%	88%	69%	85%	74%	990	91%	1082	100%	885	95%	87	3%
Delhi	Kingsway Camp	277	58	146	186	13%	88%	70%	86%	68%	805	97%	826	99%	606	98%	19	1%
Delhi	LN Chest Clinic	314	51	101	115	16%	90%	75%	88%	79%	322	96%	335	100%	308	100%	30	3%
Delhi	LRS	423	72	175	315	13%	86%	72%	87%	71%	1297	92%	1413	100%	892	82%	0	0%
Delhi	MNCH Chest Clinic	514	99	217	220	14%	85%	63%	78%	64%	671	83%	812	100%	561	76%	0	0%
Delhi	Moti Nagar	432	69	145	174	13%	84%	68%	79%	68%	584	84%	697	100%	506	89%	71	4%
Delhi	Narela	317	73	160	212	15%	91%	77%	84%	70%	778	95%	815	100%	450	71%	132	7%
Delhi	NDMC	438	69	148	144	10%	93%	78%	92%	77%	627	94%	666	100%	556	100%	0	0%
Delhi	Nehru Nagar	445	81	193	390	14%	90%	68%	85%	67%	1312	89%	1481	100%	1165	100%	0	0%
Delhi	Patparganj	570	96	241	357	15%	92%	68%	87%	72%	1169	85%	1381	100%	1054	100%	0	0%
Delhi	R.K.Mission	298	56	134	212	15%	90%	74%	87%	69%	757	98%	771	100%	640	100%	127	7%
Delhi	RTRM Chest Clinic	250	59	138	100	12%	95%	77%	90%	78%	539	99%	545	100%	493	85%	57	5%
Delhi	SGM Chest Clinic	478	79	155	313	15%	90%	67%	87%	63%	815	90%	904	100%	816	100%	0	0%
Delhi	Shahdra	534	89	167	346	20%	88%	72%	84%	68%	807	98%	827	100%	675	100%	236	10%
Delhi	SPM Marg	238	41	85	90	14%	85%	63%	84%	69%	274	83%	329	100%	314	87%	103	12%
Delhi	SPMH Chest Clinic	722	131	266	359	18%	89%	72%	87%	69%	964	86%	1119	100%	624	83%	795	28%
Goa	North Goa	166	28	66	60	7%	90%	73%	84%	70%	464	88%	508	97%	423	97%	123	11%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Dadar & Nagar Haveli	Dadra & Nagar Haveli # †	60%	2%	0%	0%	0%	50	77%	10	50%	16	80%	10	33%	38	33%	124	50%
Daman & Diu	Daman	82%	2%	2%	100%	100%	44	68%	20	100%	20	100%	7	23%	34	30%	125	50%
Daman & Diu	Diu	97%	6%	0%			48	74%	20	100%	20	100%	30	100%	65	57%	183	73%
Delhi	Bijwasan	71%	1%	0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Delhi	BJRM Chest Clinic	88%	3%	2%	100%	71%	58	89%	10	50%	16	80%	10	33%	56	49%	150	60%
Delhi	BSA Chest Clinic	34%	3%	0%	80%	100%	49	75%	20	100%	16	80%	10	33%	47	41%	142	57%
Delhi	CD Chest Clinic	59%	1%	0%	100%	100%	48	74%	20	100%	20	100%	13	45%	50	43%	151	61%
Delhi	DDU Chest Clinic	77%	2%	2%	100%	85%	43	67%	10	50%	16	80%	30	100%	63	55%	163	65%
Delhi	DFIT Chest Clinic	91%	1%	1%	57%	75%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Delhi	GTB Chest Clinic	52%	2%	1%	86%	79%	58	89%	10	50%	16	80%	27	90%	62	54%	173	69%
Delhi	Gulabi Bagh	85%	3%	2%	100%	100%	39	61%	20	100%	20	100%	20	67%	65	57%	165	66%
Delhi	Hedgewar Chest Clinic	100%	1%	1%	57%	100%	48	74%	10	50%	20	100%	28	93%	49	42%	155	62%
Delhi	Jhandewalan	70%	2%	1%	100%	86%	56	85%	20	100%	12	60%	17	56%	54	47%	158	63%
Delhi	Karawal Nagar	48%	2%	1%	5%	115%	44	67%	10	50%	12	60%	16	54%	65	57%	147	59%
Delhi	Kingsway Camp	80%	2%	1%	100%	93%	28	43%	20	100%	20	100%	20	67%	64	55%	152	61%
Delhi	LN Chest Clinic	93%	3%	2%	100%	100%	48	74%	10	50%	20	100%	18	60%	64	55%	160	64%
Delhi	LRS	76%	2%	1%	21%	79%	43	65%	20	100%	8	40%	20	67%	71	62%	162	65%
Delhi	MNCH Chest Clinic	84%	1%	1%	0%	100%	30	47%	0	0%	16	80%	10	33%	53	46%	110	44%
Delhi	Moti Nagar	61%	2%	1%	18%	53%	43	65%	20	100%	8	40%	16	53%	52	45%	138	55%
Delhi	Narela	73%	2%	1%	64%	55%	41	63%	20	100%	16	80%	10	33%	84	73%	171	69%
Delhi	NDMC	69%	3%	1%	46%	83%	56	85%	20	100%	12	60%	10	33%	64	56%	162	65%
Delhi	Nehru Nagar	60%	2%	1%	87%	84%	48	74%	20	100%	16	80%	10	33%	51	44%	145	58%
Delhi	Patparganj	81%	2%	1%	93%	89%	51	79%	20	100%	16	80%	27	90%	67	58%	182	73%
Delhi	R.K.Mission	86%	2%	1%	86%	95%	49	76%	20	100%	20	100%	10	33%	74	64%	173	69%
Delhi	RTRM Chest Clinic	87%	2%	2%	100%	100%	57	87%	10	50%	20	100%	30	100%	72	63%	189	76%
Delhi	SGM Chest Clinic	89%	1%	1%	100%	100%	37	57%	20	100%	16	80%	10	33%	63	55%	146	58%
Delhi	Shahdra	88%	2%	1%	11%	61%	58	89%	20	100%	16	80%	10	33%	50	43%	154	62%
Delhi	SPM Marg	38%	8%	2%	42%	42%	39	60%	20	100%	12	60%	10	33%	48	41%	129	52%
Delhi	SPMH Chest Clinic	67%	1%	1%	7%	93%	48	74%	20	100%	16	80%	30	100%	69	60%	183	73%
Goa	North Goa	100%	4%	4%	100%	77%	55	85%	10	50%	16	80%	5	17%	71	62%	157	63%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Goa	South Goa	6	4600	179	-3%	535	9	-2%	83	66	841	131	49	17
Gujarat	Ahmadabad	17	10722	161	3%	1533	7	11%	92	76	1781	107	57	8
Gujarat	Ahmadabad MC	57	33672	149	-1%	6010	6	-4%	106	76	8361	148	52	15
Gujarat	Amreli	15	11433	186	-6%	1248	9	4%	81	73	1413	92	58	6
Gujarat	Anand	21	14963	176	-6%	2325	6	-1%	109	88	2999	141	58	24
Gujarat	Banaskantha	32	19559	154	7%	3195	6	8%	101	80	3418	108	57	7
Gujarat	Bharuch	16	10791	171	-3%	1633	7	4%	104	85	1966	125	65	14
Gujarat	Bhavnagar	29	19613	168	0%	2426	8	5%	83	72	2974	102	57	9
Gujarat	Chhota Udepur	10	6673	164	-5%	1014	7	-13%	100	94	1222	120	70	14
Gujarat	Dahod †	22	20362	235	10%	2349	9	14%	109	99	2850	132	69	14
Gujarat	Gandhinagar	14	10701	190	3%	1229	9	15%	87	75	1585	112	58	8
Gujarat	Jamnagar	22	15997	182	5%	1630	10	8%	74	69	2144	98	53	3
Gujarat	Junagadh	28	17570	157	-5%	2072	8	4%	74	71	2704	97	57	7
Gujarat	Kachchh	21	13204	155	3%	1661	8	2%	78	66	1849	87	52	5
Gujarat	Kheda	23	15020	161	-7%	2544	6	-1%	109	87	2995	128	63	19
Gujarat	Mahesana	21	16145	196	-5%	1774	9	6%	86	71	2009	97	56	6
Gujarat	Narmada	6	5619	234	-5%	648	9	-12%	108	97	744	124	76	10
Gujarat	Navsari	14	9573	177	-7%	1273	8	-5%	94	79	1738	128	60	20
Gujarat	Panch Mahals	24	16234	167	-6%	2784	6	6%	115	103	3549	146	70	18
Gujarat	Patan	14	12240	224	-8%	1445	8	-5%	106	83	1633	120	58	12
Gujarat	Porbandar	6	3918	164	-3%	457	9	6%	77	75	747	125	64	24
Gujarat	Rajkot	39	29173	189	-2%	3108	9	0%	80	68	3688	95	57	7
Gujarat	Sabarkantha	25	16163	164	-1%	2786	6	4%	113	85	3305	134	61	22
Gujarat	Surat	16	14262	217	-2%	2470	6	1%	150	93	2256	137	71	15
Gujarat	Surat MC	45	29804	164	11%	3134	10	6%	69	64	5430	120	47	10
Gujarat	Surendranagar	18	14062	197	2%	1826	8	8%	102	77	1902	107	56	8
Gujarat	The Dangs †	2	1812	196	-15%	182	10	-14%	79	75	231	100	60	13
Gujarat	Vadodara	15	17517	289	3%	2585	7	-7%	171	89	2017	133	65	17
Gujarat	Vadodara Corp	17	9941	147	-2%	1427	7	5%	84	74	2012	119	57	12
Gujarat	Valsad †	17	11847	171	10%	1246	10	5%	72	70	1721	99	57	7

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Goa	South Goa	139	30	78	60	9%	83%	66%	81%	58%	386	88%	392	89%	313	97%	197	23%
Gujarat	Ahmadabad	52	29	82	61	5%	91%	59%	87%	60%	1155	90%	1263	98%	824	85%	1674	94%
Gujarat	Ahmadabad MC	148	43	104	539	9%	85%	58%	82%	53%	4087	92%	4367	99%	3092	95%	1715	21%
Gujarat	Amreli	28	21	64	66	6%	92%	73%	88%	60%	1067	94%	1121	98%	918	91%	1048	74%
Gujarat	Anand	65	43	125	70	3%	92%	76%	89%	72%	1780	93%	1831	96%	1424	91%	1835	61%
Gujarat	Banaskantha	35	35	94	98	4%	93%	76%	88%	68%	2396	94%	2471	97%	1957	92%	2652	78%
Gujarat	Bharuch	64	28	85	62	4%	92%	77%	90%	70%	1206	88%	1363	100%	1062	86%	1155	59%
Gujarat	Bhavnagar	49	23	68	105	5%	92%	71%	89%	67%	2026	94%	2127	98%	1666	89%	2072	70%
Gujarat	Chhota Udepur	28	29	96	38	4%	92%	77%	89%	74%	856	89%	952	99%	668	84%	914	75%
Gujarat	Dahod †	52	36	123	124	6%	95%	85%	92%	81%	2102	98%	2135	99%	1843	96%	1929	68%
Gujarat	Gandhinagar	58	31	69	63	6%	92%	75%	89%	68%	995	93%	1043	98%	966	97%	1102	70%
Gujarat	Jamnagar	63	26	74	95	6%	91%	63%	86%	55%	1502	96%	1506	96%	1058	86%	1437	67%
Gujarat	Junagadh	34	24	59	144	7%	92%	70%	88%	63%	1908	95%	1994	99%	1611	90%	2048	76%
Gujarat	Kachchh	35	21	57	77	5%	90%	58%	87%	57%	1328	94%	1379	97%	907	86%	1332	72%
Gujarat	Kheda	48	34	102	72	3%	92%	70%	87%	65%	1857	89%	1891	91%	1542	89%	1750	58%
Gujarat	Mahesana	46	24	59	70	5%	92%	74%	88%	67%	1278	87%	1386	94%	1222	89%	815	41%
Gujarat	Narmada	43	27	93	11	2%	94%	82%	94%	73%	519	87%	593	99%	459	88%	621	83%
Gujarat	Navsari	77	30	82	62	5%	93%	78%	91%	68%	1034	95%	1074	98%	925	98%	1175	68%
Gujarat	Panch Mahals	41	47	149	123	5%	94%	73%	88%	71%	2431	94%	2590	100%	2150	94%	2957	83%
Gujarat	Patan	39	40	105	48	4%	91%	66%	87%	66%	1019	89%	1138	99%	856	90%	886	54%
Gujarat	Porbandar	57	23	52	63	10%	91%	53%	91%	56%	437	96%	442	97%	362	89%	181	24%
Gujarat	Rajkot	50	19	50	195	7%	93%	76%	88%	67%	2560	96%	2666	100%	2219	96%	1580	43%
Gujarat	Sabarkantha	39	40	103	92	4%	92%	72%	88%	67%	1892	89%	2028	95%	1559	86%	2663	81%
Gujarat	Surat	81	31	89	61	3%	93%	75%	89%	71%	1408	92%	1536	100%	1216	93%	1789	79%
Gujarat	Surat MC	123	33	74	300	8%	90%	68%	87%	61%	2692	91%	2930	99%	2174	95%	1438	26%
Gujarat	Surendranagar	54	27	84	67	5%	90%	66%	87%	64%	1321	96%	1379	100%	1076	94%	1280	67%
Gujarat	The Dangs †	38	17	61	14	7%	93%	73%	91%	67%	157	90%	174	100%	134	92%	185	80%
Gujarat	Vadodara	63	36	104	70	5%	93%	71%	86%	61%	1286	93%	1328	96%	999	90%	1374	68%
Gujarat	Vadodara Corp	83	29	72	106	7%	91%	62%	86%	55%	1057	84%	1234	98%	846	86%	411	20%
Gujarat	Valsad †	52	23	54	70	5%	90%	66%	87%	67%	841	69%	914	75%	653	66%	975	57%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Goa	South Goa	91%	7%	5%	100%	90%	50	76%	10	50%	16	80%	15	50%	61	53%	152	61%
Gujarat	Ahmadabad	95%	5%	5%	97%	86%	39	60%	20	100%	20	100%	18	61%	59	51%	156	62%
Gujarat	Ahmadabad MC	83%	5%	4%	96%	78%	50	77%	20	100%	16	80%	10	33%	54	47%	150	60%
Gujarat	Amreli	85%	5%	3%	100%	92%	42	64%	20	100%	20	100%	17	57%	66	58%	165	66%
Gujarat	Anand	80%	4%	2%	99%	96%	38	58%	20	100%	16	80%	17	57%	72	62%	162	65%
Gujarat	Banaskantha	91%	2%	2%	100%	95%	54	83%	20	100%	12	60%	17	57%	66	58%	169	68%
Gujarat	Bharuch	83%	5%	2%	98%	91%	45	69%	20	100%	16	80%	16	52%	59	51%	155	62%
Gujarat	Bhavnagar	90%	2%	3%	100%	95%	37	57%	20	100%	20	100%	20	67%	61	53%	158	63%
Gujarat	Chhota Udepur	97%	2%	1%	100%	100%	54	82%	20	100%	16	80%	26	86%	68	59%	183	73%
Gujarat	Dahod †	99%	4%	2%	100%	86%	53	81%	20	100%	12	60%	10	33%	87	75%	181	73%
Gujarat	Gandhinagar	99%	6%	4%	100%	86%	55	85%	20	100%	20	100%	20	67%	56	49%	172	69%
Gujarat	Jamnagar	89%	4%	4%	90%	85%	39	60%	20	100%	12	60%	11	35%	73	64%	155	62%
Gujarat	Junagadh	99%	3%	3%	99%	96%	43	66%	20	100%	20	100%	20	67%	72	62%	174	70%
Gujarat	Kachchh	96%	7%	4%	96%	95%	56	85%	20	100%	16	80%	7	23%	93	81%	192	77%
Gujarat	Kheda	92%	3%	3%	95%	75%	45	69%	20	100%	20	100%	7	23%	69	60%	161	64%
Gujarat	Mahesana	91%	10%	8%	98%	90%	46	71%	20	100%	20	100%	18	61%	47	41%	152	61%
Gujarat	Narmada	85%	2%	1%	100%	75%	52	79%	20	100%	20	100%	10	33%	77	67%	179	72%
Gujarat	Navsari	93%	4%	4%	98%	89%	56	86%	20	100%	16	80%	30	100%	66	58%	188	75%
Gujarat	Panch Mahals	94%	2%	2%	100%	97%	39	59%	20	100%	12	60%	17	57%	83	73%	171	68%
Gujarat	Patan	96%	6%	3%	98%	96%	48	75%	20	100%	16	80%	10	33%	66	57%	160	64%
Gujarat	Porbandar	96%	6%	5%	91%	83%	30	46%	20	100%	16	80%	7	23%	84	73%	157	63%
Gujarat	Rajkot	91%	6%	5%	98%	88%	57	88%	20	100%	20	100%	16	52%	67	58%	179	72%
Gujarat	Sabarkantha	90%	3%	4%	99%	96%	57	88%	20	100%	16	80%	7	23%	76	66%	176	70%
Gujarat	Surat	95%	5%	3%	100%	85%	45	69%	20	100%	8	40%	17	58%	63	55%	154	61%
Gujarat	Surat MC	99%	8%	7%	100%	61%	58	89%	20	100%	16	80%	10	33%	59	52%	163	65%
Gujarat	Surendranagar	98%	7%	6%	99%	89%	57	88%	20	100%	20	100%	9	30%	67	58%	173	69%
Gujarat	The Dangs †	99%	3%	0%	100%	0%	58	89%	20	100%	16	80%	10	33%	81	71%	185	74%
Gujarat	Vadodara	94%	4%	2%	96%	70%	56	85%	20	100%	8	40%	27	91%	69	60%	180	72%
Gujarat	Vadodara Corp	86%	9%	4%	100%	84%	58	89%	20	100%	16	80%	20	67%	47	41%	161	65%
Gujarat	Valsad †	96%	3%	2%	98%	88%	43	67%	20	100%	8	40%	10	33%	91	80%	173	69%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Gujarat	Vyara (Surat)	8	6429	196	3%	892	7	4%	109	101	1311	160	78	30
Haryana	Ambala	12	14095	304	-9%	1531	9	-6%	132	83	1591	137	60	19
Haryana	Bhiwani	17	9034	136	0%	1389	7	7%	84	78	2063	124	49	21
Haryana	Faridabad	18	11476	157	9%	1324	9	21%	72	69	3493	191	45	37
Haryana	Fatehabad	10	5702	149	-7%	786	7	-9%	82	80	1313	137	52	32
Haryana	Gurgaon	15	10637	173	4%	1440	7	8%	93	70	2431	158	48	25
Haryana	Hisar	18	11437	161	0%	1869	6	3%	105	72	2087	118	47	20
Haryana	Jhajjar	10	7088	182	-8%	850	8	2%	87	97	1661	171	65	23
Haryana	Jind	14	7594	140	-16%	1175	6	-13%	87	79	1734	128	53	20
Haryana	Kaithal #	11	5773	132	-5%	764	8	7%	70	67	1214	111	46	18
Haryana	Karnal	15	10002	163	-6%	1610	6	-4%	105	88	2499	163	59	34
Haryana	Kurukshetra	10	7153	182	14%	1031	7	2%	105	83	1294	132	58	14
Haryana	Mahendragarh	9	6363	170	3%	932	7	-9%	99	79	1394	149	49	29
Haryana	Mewat #	11	4933	111	20%	852	6	20%	77	76	1330	120	47	16
Haryana	Palwal	11	5678	134	0%	820	7	0%	77	78	1520	143	54	31
Haryana	Panchkula	6	7861	345	-5%	726	11	7%	128	89	1102	194	65	31
Haryana	Panipat	12	7269	148	-3%	1020	7	-4%	83	74	2007	164	52	45
Haryana	Rewari	9	4991	137	-29%	676	7	-23%	74	61	1260	138	42	31
Haryana	Rohtak	11	13873	322	-18%	2325	6	-11%	216	103	2004	186	66	25
Haryana	Sirsa	13	8894	169	-4%	1301	7	-1%	99	80	1626	123	52	13
Haryana	Sonipat	15	10404	173	4%	1657	6	-10%	110	109	2957	196	77	32
Haryana	Yamunanagar	12	6902	140	-3%	1010	7	-8%	82	64	1456	118	50	16
Himachal Pradesh	Bilaspur (HP)	4	3723	241	-3%	383	10	-7%	99	104	614	159	71	16
Himachal Pradesh	Chamba	5	4878	233	15%	672	7	3%	128	131	1140	217	85	25
Himachal Pradesh	Hamirpur (HP)	5	4814	262	-6%	500	10	-7%	109	96	752	164	69	18
Himachal Pradesh	Kangra	15	14465	237	3%	1691	9	-2%	111	93	2571	169	72	25
Himachal Pradesh	Kinnaur †	1	995	292	-8%	101	10	-13%	119	112	203	238	83	18
Himachal Pradesh	Kullu	4	4327	245	-7%	491	9	-5%	111	115	1310	296	74	62
Himachal Pradesh	Lahul & Spiti †	0.3	572	449	18%	18	32	93%	57	72	70	220	47	44
Himachal Pradesh	Mandi	10	13009	322	26%	1089	12	19%	108	112	2020	200	73	26

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Gujarat	Vyara (Surat)	72	34	99	23	2%	94%	84%	91%	78%	773	92%	831	99%	683	93%	1146	87%
Haryana	Ambala	103	33	105	48	4%	93%	81%	88%	79%	883	89%	953	96%	771	89%	11	1%
Haryana	Bhiwani	64	38	128	64	4%	87%	66%	86%	66%	1121	83%	1213	90%	685	69%	105	5%
Haryana	Faridabad	258	44	102	288	11%	91%	74%	85%	67%	1183	91%	1177	91%	828	83%	261	7%
Haryana	Fatehabad	53	39	122	55	6%	91%	87%	87%	75%	522	66%	525	67%	441	77%	383	29%
Haryana	Gurgaon	171	42	95	141	8%	87%	62%	85%	63%	893	81%	998	90%	768	91%	1215	50%
Haryana	Hisar	53	37	115	64	4%	89%	76%	85%	68%	1186	88%	1212	90%	915	87%	343	16%
Haryana	Jhajjar	137	48	151	94	8%	91%	81%	85%	73%	963	96%	999	100%	906	95%	401	24%
Haryana	Jind	70	38	118	44	4%	92%	82%	87%	74%	997	90%	1074	97%	853	95%	494	28%
Haryana	Kaithal #	60	32	97	38	4%	91%	70%	85%	75%	708	93%	765	100%	587	91%	267	22%
Haryana	Karnal	111	41	128	103	6%	90%	69%	90%	79%	1295	92%	1403	100%	997	99%	1214	49%
Haryana	Kurukshetra	115	31	111	52	5%	93%	78%	89%	74%	801	95%	811	96%	596	91%	509	39%
Haryana	Mahendragarh	81	50	128	45	5%	90%	77%	85%	73%	699	92%	712	94%	425	80%	501	36%
Haryana	Mewat #	61	42	123	83	10%	92%	64%	89%	70%	789	91%	865	100%	516	80%	622	47%
Haryana	Palwal	84	38	110	106	9%	90%	79%	87%	84%	813	95%	828	97%	637	96%	1094	72%
Haryana	Panchkula	236	39	109	67	8%	90%	74%	85%	67%	487	93%	505	96%	385	93%	404	37%
Haryana	Panipat	97	43	97	106	7%	91%	85%	87%	78%	844	91%	928	100%	606	85%	1157	58%
Haryana	Rewari	112	37	91	42	5%	90%	76%	84%	74%	492	84%	537	91%	394	76%	683	54%
Haryana	Rohtak	177	51	157	81	6%	90%	72%	86%	71%	952	84%	1109	98%	688	69%	391	20%
Haryana	Sirsa	74	40	135	42	4%	89%	65%	85%	61%	1006	90%	1043	93%	618	73%	781	48%
Haryana	Sonipat	142	52	138	84	4%	90%	81%	89%	78%	1502	90%	1650	99%	1137	92%	700	24%
Haryana	Yamunanagar	97	27	82	35	3%	90%	64%	86%	68%	811	93%	842	97%	604	90%	1068	73%
Himachal Pradesh	Bilaspur (HP)	108	45	151	16	4%	89%	83%	86%	75%	407	97%	415	99%	277	86%	22	4%
Himachal Pradesh	Chamba	166	65	216	38	5%	92%	81%	88%	77%	714	98%	725	99%	460	89%	318	28%
Himachal Pradesh	Hamirpur (HP)	166	36	123	10	2%	92%	73%	88%	73%	444	97%	452	99%	345	93%	77	10%
Himachal Pradesh	Kangra	148	32	91	156	7%	94%	82%	91%	80%	1410	98%	1427	99%	955	85%	718	28%
Himachal Pradesh	Kinnaur †	286	62	136	7	5%	88%	64%	87%	77%	98	98%	100	100%	68	84%	37	18%
Himachal Pradesh	Kullu	359	70	175	131	13%	93%	79%	92%	84%	466	89%	481	92%	319	80%	365	28%
Himachal Pradesh	Lahul & Spiti †	339	44	100	8	14%	85%	88%	89%	100%	22	96%	22	96%	27	96%	0	0%
Himachal Pradesh	Mandi	193	52	167	46	3%	91%	78%	88%	75%	1116	96%	1157	99%	820	96%	339	17%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Gujarat	Vyara (Surat)	97%	3%	2%	100%	88%	58	89%	20	100%	16	80%	30	100%	81	71%	205	82%
Haryana	Ambala	64%	1%	1%	100%	56%	47	73%	20	100%	16	80%	10	33%	65	57%	158	63%
Haryana	Bhiwani	65%	1%	0%	63%	13%	42	65%	20	100%	8	40%	19	63%	56	49%	145	58%
Haryana	Faridabad	52%	1%	1%	100%	100%	44	68%	20	100%	4	20%	0	0%	44	38%	112	45%
Haryana	Fatehabad	56%	0%	0%	0%	0%	57	88%	20	100%	0	0%	9	30%	74	64%	160	64%
Haryana	Gurgaon	68%	1%	0%	100%	0%	40	62%	20	100%	12	60%	0	0%	43	37%	115	46%
Haryana	Hisar	72%	1%	0%	50%	25%	52	79%	20	100%	16	80%	0	0%	46	40%	133	53%
Haryana	Jhajjar	54%	2%	1%	67%	100%	57	88%	20	100%	12	60%	11	38%	69	60%	170	68%
Haryana	Jind	54%	1%	1%	40%	60%	43	67%	10	50%	4	20%	11	36%	80	70%	148	59%
Haryana	Kaithal #	42%	0%	0%	0%	100%	52	80%	20	100%	12	60%	16	52%	52	45%	152	61%
Haryana	Karnal	84%	0%	0%	33%	67%	44	68%	20	100%	12	60%	7	23%	82	71%	165	66%
Haryana	Kurukshetra	59%	2%	0%			53	82%	20	100%	20	100%	0	0%	50	44%	143	57%
Haryana	Mahendragarh	89%	1%	0%	33%	33%	53	81%	20	100%	0	0%	20	67%	66	58%	159	64%
Haryana	Mewat #	69%	0%	0%			37	57%	20	100%	20	100%	0	0%	55	48%	132	53%
Haryana	Palwal	76%	2%	0%			46	71%	20	100%	16	80%	20	67%	83	72%	185	74%
Haryana	Panchkula	68%	2%	0%	100%	50%	53	82%	20	100%	12	60%	5	17%	39	34%	130	52%
Haryana	Panipat	61%	1%	1%	100%	77%	45	70%	10	50%	16	80%	7	23%	82	71%	161	64%
Haryana	Rewari	60%	1%	1%	100%	50%	49	76%	10	50%	12	60%	0	0%	43	37%	114	46%
Haryana	Rohtak	51%	2%	1%	100%	94%	49	75%	20	100%	12	60%	5	17%	54	47%	139	56%
Haryana	Sirsa	54%	1%	0%			43	66%	20	100%	20	100%	0	0%	47	41%	130	52%
Haryana	Sonipat	98%	1%	1%	96%	35%	55	85%	20	100%	12	60%	20	67%	67	59%	175	70%
Haryana	Yamunanagar	61%	1%	0%	0%	100%	52	79%	20	100%	20	100%	10	33%	62	54%	164	66%
Himachal Pradesh	Bilaspur (HP)	61%	1%	0%			48	74%	20	100%	20	100%	20	67%	71	62%	179	72%
Himachal Pradesh	Chamba	76%	1%	0%			44	68%	20	100%	16	80%	11	37%	85	74%	176	70%
Himachal Pradesh	Hamirpur (HP)	61%	4%	0%	100%	100%	48	74%	20	100%	20	100%	10	33%	82	71%	179	72%
Himachal Pradesh	Kangra	90%	1%	1%	88%	76%	52	80%	20	100%	20	100%	9	30%	87	76%	188	75%
Himachal Pradesh	Kinnaur †	25%	0%	0%			46	70%	20	100%	16	80%	10	33%	69	60%	161	64%
Himachal Pradesh	Kullu	25%	0%	0%			50	77%	20	100%	12	60%	4	12%	62	54%	148	59%
Himachal Pradesh	Lahul & Spiti †	10%	0%	0%			41	63%	20	100%	20	100%	0	0%	76	66%	157	63%
Himachal Pradesh	Mandi	23%	1%	0%	100%	100%	53	82%	20	100%	20	100%	15	50%	66	57%	174	70%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Himachal Pradesh	Shimla	8	10257	312	0%	1310	8	-9%	159	97	1763	215	70	30
Himachal Pradesh	Sirmaur	5	4454	208	-3%	525	8	3%	98	100	1102	206	73	44
Himachal Pradesh	Solan	6	8381	360	-5%	760	11	11%	130	89	1307	224	70	57
Himachal Pradesh	Una	5	4526	215	8%	503	9	0%	96	96	763	145	76	21
Jammu & Kashmir	Anantnag	15	11959	196	-2%	719	17	7%	47	47	1000	66	42	7
Jammu & Kashmir	Badgam	8	5415	180	1%	399	14	13%	53	55	556	74	53	7
Jammu & Kashmir	Baramula	14	8695	152	5%	615	14	9%	43	41	868	61	35	4
Jammu & Kashmir	Doda	9	4194	111	-14%	372	11	-2%	39	41	964	102	29	22
Jammu & Kashmir	Jammu	19	18077	240	-4%	2606	7	-7%	138	104	2998	159	73	21
Jammu & Kashmir	Kargil †	1	1280	219	-1%	78	16	-9%	53	53	178	122	44	37
Jammu & Kashmir	Kathua	6	4130	164	-5%	549	8	8%	87	87	949	151	59	28
Jammu & Kashmir	Kupwara	9	6273	176	-4%	457	14	11%	51	61	741	83	54	8
Jammu & Kashmir	Leh (Ladakh) †	2	1545	257	14%	76	20	14%	51	51	178	119	42	9
Jammu & Kashmir	Poonch	5	2610	134	-20%	260	10	-16%	53	52	543	112	42	27
Jammu & Kashmir	Pulwama	9	5442	160	-9%	421	13	25%	49	58	668	78	55	10
Jammu & Kashmir	Rajouri	6	3742	148	-20%	341	11	-4%	54	51	680	108	37	13
Jammu & Kashmir	Srinagar	16	12125	190	-20%	707	17	22%	44	37	1256	79	31	14
Jammu & Kashmir	Udhampur	9	6936	195	-15%	646	11	-3%	73	70	1083	122	47	11
Jharkhand	Bokaro	21	11249	134	-7%	1359	8	-1%	65	63	2427	115	53	27
Jharkhand	Chatra #	11	3837	90	-6%	643	6	2%	60	58	941	88	52	23
Jharkhand	Deoghar #	15	8412	138	5%	987	9	7%	65	60	1145	75	55	9
Jharkhand	Dhanbad	27	12499	114	-5%	1637	8	10%	60	56	2760	101	50	26
Jharkhand	Dumka #	13	7909	147	7%	1172	7	10%	87	85	2147	159	75	55
Jharkhand	Garhwa	14	5236	97	-3%	727	7	14%	54	52	1722	127	45	55
Jharkhand	Giridih #	25	8103	81	-8%	1396	6	-4%	56	54	1802	72	46	11
Jharkhand	Godda #	13	5202	97	-1%	700	7	6%	52	49	1420	106	43	39
Jharkhand	Gumla # †	10	3691	88	-5%	619	6	-3%	59	55	885	84	50	15
Jharkhand	Hazaribagh #	18	9816	139	-5%	1156	8	-10%	65	59	1867	105	51	31
Jharkhand	Jamtara #	8	3533	109	-7%	563	6	-3%	70	67	922	114	57	25
Jharkhand	Khunti # †	5	1414	65	-5%	285	5	18%	53	51	414	76	46	14

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Himachal Pradesh	Shimla	267	48	116	85	6%	96%	91%	91%	88%	769	94%	719	88%	604	94%	146	8%
Himachal Pradesh	Sirmaur	161	49	117	45	5%	89%	81%	87%	78%	539	98%	530	97%	389	89%	288	26%
Himachal Pradesh	Solan	205	46	85	78	8%	88%	78%	89%	74%	523	99%	527	100%	475	98%	312	24%
Himachal Pradesh	Una	84	27	87	15	2%	92%	70%	96%	79%	513	99%	520	101%	431	100%	186	24%
Jammu & Kashmir	Anantnag	38	7	27	125	14%	92%	76%	92%	89%	729	99%	729	99%	459	65%	155	16%
Jammu & Kashmir	Badgam	45	3	10	47	9%	93%	77%	88%	67%	402	97%	414	100%	348	86%	88	16%
Jammu & Kashmir	Baramula	55	8	26	49	6%	96%	92%	89%	87%	592	100%	592	100%	446	98%	107	12%
Jammu & Kashmir	Doda	131	19	57	66	8%	89%	67%	90%	80%	404	100%	404	100%	319	100%	0	0%
Jammu & Kashmir	Jammu	100	40	140	100	4%	88%	74%	87%	71%	1985	98%	1999	98%	1471	93%	579	19%
Jammu & Kashmir	Kargil †	93	17	36	13	8%	98%	100%	98%	75%	78	100%	78	100%	64	100%	18	10%
Jammu & Kashmir	Kathua	94	40	126	27	4%	85%	71%	82%	75%	551	97%	569	100%	388	98%	0	0%
Jammu & Kashmir	Kupwara	49	8	29	46	7%	90%	64%	91%	79%	549	100%	549	100%	548	99%	84	11%
Jammu & Kashmir	Leh (Ladakh) †	208	15	43	2	1%	81%	80%	67%	72%	75	95%	75	95%	26	60%	13	7%
Jammu & Kashmir	Poonch	113	14	45	33	7%	90%	67%	91%	78%	259	100%	259	100%	198	88%	0	0%
Jammu & Kashmir	Pulwama	38	4	13	45	7%	92%	73%	92%	81%	362	73%	362	73%	568	100%	54	8%
Jammu & Kashmir	Rajouri	154	18	58	39	7%	90%	83%	93%	79%	322	99%	325	100%	289	87%	0	0%
Jammu & Kashmir	Srinagar	104	7	24	166	15%	90%	74%	90%	83%	594	100%	594	100%	848	100%	53	4%
Jammu & Kashmir	Udhampur	141	29	98	21	3%	90%	79%	87%	84%	593	93%	628	99%	524	87%	79	7%
Jharkhand	Bokaro	54	22	43	90	5%	92%	73%	90%	79%	1262	94%	1349	100%	954	83%	1899	78%
Jharkhand	Chatra #	8	12	30	28	3%	91%	74%	93%	88%	565	90%	619	98%	488	87%	871	93%
Jharkhand	Deoghar #	12	8	21	43	4%	96%	94%	95%	90%	806	88%	916	100%	720	86%	819	72%
Jharkhand	Dhanbad	32	16	24	154	7%	93%	78%	92%	78%	1403	91%	1507	98%	1305	85%	1610	58%
Jharkhand	Dumka #	11	27	45	46	3%	93%	81%	94%	88%	967	83%	1160	100%	817	84%	2085	97%
Jharkhand	Garhwa	17	23	29	129	9%	89%	88%	95%	84%	549	77%	711	100%	422	64%	1354	79%
Jharkhand	Giridih #	15	11	33	94	6%	90%	78%	91%	86%	1192	88%	1357	100%	834	74%	1453	81%
Jharkhand	Godda #	13	21	29	45	4%	83%	85%	91%	88%	558	83%	660	99%	238	54%	963	68%
Jharkhand	Gumla # †	25	11	22	30	4%	91%	80%	91%	77%	460	79%	579	100%	299	67%	779	88%
Jharkhand	Hazaribagh #	33	15	39	140	9%	93%	77%	88%	78%	1016	95%	1070	100%	648	75%	1672	90%
Jharkhand	Jamtara #	8	30	40	15	2%	94%	76%	94%	80%	446	82%	542	100%	318	64%	687	75%
Jharkhand	Khunti # †	37	6	20	17	4%	89%	61%	88%	74%	260	94%	274	99%	192	66%	414	100%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Himachal Pradesh	Shimla	50%	0%	0%			41	63%	20	100%	12	60%	12	41%	56	48%	141	56%
Himachal Pradesh	Sirmaur	41%	1%	0%	100%	0%	49	76%	20	100%	12	60%	0	1%	69	60%	150	60%
Himachal Pradesh	Solan	70%	0%	0%			53	81%	20	100%	12	60%	20	67%	63	55%	168	67%
Himachal Pradesh	Una	72%	3%	0%	0%	0%	47	72%	20	100%	20	100%	10	33%	78	67%	174	70%
Jammu & Kashmir	Anantnag	43%	0%	0%			50	77%	0	0%	20	100%	10	33%	81	70%	161	64%
Jammu & Kashmir	Badgam	26%	0%	0%			44	67%	20	100%	16	80%	10	33%	71	62%	161	64%
Jammu & Kashmir	Baramula	2%	0%	0%			53	82%	20	100%	20	100%	10	33%	48	42%	151	60%
Jammu & Kashmir	Doda	4%	0%	0%			37	57%	10	50%	20	100%	0	0%	51	44%	118	47%
Jammu & Kashmir	Jammu	16%	4%	0%	33%	44%	36	55%	20	100%	8	40%	15	49%	54	47%	132	53%
Jammu & Kashmir	Kargil †	0%		0%			37	56%	20	100%	20	100%	10	33%	78	68%	165	66%
Jammu & Kashmir	Kathua	0%		0%			48	74%	20	100%	4	20%	7	23%	42	37%	121	48%
Jammu & Kashmir	Kupwara	91%	0%	0%			51	79%	20	100%	20	100%	10	33%	83	72%	184	74%
Jammu & Kashmir	Leh (Ladakh) †	29%	0%	0%			50	77%	20	100%	20	100%	0	0%	77	67%	168	67%
Jammu & Kashmir	Poonch	0%		0%			31	48%	20	100%	20	100%	10	33%	68	59%	149	60%
Jammu & Kashmir	Pulwama	20%	0%	0%			58	89%	20	100%	12	60%	10	33%	84	73%	184	74%
Jammu & Kashmir	Rajouri	0%		0%			53	81%	20	100%	16	80%	10	33%	38	33%	137	55%
Jammu & Kashmir	Srinagar	21%	0%	0%			54	83%	20	100%	16	80%	10	33%	44	38%	144	58%
Jammu & Kashmir	Udhampur	5%	2%	0%			51	79%	20	100%	12	60%	0	0%	53	46%	137	55%
Jharkhand	Bokaro	15%	1%	0%	33%	33%	39	60%	20	100%	16	80%	5	17%	77	67%	158	63%
Jharkhand	Chatra #	52%	1%	0%			40	61%	10	50%	0	0%	0	0%	89	77%	139	56%
Jharkhand	Deoghar #	71%	0%	0%	0%	50%	43	66%	10	50%	20	100%	0	0%	71	62%	144	58%
Jharkhand	Dhanbad	23%	1%	0%	33%	67%	47	72%	10	50%	20	100%	17	57%	55	48%	149	60%
Jharkhand	Dumka #	52%	0%	0%	0%	0%	41	64%	20	100%	20	100%	5	17%	73	64%	160	64%
Jharkhand	Garhwa	13%	1%	0%			51	78%	10	50%	12	60%	10	33%	66	57%	148	59%
Jharkhand	Giridih #	21%	1%	0%	0%	0%	48	73%	10	50%	16	80%	0	0%	64	56%	137	55%
Jharkhand	Godda #	28%	0%	0%			51	79%	10	50%	20	100%	0	0%	75	65%	156	62%
Jharkhand	Gumla # †	63%	0%	0%	0%	0%	42	65%	20	100%	20	100%	5	17%	84	73%	171	68%
Jharkhand	Hazaribagh #	48%	6%	3%	0%	100%	47	72%	20	100%	20	100%	0	0%	72	62%	159	63%
Jharkhand	Jamtara #	38%	0%	0%	0%	100%	53	81%	20	100%	20	100%	5	17%	70	61%	168	67%
Jharkhand	Khunti # †	38%	0%	0%	0%	100%	43	66%	20	100%	20	100%	10	33%	50	44%	143	57%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Jharkhand	Kodarma #	7	2478	85	-17%	247	10	7%	34	30	371	51	26	13
Jharkhand	Lathehar #	7	4231	143	-12%	517	8	-9%	70	68	799	108	57	27
Jharkhand	Lohardaga †	5	1606	85	1%	267	6	-4%	57	55	432	92	46	21
Jharkhand	Pakaur #	9	4742	129	-3%	882	5	-1%	96	90	1237	135	80	29
Jharkhand	Palamu #	20	11065	140	-4%	1504	7	3%	76	72	2653	134	61	42
Jharkhand	Pashchimi Singhbhum †	15	6456	105	2%	1317	5	-2%	86	80	2472	161	75	65
Jharkhand	Purbi Singhbhum # †	23	9835	105	6%	1843	5	11%	79	66	2798	120	56	28
Jharkhand	Ramgarh #	10	4691	121	5%	581	8	-1%	60	58	1021	105	48	29
Jharkhand	Ranchi # †	30	14545	122	-2%	2071	7	4%	70	53	3010	101	43	28
Jharkhand	Sahibganj #	12	5960	127	-7%	753	8	-7%	64	58	1473	125	50	49
Jharkhand	Saraikela-Kharsawan #	11	5905	136	9%	688	9	15%	63	63	1301	120	57	43
Jharkhand	Simdega #	6	2550	104	-12%	450	6	4%	73	74	647	106	64	18
Karnataka	Bagalkot	19	14146	185	-7%	1283	11	3%	67	52	2151	112	40	35
Karnataka	Bangalore City	75	45882	153	-4%	6058	8	-6%	81	37	5976	80	26	11
Karnataka	Bangalore Rural	10	7752	194	0%	624	12	1%	62	60	1156	116	48	19
Karnataka	Bangalore Urban	22	20089	225	4%	1653	12	-1%	74	93	4116	184	71	25
Karnataka	Belgaum	48	34180	176	5%	2492	14	6%	51	48	4865	100	41	35
Karnataka	Bellary	26	20237	197	0%	2249	9	7%	88	62	3061	119	46	29
Karnataka	Bidar #	17	12118	176	-28%	1117	11	-10%	65	59	2327	135	43	48
Karnataka	Bijapur	22	12704	144	-24%	1341	9	-10%	61	49	2018	92	40	29
Karnataka	Chamarajanagar	10	9493	229	-5%	719	13	-5%	70	77	1376	133	57	21
Karnataka	Chikkaballapur	13	9244	182	-13%	1054	9	-7%	83	74	1633	128	58	21
Karnataka	Chikmagalur	12	12337	268	-5%	621	20	3%	54	49	1005	87	38	12
Karnataka	Chitradurga	17	13841	206	23%	1379	10	11%	82	76	2336	139	63	30
Karnataka	Dakshina Kannada	21	19897	236	-12%	1525	13	-18%	72	49	1785	85	38	12
Karnataka	Davanagere	20	17831	226	-10%	1590	11	-8%	81	56	2058	104	43	20
Karnataka	Dharwad	19	14858	198	-8%	1563	10	-11%	84	54	1803	96	43	13
Karnataka	Gadag	11	9894	229	0%	868	11	9%	80	71	1218	113	55	20
Karnataka	Gulbarga #	26	19034	183	-14%	1811	11	-5%	70	60	2792	107	42	18
Karnataka	Hassan	18	19425	270	-6%	1114	17	-10%	62	55	1625	90	44	13

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Jharkhand	Kodarma #	11	9	17	22	7%	86%	73%	83%	64%	207	92%	224	100%	144	76%	271	73%
Jharkhand	Lathehar #	25	17	45	49	7%	94%	82%	94%	84%	430	84%	501	98%	223	44%	576	72%
Jharkhand	Lohardaga †	37	15	41	18	5%	88%	65%	83%	60%	205	78%	243	92%	106	60%	426	99%
Jharkhand	Pakaur #	11	23	44	21	2%	92%	89%	89%	73%	578	69%	836	100%	293	39%	1132	92%
Jharkhand	Palamu #	44	20	45	189	8%	93%	80%	93%	78%	1299	91%	1421	100%	1142	87%	576	22%
Jharkhand	Pashchimi Singhbhum †	27	14	23	61	3%	93%	83%	91%	82%	1033	84%	1217	99%	529	53%	2002	81%
Jharkhand	Purbi Singhbhum # †	49	24	46	97	4%	92%	78%	90%	70%	1425	91%	1566	100%	1168	87%	1928	69%
Jharkhand	Ramgarh #	47	17	43	41	5%	86%	73%	91%	74%	508	90%	527	93%	229	54%	581	57%
Jharkhand	Ranchi # †	48	19	40	161	7%	94%	74%	91%	62%	1455	92%	1529	97%	1138	82%	1806	60%
Jharkhand	Sahibganj #	25	20	34	101	8%	91%	86%	88%	83%	595	86%	680	99%	362	66%	1047	71%
Jharkhand	Saraikela-Kharsawan #	23	14	24	25	2%	93%	94%	93%	82%	600	87%	687	100%	383	63%	919	71%
Jharkhand	Simdega #	42	13	41	10	2%	74%	60%	78%	48%	388	85%	431	95%	238	71%	592	91%
Karnataka	Bagalkot	61	22	51	190	11%	88%	66%	81%	64%	809	79%	967	95%	660	77%	969	45%
Karnataka	Bangalore City	102	17	50	428	9%	86%	55%	82%	53%	2448	86%	2841	100%	1886	90%	1806	30%
Karnataka	Bangalore Rural	115	19	55	34	4%	90%	63%	83%	59%	552	89%	621	100%	428	90%	604	52%
Karnataka	Bangalore Urban	213	34	94	229	7%	89%	71%	85%	59%	1799	85%	2082	98%	1353	84%	2934	71%
Karnataka	Belgaum	45	13	29	994	24%	89%	75%	82%	71%	2149	92%	2317	99%	1511	79%	2216	46%
Karnataka	Bellary	79	25	74	258	11%	89%	59%	83%	59%	1376	84%	1517	92%	968	74%	1246	41%
Karnataka	Bidar #	50	32	81	95	5%	90%	60%	81%	52%	1003	93%	1039	96%	740	83%	765	33%
Karnataka	Bijapur	23	17	42	119	7%	88%	69%	85%	59%	881	79%	1001	90%	609	68%	956	47%
Karnataka	Chamarajanagar	114	26	87	67	6%	87%	67%	86%	58%	741	91%	785	96%	561	89%	674	49%
Karnataka	Chikkaballapur	99	25	80	88	7%	89%	58%	85%	57%	757	76%	980	99%	570	69%	795	49%
Karnataka	Chikmagalur	78	18	55	39	5%	89%	56%	86%	53%	526	88%	591	99%	290	65%	686	68%
Karnataka	Chitradurga	78	26	60	119	6%	89%	61%	85%	55%	1159	88%	1270	97%	769	81%	1804	77%
Karnataka	Dakshina Kannada	62	19	54	65	5%	85%	60%	84%	57%	994	91%	1032	95%	717	88%	967	54%
Karnataka	Davanagere	78	22	56	65	4%	88%	68%	79%	55%	991	88%	1074	95%	672	78%	1186	58%
Karnataka	Dharwad	96	16	49	122	8%	86%	61%	84%	58%	901	87%	1030	100%	639	81%	487	27%
Karnataka	Gadag	56	24	70	80	8%	89%	69%	85%	64%	670	85%	773	98%	564	87%	227	19%
Karnataka	Gulbarga #	59	32	80	123	6%	87%	47%	80%	48%	1417	87%	1510	93%	850	72%	1532	55%
Karnataka	Hassan	69	17	50	48	4%	91%	70%	85%	54%	889	88%	966	96%	665	87%	902	56%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Jharkhand	Kodarma #	31%	12%	1%	0%	75%	35	53%	10	50%	16	80%	0	0%	54	47%	115	46%
Jharkhand	Lathehar #	26%	1%	0%	0%	50%	53	82%	0	0%	12	60%	11	38%	85	74%	161	64%
Jharkhand	Lohardaga †	48%	1%	0%			53	82%	10	50%	20	100%	15	50%	56	48%	153	61%
Jharkhand	Pakaur #	3%	0%	0%			39	61%	20	100%	20	100%	0	0%	86	75%	165	66%
Jharkhand	Palamu #	40%	2%	0%	0%	31%	47	72%	20	100%	20	100%	10	33%	75	65%	172	69%
Jharkhand	Pashchimi Singhbhum †	36%	0%	0%			45	69%	10	50%	16	80%	0	0%	61	53%	132	53%
Jharkhand	Purbi Singhbhum # †	28%	3%	1%	33%	89%	44	68%	10	50%	20	100%	5	17%	57	50%	136	54%
Jharkhand	Ramgarh #	39%	0%	0%			34	53%	10	50%	8	40%	8	28%	61	53%	122	49%
Jharkhand	Ranchi # †	42%	1%	0%	0%	86%	49	76%	10	50%	20	100%	10	33%	72	63%	162	65%
Jharkhand	Sahibganj #	42%	4%	1%	0%	100%	50	77%	20	100%	16	80%	5	17%	56	49%	147	59%
Jharkhand	Saraikela-Kharsawan #	33%	0%	0%			51	79%	0	0%	12	60%	7	23%	83	72%	153	61%
Jharkhand	Simdega #	29%	1%	0%			32	49%	20	100%	16	80%	14	48%	60	52%	142	57%
Karnataka	Bagalkot	98%	42%	32%	100%	85%	57	87%	10	50%	16	80%	4	15%	70	60%	157	63%
Karnataka	Bangalore City	85%	6%	5%	98%	72%	42	65%	20	100%	16	80%	0	0%	53	46%	132	53%
Karnataka	Bangalore Rural	98%	7%	5%	100%	87%	57	87%	20	100%	16	80%	8	27%	42	37%	143	57%
Karnataka	Bangalore Urban	90%	10%	7%	100%	82%	53	81%	20	100%	8	40%	11	37%	64	56%	156	62%
Karnataka	Belgaum	95%	22%	18%	100%	83%	57	88%	10	50%	8	40%	5	17%	71	62%	151	60%
Karnataka	Bellary	96%	13%	10%	100%	78%	56	87%	10	50%	16	80%	15	50%	66	57%	163	65%
Karnataka	Bidar #	93%	9%	6%	100%	82%	57	88%	10	50%	16	80%	15	50%	56	49%	154	62%
Karnataka	Bijapur	96%	31%	27%	97%	77%	51	79%	10	50%	16	80%	5	17%	53	46%	136	54%
Karnataka	Chamarajanagar	93%	9%	8%	97%	77%	56	86%	10	50%	8	40%	18	58%	69	60%	160	64%
Karnataka	Chikkaballapur	96%	7%	6%	98%	88%	52	79%	10	50%	8	40%	15	50%	50	43%	134	54%
Karnataka	Chikmagalur	94%	10%	7%	97%	82%	49	76%	10	50%	8	40%	15	51%	40	35%	123	49%
Karnataka	Chitradurga	90%	9%	6%	88%	74%	45	70%	10	50%	12	60%	5	17%	65	56%	137	55%
Karnataka	Dakshina Kannada	98%	8%	9%	99%	97%	55	85%	10	50%	16	80%	0	0%	46	40%	127	51%
Karnataka	Davanagere	87%	15%	11%	97%	73%	56	86%	10	50%	16	80%	12	40%	64	56%	158	63%
Karnataka	Dharwad	95%	15%	11%	100%	86%	55	84%	10	50%	12	60%	5	17%	48	42%	130	52%
Karnataka	Gadag	98%	16%	16%	100%	83%	57	88%	20	100%	16	80%	14	47%	48	42%	156	62%
Karnataka	Gulbarga #	92%	14%	9%	100%	95%	51	79%	20	100%	12	60%	0	0%	48	42%	131	52%
Karnataka	Hassan	97%	9%	8%	100%	81%	57	88%	10	50%	16	80%	14	45%	38	33%	135	54%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Karnataka	Haveri	16	10176	157	-23%	902	11	9%	56	55	1971	122	42	39
Karnataka	Kodagu	6	5361	238	3%	282	19	0%	50	43	412	73	36	10
Karnataka	Kolar	16	11402	183	-4%	1083	11	-4%	69	55	1523	98	46	14
Karnataka	Koppal	14	9600	170	3%	1130	8	11%	80	77	1891	134	57	30
Karnataka	Mandya	18	20028	273	-8%	1297	15	-8%	71	67	1993	109	52	13
Karnataka	Mysore	30	36054	297	1%	3583	10	-2%	118	65	3653	120	50	23
Karnataka	Raichur	20	16112	207	7%	1900	8	13%	97	78	2873	147	59	42
Karnataka	Ramanagara	11	11647	265	-1%	761	15	9%	69	71	1311	119	52	16
Karnataka	Shimoga	18	16158	227	-3%	1143	14	3%	64	62	1877	106	52	16
Karnataka	Tumkur	27	24873	229	-5%	2187	11	-4%	80	67	3268	120	53	20
Karnataka	Udupi	12	11322	237	-9%	829	14	-6%	69	51	974	82	40	10
Karnataka	Uttara Kannada	15	13293	228	-2%	674	20	-2%	46	42	1252	86	35	21
Karnataka	Yadgiri #	12	7495	158	3%	747	10	-16%	63	58	1273	107	43	24
Kerala	Alappuzha	21	22616	266	-7%	999	23	-16%	47	48	2017	95	41	26
Kerala	Ernakulam	33	31090	236	9%	1744	18	8%	53	41	2569	78	35	19
Kerala	Idukki	11	16105	362	0%	315	51	21%	28	26	653	59	23	11
Kerala	Kannur	25	27434	271	5%	1006	27	0%	40	32	1732	68	27	12
Kerala	Kasaragod	13	10345	198	6%	468	22	4%	36	36	871	67	30	10
Kerala	Kollam	26	32527	308	15%	1242	26	9%	47	43	2205	84	38	21
Kerala	Kottayam	20	31568	397	8%	1241	25	-4%	62	53	1833	92	47	14
Kerala	Kozhikode	31	26029	210	-6%	1222	21	-8%	39	31	2358	76	26	19
Kerala	Malappuram	41	38451	233	12%	1226	31	7%	30	27	2676	65	23	17
Kerala	Palakkad	28	21615	192	3%	1325	16	-5%	47	42	2158	77	37	10
Kerala	Pathanamthitta	12	14396	300	16%	624	23	21%	52	47	1095	91	41	20
Kerala	Thiruvananthapuram	33	51705	389	8%	1750	30	12%	53	43	2676	81	38	15
Kerala	Thrissur	31	35545	285	9%	1723	21	5%	55	43	2403	77	37	11
Kerala	Wayanad	8	9098	278	11%	297	31	5%	36	34	671	82	30	24
Lakshadweep	Lakshadweep †	1	1130	437	18%	11	103	8%	17	19	20	31	17	2
Madhya Pradesh	Alirajpur # †	7	3153	106	59%	365	9	37%	49	46	552	74	40	19
Madhya Pradesh	Anuppur	8	3604	118	-11%	458	8	-10%	60	56	720	94	51	30

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Karnataka	Haveri	71	23	54	291	18%	86%	72%	83%	71%	705	78%	867	96%	736	76%	1488	75%
Karnataka	Kodagu	65	11	36	21	6%	88%	61%	85%	73%	215	86%	251	100%	186	92%	248	60%
Karnataka	Kolar	94	14	43	74	6%	89%	67%	84%	57%	768	87%	866	98%	490	75%	769	50%
Karnataka	Koppal	57	33	96	133	9%	85%	61%	78%	52%	991	86%	1124	98%	665	87%	1188	63%
Karnataka	Mandya	84	23	71	96	6%	91%	64%	87%	65%	1140	89%	1233	96%	947	94%	1332	67%
Karnataka	Mysore	106	21	64	255	8%	86%	65%	82%	56%	1852	92%	1890	94%	1153	79%	1309	36%
Karnataka	Raichur	49	35	89	339	15%	87%	62%	83%	59%	1355	86%	1416	90%	829	69%	2155	75%
Karnataka	Ramanagara	101	26	85	82	8%	91%	64%	86%	61%	670	83%	765	95%	484	73%	712	54%
Karnataka	Shimoga	92	14	44	85	5%	90%	68%	86%	71%	1007	90%	1092	98%	746	77%	1041	55%
Karnataka	Tumkur	101	22	68	173	6%	86%	63%	83%	61%	1698	90%	1856	98%	1353	89%	1982	61%
Karnataka	Udupi	55	18	55	44	6%	84%	60%	85%	61%	626	97%	635	98%	518	96%	562	58%
Karnataka	Uttara Kannada	62	15	38	108	10%	88%	67%	84%	60%	553	86%	611	95%	415	83%	744	59%
Karnataka	Yadgiri #	44	29	66	61	7%	82%	55%	73%	48%	506	71%	603	84%	227	60%	881	69%
Kerala	Alappuzha	66	12	35	308	17%	84%	70%	85%	68%	997	95%	977	93%	637	80%	1575	78%
Kerala	Ernakulam	46	13	35	285	13%	81%	58%	80%	57%	1222	86%	1231	87%	781	78%	1276	50%
Kerala	Idukki	75	6	21	57	10%	78%	71%	82%	63%	282	90%	298	95%	223	77%	498	76%
Kerala	Kannur	78	10	26	168	11%	86%	71%	86%	72%	775	91%	808	95%	537	83%	865	50%
Kerala	Kasaragod	62	12	33	32	4%	86%	69%	82%	55%	453	92%	474	96%	247	70%	589	68%
Kerala	Kollam	61	10	30	200	10%	88%	74%	86%	69%	1116	93%	1174	98%	767	82%	792	36%
Kerala	Kottayam	83	11	32	144	9%	84%	62%	84%	71%	953	87%	934	86%	563	71%	944	52%
Kerala	Kozhikode	88	8	25	462	22%	82%	61%	82%	67%	898	88%	987	97%	616	82%	1522	65%
Kerala	Malappuram	69	8	22	520	22%	81%	67%	84%	71%	985	83%	1123	95%	640	72%	2122	79%
Kerala	Palakkad	80	10	33	133	7%	81%	62%	85%	64%	1026	81%	1068	85%	748	75%	1651	77%
Kerala	Pathanamthitta	78	11	32	105	11%	87%	72%	86%	70%	556	95%	572	98%	242	55%	722	66%
Kerala	Thiruvananthapuram	71	10	31	203	9%	84%	71%	83%	67%	1336	89%	1414	94%	888	80%	1768	66%
Kerala	Thrissur	74	11	33	242	12%	81%	61%	82%	65%	1194	85%	1220	87%	807	80%	1503	63%
Kerala	Wayanad	86	7	22	114	19%	83%	68%			252	88%	277	97%	188		467	70%
Lakshadweep	Lakshadweep †	37	3	6	2	11%	86%	100%	100%	60%	12	100%	12	100%	15	136%	5	25%
Madhya Pradesh	Alirajpur # †	22	9	28	21	4%	89%	73%	84%	67%	277	79%	344	99%	160	66%	175	32%
Madhya Pradesh	Anuppur	20	8	23	47	7%	90%	74%	90%	65%	347	80%	422	97%	203	54%	92	13%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Karnataka	Haveri	79%	8%	8%	100%	88%	58	89%	10	50%	8	40%	0	1%	54	47%	130	52%
Karnataka	Kodagu	97%	8%	6%	100%	92%	52	80%	10	50%	8	40%	13	43%	73	63%	155	62%
Karnataka	Kolar	99%	10%	6%	100%	85%	50	78%	20	100%	16	80%	19	63%	54	47%	159	64%
Karnataka	Koppal	99%	15%	12%	99%	89%	48	74%	20	100%	8	40%	5	16%	68	60%	150	60%
Karnataka	Mandya	98%	12%	8%	100%	97%	52	80%	20	100%	16	80%	10	34%	48	42%	146	59%
Karnataka	Mysore	95%	9%	8%	100%	89%	50	77%	10	50%	16	80%	10	33%	38	33%	125	50%
Karnataka	Raichur	94%	13%	10%	98%	72%	56	86%	10	50%	20	100%	5	17%	52	45%	143	57%
Karnataka	Ramanagara	98%	6%	6%	97%	88%	45	69%	20	100%	16	80%	15	48%	42	36%	137	55%
Karnataka	Shimoga	93%	8%	5%	100%	93%	56	86%	10	50%	8	40%	5	17%	75	66%	154	62%
Karnataka	Tumkur	97%	11%	13%	100%	73%	56	87%	10	50%	12	60%	5	17%	69	60%	152	61%
Karnataka	Udupi	98%	15%	13%	100%	100%	45	69%	20	100%	12	60%	5	17%	54	47%	135	54%
Karnataka	Uttara Kannada	90%	9%	7%	99%	87%	57	88%	20	100%	12	60%	0	0%	96	84%	185	74%
Karnataka	Yadgiri #	94%	12%	8%	100%	90%	46	71%	10	50%	12	60%	5	17%	64	56%	137	55%
Kerala	Alappuzha	71%	2%	1%	100%	100%	46	71%	10	50%	16	80%	20	67%	64	55%	156	62%
Kerala	Ernakulam	69%	1%	1%	77%	85%	48	74%	20	100%	12	60%	7	23%	61	53%	148	59%
Kerala	Idukki	82%	2%	1%	43%	71%	43	66%	20	100%	16	80%	16	52%	90	78%	184	74%
Kerala	Kannur	85%	3%	1%	65%	95%	54	84%	20	100%	20	100%	21	70%	66	58%	182	73%
Kerala	Kasaragod	100%	4%	4%	100%	94%	49	75%	20	100%	12	60%	20	67%	63	55%	164	65%
Kerala	Kollam	100%	2%	1%	96%	100%	52	80%	20	100%	20	100%	30	100%	81	71%	203	81%
Kerala	Kottayam	83%	2%	1%	100%	100%	47	73%	20	100%	16	80%	7	23%	71	62%	161	64%
Kerala	Kozhikode	72%	3%	1%	94%	88%	40	61%	20	100%	20	100%	11	37%	49	42%	140	56%
Kerala	Malappuram	89%	1%	1%	92%	96%	51	79%	20	100%	20	100%	12	40%	63	54%	166	66%
Kerala	Palakkad	62%	3%	2%	46%	94%	53	82%	20	100%	16	80%	9	30%	75	65%	173	69%
Kerala	Pathanamthitta	77%	1%	0%	100%	100%	46	71%	20	100%	16	80%	7	23%	73	63%	162	65%
Kerala	Thiruvananthapuram	89%	3%	2%	100%	100%	48	74%	10	50%	16	80%	20	67%	76	66%	170	68%
Kerala	Thrissur	87%	2%	1%	58%	94%	46	71%	10	50%	16	80%	10	33%	74	64%	156	62%
Kerala	Wayanad	96%	2%	0%	50%	100%	47	72%	20	100%	20	100%	10	33%	78	67%	174	70%
Lakshadweep	Lakshadweep †	0%		0%			28	43%	20	100%	20	100%	0	0%	68	59%	136	54%
Madhya Pradesh	Alirajpur # †	38%	0%	0%			45	69%	10	50%	12	60%	10	33%	59	51%	135	54%
Madhya Pradesh	Anuppur	47%	0%	0%			54	83%	10	50%	20	100%	0	0%	71	61%	154	62%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Madhya Pradesh	Ashoknagar	9	3315	96	8%	477	7	9%	55	52	1032	120	44	48
Madhya Pradesh	Balaghat #	17	5330	77	51%	874	6	38%	50	48	1328	77	43	18
Madhya Pradesh	Barwani # †	14	7827	139	2%	910	9	5%	65	57	1242	88	50	17
Madhya Pradesh	Betul #	16	9792	153	-20%	906	11	-17%	57	43	1259	79	38	23
Madhya Pradesh	Bhind	17	6975	101	-7%	741	9	1%	43	39	1700	98	29	49
Madhya Pradesh	Bhopal	24	20576	213	-6%	3099	7	6%	129	76	4507	187	55	57
Madhya Pradesh	Burhanpur #	8	5580	181	4%	570	10	20%	74	73	1089	141	63	49
Madhya Pradesh	Chhatarpur #	18	18719	261	-21%	2287	8	4%	127	92	2551	142	68	36
Madhya Pradesh	Chhindwara #	21	9307	109	-1%	1110	8	16%	52	45	1915	90	33	29
Madhya Pradesh	Damoh #	13	7351	143	5%	1419	5	-5%	110	102	2169	169	74	31
Madhya Pradesh	Datia	8	2783	87	-15%	618	5	-2%	77	67	1187	148	49	52
Madhya Pradesh	Dewas	16	8905	140	31%	934	10	30%	59	57	1576	99	51	24
Madhya Pradesh	Dhar # †	22	11192	126	4%	1167	10	16%	52	53	2697	121	46	51
Madhya Pradesh	Dindori # †	7	8291	289	69%	403	21	60%	56	52	677	94	43	29
Madhya Pradesh	Guna	13	4306	85	5%	586	7	19%	46	43	1323	105	37	43
Madhya Pradesh	Gwalior	21	31696	383	95%	2276	14	95%	110	82	2954	143	61	26
Madhya Pradesh	Harda #	6	3723	160	39%	327	11	30%	56	51	779	134	39	65
Madhya Pradesh	Hoshangabad #	13	10947	217	32%	1227	9	14%	97	90	2402	190	73	76
Madhya Pradesh	Indore	33	30647	230	-1%	3556	9	-7%	107	74	4871	146	58	25
Madhya Pradesh	Jabalpur	25	22207	222	15%	2386	9	21%	95	78	3706	148	61	30
Madhya Pradesh	Jhabua # †	10	4783	115	7%	764	6	5%	73	65	1479	142	58	63
Madhya Pradesh	Katni	13	4313	82	6%	880	5	9%	67	58	1810	138	49	69
Madhya Pradesh	Khandwa #	13	7854	147	58%	837	9	36%	63	59	1371	103	54	33
Madhya Pradesh	Khargone #	19	10497	138	4%	1440	7	0%	76	66	2646	139	55	48
Madhya Pradesh	Mandla # †	11	6320	147	33%	840	8	36%	78	68	1369	128	60	36
Madhya Pradesh	Mandsaur	14	8762	161	-2%	1099	8	5%	81	76	1995	146	53	45
Madhya Pradesh	Morena	20	8296	104	10%	1159	7	10%	58	51	1720	86	34	12
Madhya Pradesh	Narsinghpur #	11	5229	118	2%	509	10	10%	46	44	1025	92	33	24
Madhya Pradesh	Neemuch	8	5150	153	-11%	640	8	-3%	76	77	1317	157	58	49
Madhya Pradesh	Panna #	10	3425	83	5%	677	5	24%	65	62	1036	100	49	22

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Madhya Pradesh	Ashoknagar	34	19	38	78	9%	91%	70%	89%	86%	400	87%	459	100%	287	74%	718	70%
Madhya Pradesh	Balaghat #	21	10	24	56	5%	93%	64%	89%	71%	705	82%	823	96%	447	67%	929	70%
Madhya Pradesh	Barwani # †	41	11	30	57	5%	92%	66%	91%	72%	768	94%	801	98%	439	70%	706	57%
Madhya Pradesh	Betul #	32	9	27	93	8%	90%	73%	87%	76%	614	86%	718	100%	483	80%	1000	79%
Madhya Pradesh	Bhind	24	14	43	197	14%	87%	65%	81%	56%	592	86%	657	95%	378	77%	816	48%
Madhya Pradesh	Bhopal	120	45	88	499	15%	94%	62%	92%	60%	1677	90%	1863	100%	1428	91%	2405	53%
Madhya Pradesh	Burhanpur #	58	15	51	95	10%	92%	79%	89%	72%	536	92%	579	99%	517	97%	528	48%
Madhya Pradesh	Chhatarpur #	31	31	103	295	15%	95%	86%	93%	82%	1618	96%	1669	99%	1725	97%	2308	90%
Madhya Pradesh	Chhindwara #	36	19	55	61	4%	92%	78%	89%	77%	890	90%	937	95%	594	66%	1279	67%
Madhya Pradesh	Damoh #	97	38	125	112	7%	87%	61%	88%	66%	1270	94%	1346	100%	677	77%	671	31%
Madhya Pradesh	Datia	70	30	74	184	19%	89%	49%	87%	59%	521	96%	532	99%	229	55%	577	49%
Madhya Pradesh	Dewas	55	10	26	132	9%	92%	63%	87%	63%	853	93%	916	100%	547	73%	972	62%
Madhya Pradesh	Dhar # †	51	12	30	489	20%	92%	85%	92%	80%	1095	93%	1179	100%	887	82%	1444	54%
Madhya Pradesh	Dindori # †	35	13	41	72	12%	94%	79%	85%	71%	316	82%	368	96%	187	62%	564	83%
Madhya Pradesh	Guna	56	10	29	106	9%	90%	71%	86%	78%	508	91%	557	100%	369	83%	495	37%
Madhya Pradesh	Gwalior	101	31	93	491	21%	92%	68%	88%	63%	1524	88%	1735	100%	1169	88%	1647	56%
Madhya Pradesh	Harda #	56	16	54	227	33%	93%	47%	91%	52%	276	90%	300	98%	130	61%	502	64%
Madhya Pradesh	Hoshangabad #	68	25	73	326	16%	93%	80%	92%	79%	1040	90%	1153	100%	834	91%	1417	59%
Madhya Pradesh	Indore	136	28	66	592	15%	94%	83%	93%	75%	2317	93%	2492	100%	2069	92%	2926	60%
Madhya Pradesh	Jabalpur	104	30	74	310	11%	93%	65%	92%	66%	1846	92%	1985	99%	1402	86%	2417	65%
Madhya Pradesh	Jhabua # †	28	14	35	116	9%	95%	80%	96%	88%	606	88%	676	98%	449	75%	525	35%
Madhya Pradesh	Katni	30	12	44	98	6%	88%	66%	87%	71%	630	80%	751	95%	398	63%	1470	81%
Madhya Pradesh	Khandwa #	33	8	20	166	13%	93%	71%	89%	66%	690	87%	770	98%	371	68%	1174	86%
Madhya Pradesh	Khargone #	88	13	45	425	18%	93%	77%	89%	74%	1149	91%	1265	100%	948	89%	988	37%
Madhya Pradesh	Mandla # †	68	14	38	91	7%	92%	78%	89%	74%	667	90%	731	99%	527	81%	1094	80%
Madhya Pradesh	Mandsaur	69	31	102	192	12%	91%	70%	88%	80%	954	90%	1063	100%	773	85%	1517	76%
Madhya Pradesh	Morena	43	30	74	105	9%	92%	72%	88%	63%	858	82%	991	94%	390	54%	1490	87%
Madhya Pradesh	Narsinghpur #	67	19	52	87	11%	86%	59%	81%	63%	358	70%	503	99%	244	61%	807	79%
Madhya Pradesh	Neemuch	58	35	80	56	5%	93%	81%	89%	82%	577	88%	654	100%	408	72%	880	67%
Madhya Pradesh	Panna #	32	21	56	143	18%	90%	74%	87%	75%	601	92%	651	100%	469	82%	40	4%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Madhya Pradesh	Ashoknagar	21%	0%	0%			46	71%	10	50%	16	80%	20	67%	43	37%	135	54%
Madhya Pradesh	Balaghat #	44%	0%	0%	20%	20%	49	76%	0	0%	20	100%	20	67%	83	72%	172	69%
Madhya Pradesh	Barwani # †	26%	0%	0%			43	66%	10	50%	8	40%	18	61%	75	65%	155	62%
Madhya Pradesh	Betul #	12%	3%	0%			50	77%	20	100%	12	60%	15	50%	56	49%	153	61%
Madhya Pradesh	Bhind	15%	1%	0%			43	67%	20	100%	8	40%	2	6%	55	48%	128	51%
Madhya Pradesh	Bhopal	34%	1%	0%	100%	100%	52	80%	20	100%	16	80%	11	38%	70	61%	169	68%
Madhya Pradesh	Burhanpur #	53%	5%	1%	0%	0%	40	61%	20	100%	12	60%	20	67%	65	56%	156	63%
Madhya Pradesh	Chhatarpur #	11%	0%	0%			54	82%	10	50%	8	40%	0	0%	68	59%	140	56%
Madhya Pradesh	Chhindwara #	21%	1%	1%	0%	0%	48	74%	20	100%	8	40%	0	0%	57	50%	133	53%
Madhya Pradesh	Damoh #	35%	1%	0%	100%	100%	50	78%	20	100%	12	60%	10	33%	65	57%	158	63%
Madhya Pradesh	Datia	25%	1%	0%			40	62%	20	100%	8	40%	0	0%	44	38%	112	45%
Madhya Pradesh	Dewas	63%	1%	1%	33%	67%	48	74%	10	50%	12	60%	20	68%	67	58%	157	63%
Madhya Pradesh	Dhar # †	40%	1%	0%			50	78%	10	50%	12	60%	15	48%	70	61%	157	63%
Madhya Pradesh	Dindori # †	38%	0%	0%	0%	100%	42	64%	20	100%	20	100%	0	0%	74	64%	156	62%
Madhya Pradesh	Guna	19%	0%	0%			52	80%	10	50%	8	40%	0	0%	50	44%	120	48%
Madhya Pradesh	Gwalior	45%	2%	0%	0%	100%	53	82%	10	50%	8	40%	23	76%	54	47%	148	59%
Madhya Pradesh	Harda #	31%	2%	1%	17%	83%	54	84%	20	100%	16	80%	0	0%	70	61%	160	64%
Madhya Pradesh	Hoshangabad #	60%	1%	0%	100%	0%	56	86%	10	50%	8	40%	20	67%	79	69%	173	69%
Madhya Pradesh	Indore	62%	4%	2%	0%	100%	58	89%	10	50%	12	60%	10	33%	76	66%	166	67%
Madhya Pradesh	Jabalpur	31%	1%	0%	0%	100%	55	84%	10	50%	12	60%	15	50%	83	73%	175	70%
Madhya Pradesh	Jhabua # †	58%	1%	0%			47	73%	10	50%	8	40%	10	33%	92	80%	167	67%
Madhya Pradesh	Katni	20%	1%	0%			50	76%	10	50%	16	80%	10	33%	72	63%	158	63%
Madhya Pradesh	Khandwa #	36%	0%	0%			47	72%	10	50%	8	40%	15	50%	57	49%	136	55%
Madhya Pradesh	Khargone #	44%	1%	0%			39	59%	10	50%	12	60%	15	50%	58	51%	134	54%
Madhya Pradesh	Mandla # †	73%	4%	0%	0%	0%	50	77%	10	50%	8	40%	12	40%	74	64%	154	62%
Madhya Pradesh	Mandsaur	56%	2%	1%	80%	93%	51	79%	10	50%	12	60%	5	17%	81	70%	159	64%
Madhya Pradesh	Morena	19%	1%	0%			51	79%	20	100%	8	40%	9	28%	64	56%	152	61%
Madhya Pradesh	Narsinghpur #	13%	1%	0%			48	74%	10	50%	20	100%	0	0%	59	52%	138	55%
Madhya Pradesh	Neemuch	60%	3%	0%			55	84%	20	100%	16	80%	17	57%	66	58%	174	70%
Madhya Pradesh	Panna #	27%	0%	0%			52	80%	20	100%	16	80%	0	2%	55	48%	143	57%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Madhya Pradesh	Raisen #	14	6668	123	29%	732	9	13%	54	54	1374	101	39	30
Madhya Pradesh	Rajgarh	16	6457	103	13%	825	8	8%	52	43	1807	115	35	38
Madhya Pradesh	Ratlam	15	6452	109	-4%	948	7	1%	64	53	2006	136	35	55
Madhya Pradesh	Rewa	24	17548	182	27%	1873	9	28%	78	74	3837	160	62	48
Madhya Pradesh	Sagar #	24	10875	112	0%	1871	6	7%	77	69	2662	110	56	28
Madhya Pradesh	Satna	23	12358	136	-6%	1645	8	-10%	73	63	3466	153	59	63
Madhya Pradesh	Sehore #	13	4274	80	-18%	505	8	-9%	38	38	1207	90	32	36
Madhya Pradesh	Seoni #	14	5765	103	21%	750	8	13%	53	49	1089	78	38	13
Madhya Pradesh	Shahdol	11	4457	103	14%	619	7	5%	57	49	1024	94	43	31
Madhya Pradesh	Shajapur	15	6199	101	8%	922	7	46%	60	61	1697	110	46	25
Madhya Pradesh	Sheopur	7	3493	125	-9%	858	4	-2%	123	85	955	136	68	30
Madhya Pradesh	Shivpuri	18	10849	154	7%	1606	7	2%	91	87	2308	131	71	32
Madhya Pradesh	Sidhi	11	4383	96	-8%	712	6	0%	62	55	1306	114	45	27
Madhya Pradesh	Singrauli	12	5569	116	35%	526	11	27%	44	38	853	71	34	15
Madhya Pradesh	Tikamgarh #	15	3943	67	12%	494	8	20%	34	30	805	55	22	18
Madhya Pradesh	Ujjain	20	11662	144	-8%	1886	6	-2%	93	60	2500	124	42	33
Madhya Pradesh	Umaria	7	3352	128	-22%	337	10	8%	51	50	593	91	45	23
Madhya Pradesh	Vidisha #	15	7521	127	15%	1005	7	7%	68	71	2052	138	49	44
Maharashtra	Ahmadnagar	42	29419	173	25%	2124	14	-1%	50	50	3853	91	44	19
Maharashtra	Ahmednagar MC	4	2610	184	-1%	285	9	-32%	80	36	363	102	28	33
Maharashtra	Akola	14	8473	150	-8%	477	18	11%	34	44	1149	82	34	16
Maharashtra	Akola Municipal Corporation	4	3326	192	-3%	516	6	7%	119	47	420	97	33	18
Maharashtra	Amravati MC	7	5335	204	-14%	526	10	-18%	80	47	760	116	31	24
Maharashtra	Amravati Rural	23	17335	191	-1%	1463	12	-4%	64	53	2280	100	40	20
Maharashtra	Aurangabad #	26	14624	142	51%	1155	13	22%	45	51	1785	70	43	7
Maharashtra	Aurangabad MC	12	5795	122	-55%	1036	6	-50%	87	51	1093	92	41	6
Maharashtra	Bhandara	12	12954	267	24%	722	18	24%	59	53	1406	116	42	28
Maharashtra	Bhiwandi Nizampur	7	6629	230	36%	762	9	33%	106	80	1660	230	54	57
Maharashtra	Bid #	26	14217	136	-19%	974	15	-14%	37	33	1616	62	27	12
Maharashtra	Buldana #	26	12277	117	-16%	1836	7	-9%	70	45	2191	84	33	19

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Madhya Pradesh	Raisen #	34	25	65	52	5%	89%	80%	89%	80%	467	63%	746	100%	285	55%	225	16%
Madhya Pradesh	Rajgarh	42	31	37	130	10%	89%	60%	87%	62%	684	98%	699	100%	404	80%	1438	80%
Madhya Pradesh	Ratlam	57	32	80	353	23%	91%	75%	82%	72%	644	80%	794	98%	395	64%	1245	62%
Madhya Pradesh	Rewa	106	24	54	304	9%	93%	77%	87%	76%	1684	93%	921	51%	1237	88%	2374	62%
Madhya Pradesh	Sagar #	39	16	54	173	8%	88%	65%	89%	74%	1515	90%	1651	98%	924	67%	1532	58%
Madhya Pradesh	Satna	80	11	20	188	6%	90%	73%	91%	77%	1352	93%	1417	98%	921	78%	1900	55%
Madhya Pradesh	Sehore #	30	15	26	123	12%	89%	82%	86%	73%	478	94%	506	100%	352	87%	917	76%
Madhya Pradesh	Seoni #	39	16	48	49	6%	91%	68%	90%	64%	618	87%	651	92%	346	66%	984	90%
Madhya Pradesh	Shahdol	24	13	24	51	6%	88%	81%	87%	84%	486	91%	567	106%	214	59%	468	46%
Madhya Pradesh	Shajapur	59	25	64	190	14%	93%	89%	91%	87%	915	96%	911	96%	956	88%	1199	71%
Madhya Pradesh	Sheopur	42	28	73	98	13%	87%	53%	91%	78%	491	81%	570	94%	345	66%	820	86%
Madhya Pradesh	Shivpuri	12	26	63	109	6%	92%	73%	93%	71%	1446	95%	1466	96%	953	81%	1936	84%
Madhya Pradesh	Sidhi	63	26	54	130	13%	86%	58%	93%	94%	523	78%	654	98%	334	64%	1044	80%
Madhya Pradesh	Singrauli	52	8	18	55	7%	91%	59%	90%	77%	347	74%	453	97%	153	46%	342	40%
Madhya Pradesh	Tikamgarh #	17	10	33	56	9%	86%	66%	82%	72%	356	79%	450	100%	214	57%	533	66%
Madhya Pradesh	Ujjain	97	24	78	376	19%	90%	68%	88%	63%	1146	92%	1223	99%	829	84%	1476	59%
Madhya Pradesh	Umaria	38	13	24	29	6%	90%	73%	92%	75%	299	89%	320	96%	266	72%	546	92%
Madhya Pradesh	Vidisha #	49	33	91	195	13%	88%	73%	87%	80%	951	90%	981	93%	534	83%	487	24%
Maharashtra	Ahmadnagar	58	14	26	191	6%	91%	67%	89%	61%	2005	94%	2131	100%	1301	90%	855	22%
Maharashtra	Ahmednagar MC	99	16	33	17	6%	82%	75%	79%	71%	111	86%	81	63%	65	83%	7	2%
Maharashtra	Akola	58	17	46	37	4%	86%	62%	78%	54%	513	79%	628	97%	401	81%	881	77%
Maharashtra	Akola Municipal Corporation	89	24	65	22	7%	82%	59%	69%	46%	179	84%	213	100%	100	66%	109	26%
Maharashtra	Amravati MC	125	30	74	29	5%	87%	66%	83%	61%	349	108%	362	112%	237	94%	306	40%
Maharashtra	Amravati Rural	73	22	60	86	5%	89%	63%	84%	58%	1029	83%	1239	99%	606	62%	1086	48%
Maharashtra	Aurangabad #	27	13	35	43	3%	94%	83%	92%	83%	1160	88%	1298	98%	1023	87%	795	45%
Maharashtra	Aurangabad MC	108	19	48	55	6%	91%	66%	85%	57%	552	89%	623	100%	445	93%	4	0%
Maharashtra	Bhandara	63	21	51	170	15%	90%	61%	85%	59%	566	86%	661	100%	409	77%	778	55%
Maharashtra	Bhiwandi Nizampur	175	75	106	136	12%	90%	63%	82%	58%	514	88%	581	100%	439	93%	394	24%
Maharashtra	Bid #	47	11	27	53	4%	89%	65%	85%	65%	816	93%	872	99%	510	72%	756	47%
Maharashtra	Buldana #	51	19	54	64	4%	84%	56%	82%	55%	996	82%	1195	99%	665	71%	729	33%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Madhya Pradesh	Raisen #	43%	0%	0%	0%	100%	40	61%	10	50%	20	100%	2	5%	56	49%	127	51%
Madhya Pradesh	Rajgarh	34%	1%	0%			46	70%	10	50%	12	60%	15	49%	56	48%	138	55%
Madhya Pradesh	Ratlam	51%	2%	0%	0%	100%	47	73%	20	100%	0	0%	5	17%	67	58%	139	56%
Madhya Pradesh	Rewa	76%	2%	1%	0%	100%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Madhya Pradesh	Sagar #	13%	0%	0%			56	87%	10	50%	12	60%	0	0%	65	56%	143	57%
Madhya Pradesh	Satna	93%	0%	0%	0%	33%	45	70%	10	50%	12	60%	0	0%	78	68%	145	58%
Madhya Pradesh	Sehore #	35%	1%	0%	100%	100%	44	67%	10	50%	16	80%	0	0%	64	56%	134	53%
Madhya Pradesh	Seoni #	47%	3%	1%	0%	50%	52	79%	10	50%	20	100%	20	67%	62	54%	164	66%
Madhya Pradesh	Shahdol	16%	0%	0%			48	74%	10	50%	16	80%	17	57%	50	43%	141	56%
Madhya Pradesh	Shajapur	36%	1%	0%	0%	50%	57	88%	10	50%	8	40%	10	33%	80	69%	165	66%
Madhya Pradesh	Sheopur	50%	0%	0%			49	76%	10	50%	4	20%	0	0%	45	40%	109	43%
Madhya Pradesh	Shivpuri	23%	2%	0%	0%	100%	43	66%	10	50%	4	20%	11	37%	55	48%	124	49%
Madhya Pradesh	Sidhi	32%	0%	0%			38	59%	10	50%	4	20%	10	33%	79	68%	141	56%
Madhya Pradesh	Singrauli	2%	0%	0%			44	68%	10	50%	12	60%	20	67%	67	58%	153	61%
Madhya Pradesh	Tikamgarh #	26%	0%	0%			48	74%	10	50%	12	60%	0	0%	37	32%	107	43%
Madhya Pradesh	Ujjain	46%	2%	1%	13%	87%	53	82%	20	100%	12	60%	10	33%	64	56%	159	64%
Madhya Pradesh	Umaria	75%	0%	0%			57	87%	0	0%	12	60%	0	0%	77	67%	146	58%
Madhya Pradesh	Vidisha #	20%	0%	0%			45	70%	10	50%	12	60%	21	71%	50	44%	139	56%
Maharashtra	Ahmadnagar	84%	9%	7%	96%	81%	57	87%	10	50%	8	40%	20	67%	79	69%	174	70%
Maharashtra	Ahmednagar MC	79%	14%	20%	93%	75%	39	60%	10	50%	8	40%	10	33%	97	84%	164	66%
Maharashtra	Akola	92%	8%	7%	100%	100%	40	62%	10	50%	16	80%	7	23%	87	75%	160	64%
Maharashtra	Akola Municipal Corporation	96%	11%	12%	98%	86%	51	78%	20	100%	12	60%	10	33%	60	52%	153	61%
Maharashtra	Amravati MC	84%	8%	5%	100%	80%	57	87%	20	100%	12	60%	20	67%	62	54%	170	68%
Maharashtra	Amravati Rural	75%	4%	3%	100%	84%	49	76%	10	50%	20	100%	7	23%	60	53%	147	59%
Maharashtra	Aurangabad #	81%	4%	4%	82%	76%	53	82%	10	50%	12	60%	5	17%	89	77%	169	68%
Maharashtra	Aurangabad MC	83%	7%	5%	100%	100%	58	89%	20	100%	16	80%	11	36%	51	44%	156	62%
Maharashtra	Bhandara	95%	6%	7%	97%	96%	58	89%	10	50%	8	40%	16	52%	80	70%	172	69%
Maharashtra	Bhiwandi Nizampur	83%	8%	5%	99%	91%	50	77%	20	100%	16	80%	7	23%	73	64%	166	66%
Maharashtra	Bid #	84%	16%	12%	100%	59%	55	85%	20	100%	12	60%	10	33%	70	60%	167	67%
Maharashtra	Buldana #	79%	4%	3%	94%	83%	39	59%	20	100%	8	40%	5	17%	53	46%	125	50%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Maharashtra	Chandrapur	22	14294	161	-7%	1473	10	-7%	66	54	2082	94	44	19
Maharashtra	Dhule	17	10940	161	6%	998	11	-1%	59	65	1754	104	56	22
Maharashtra	Dhule MC	4	4249	279	-10%	660	6	-3%	173	76	496	130	64	12
Maharashtra	Gadchiroli #	11	7575	174	11%	899	8	5%	83	70	1292	119	58	27
Maharashtra	Gondiya	13	7864	147	-4%	770	10	2%	57	50	1370	102	39	26
Maharashtra	Hingoli #	12	5216	109	3%	587	9	7%	49	51	1097	92	39	19
Maharashtra	Jalgaon	38	15832	104	-3%	1600	10	1%	42	49	3898	102	38	32
Maharashtra	Jalgaon MC	5	4947	265	-9%	562	9	1%	120	51	515	110	41	25
Maharashtra	Jalna #	20	4777	60	-12%	744	6	4%	37	39	1544	78	29	20
Maharashtra	Kalyan Dombivli MC	13	6163	122	-10%	952	6	-6%	75	55	1846	146	39	34
Maharashtra	Kolhapur	34	25014	186	12%	1874	13	8%	56	50	2889	86	43	15
Maharashtra	Kolhapur MC	6	2729	123	10%	231	12	5%	42	41	514	92	33	22
Maharashtra	Latur #	25	15401	155	-9%	1122	14	-3%	45	41	2069	83	32	19
Maharashtra	Malegoan Corporation	5	4179	219	5%	482	9	17%	101	78	1004	210	64	65
Maharashtra	Mira Bhayander	8	4396	133	14%	673	7	9%	82	75	1037	126	57	10
Maharashtra	Mumbai Zone 1	14	17909	311	6%	2042	9	0%	142	86	2955	205	57	37
Maharashtra	Mumbai Zone 2	21	36701	439	26%	4402	8	20%	211	162	9146	438	92	79
Maharashtra	Mumbai Zone 3	26	14944	146	18%	2083	7	11%	81	77	4494	175	59	32
Maharashtra	Mumbai Zone 4	28	17314	152	23%	2198	8	13%	77	70	4772	168	51	40
Maharashtra	Mumbai Zone 5	20	17004	216	24%	1943	9	22%	99	108	6106	310	68	69
Maharashtra	Mumbai Zone 6	17	13362	192	18%	1546	9	9%	89	81	3355	193	59	39
Maharashtra	Nagpur MC	24	14518	149	1%	2134	7	-2%	88	65	3017	124	52	13
Maharashtra	Nagpur Rural	23	15083	166	-2%	1584	10	5%	70	66	2487	109	55	25
Maharashtra	Nanded #	28	15480	136	24%	1513	10	20%	53	49	2585	91	40	20
Maharashtra	Nanded Waghela MC	6	3769	169	16%	430	9	5%	77	48	499	89	34	13
Maharashtra	Nandurbar †	17	8487	127	7%	1171	7	-1%	70	61	1927	116	48	32
Maharashtra	Nashik	42	21732	129	0%	1780	12	13%	42	43	3143	75	38	18
Maharashtra	Nashik Corp	15	10392	172	18%	989	11	23%	66	50	1384	92	44	23
Maharashtra	Navi Mumbai	11	11116	245	-2%	1424	8	-2%	126	81	2006	177	57	19
Maharashtra	Osmanabad #	17	9410	140	18%	622	15	27%	37	37	1318	78	30	23

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Maharashtra	Chandrapur	61	16	43	45	3%	91%	65%	88%	58%	1063	88%	1206	100%	824	87%	1050	50%
Maharashtra	Dhule	42	15	37	82	5%	91%	77%	90%	68%	1018	92%	1101	100%	775	84%	1344	77%
Maharashtra	Dhule MC	113	25	52	28	7%	99%	92%	96%	78%	295	100%	295	100%	280	99%	106	21%
Maharashtra	Gadchiroli #	62	18	50	66	6%	91%	68%	88%	72%	454	59%	525	68%	453	79%	602	47%
Maharashtra	Gondiya	76	18	45	74	7%	83%	47%	82%	55%	592	88%	674	100%	356	72%	817	60%
Maharashtra	Hingoli #	59	19	53	31	4%	88%	70%	82%	59%	560	90%	606	97%	357	74%	762	69%
Maharashtra	Jalgaon	54	19	47	131	4%	87%	64%	82%	64%	1552	82%	1866	99%	1118	73%	2147	55%
Maharashtra	Jalgaon MC	93	21	47	28	7%	94%	53%	84%	63%	233	94%	248	100%	201	99%	26	5%
Maharashtra	Jalna #	47	17	47	61	5%	92%	78%	90%	79%	784	98%	798	100%	640	92%	659	43%
Maharashtra	Kalyan Dombivli MC	136	39	72	175	13%	82%	55%	77%	49%	609	85%	714	100%	484	87%	81	4%
Maharashtra	Kolhapur	52	14	28	151	6%	92%	69%	88%	61%	1519	90%	1682	99%	1136	83%	1606	56%
Maharashtra	Kolhapur MC	92	14	32	52	12%	86%	72%	81%	53%	215	93%	228	99%	147	94%	54	11%
Maharashtra	Latur #	57	18	44	85	5%	84%	58%	77%	50%	948	89%	1061	100%	625	84%	1062	51%
Maharashtra	Malegoan Corporation	231	23	59	92	10%	89%	62%	88%	71%	353	94%	374	99%	292	82%	295	29%
Maharashtra	Mira Bhayander	105	33	76	47	6%	89%	60%	90%	66%	602	96%	625	100%	506	100%	524	51%
Maharashtra	Mumbai Zone 1	210	59	130	122	6%	93%	61%	86%	56%	1116	87%	1226	96%	812	92%	113	4%
Maharashtra	Mumbai Zone 2	373	174	294	508	9%	86%	59%	82%	54%	2773	80%	2765	80%	2088	82%	419	5%
Maharashtra	Mumbai Zone 3	177	40	87	324	9%	93%	63%	87%	56%	1969	95%	2023	98%	1292	81%	365	8%
Maharashtra	Mumbai Zone 4	134	44	84	285	8%	92%	61%	88%	54%	1895	92%	2031	99%	1387	85%	950	20%
Maharashtra	Mumbai Zone 5	299	99	180	551	13%	91%	49%	86%	52%	2114	95%	2126	96%	1290	82%	1341	22%
Maharashtra	Mumbai Zone 6	165	54	97	244	10%	92%	77%	86%	70%	1159	81%	1294	90%	957	80%	1096	33%
Maharashtra	Nagpur MC	115	29	53	140	6%	90%	69%	85%	54%	1426	89%	1540	96%	1067	87%	449	15%
Maharashtra	Nagpur Rural	48	17	44	129	6%	93%	79%	88%	73%	1399	92%	1516	100%	1125	89%	1271	51%
Maharashtra	Nanded #	62	16	41	93	4%	91%	70%	92%	78%	1317	93%	1376	97%	795	74%	1540	60%
Maharashtra	Nanded Waghela MC	93	19	59	17	4%	94%	71%	84%	70%	260	96%	268	99%	131	68%	290	58%
Maharashtra	Nandurbar †	56	22	59	97	6%	86%	73%	86%	76%	861	83%	1040	100%	456	59%	1425	74%
Maharashtra	Nashik	36	10	22	235	9%	96%	83%	92%	81%	1678	92%	1791	98%	1322	72%	1393	44%
Maharashtra	Nashik Corp	42	14	25	134	11%	91%	75%	87%	61%	719	94%	762	100%	675	97%	211	15%
Maharashtra	Navi Mumbai	196	51	108	206	14%	85%	51%	83%	40%	886	93%	955	100%	688	99%	868	43%
Maharashtra	Osmanabad #	44	14	33	86	8%	89%	76%	86%	67%	559	86%	650	100%	413	78%	752	57%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Maharashtra	Chandrapur	82%	8%	6%	100%	85%	54	83%	20	100%	16	80%	10	33%	66	57%	166	66%
Maharashtra	Dhule	73%	9%	6%	99%	98%	40	62%	10	50%	16	80%	10	33%	76	66%	152	61%
Maharashtra	Dhule MC	92%	8%	7%	100%	81%	39	61%	10	50%	12	60%	12	39%	77	67%	150	60%
Maharashtra	Gadchiroli #	90%	2%	1%	100%	100%	50	77%	10	50%	12	60%	30	100%	75	65%	177	71%
Maharashtra	Gondiya	84%	5%	3%	100%	83%	55	85%	20	100%	16	80%	8	27%	51	44%	150	60%
Maharashtra	Hingoli #	83%	7%	8%	100%	72%	50	77%	20	100%	8	40%	10	33%	75	66%	163	65%
Maharashtra	Jalgaon	79%	10%	7%	89%	73%	48	74%	10	50%	16	80%	0	0%	83	72%	157	63%
Maharashtra	Jalgaon MC	98%	13%	8%	100%	90%	48	73%	20	100%	12	60%	10	33%	79	69%	169	67%
Maharashtra	Jalna #	86%	8%	6%	95%	84%	54	82%	20	100%	16	80%	9	31%	94	82%	193	77%
Maharashtra	Kalyan Dombivli MC	68%	8%	5%	88%	48%	41	63%	20	100%	16	80%	7	24%	56	49%	140	56%
Maharashtra	Kolhapur	89%	12%	9%	100%	98%	49	76%	20	100%	8	40%	29	96%	81	71%	187	75%
Maharashtra	Kolhapur MC	89%	23%	12%	100%	77%	46	70%	20	100%	12	60%	14	47%	79	69%	171	69%
Maharashtra	Latur #	83%	14%	9%	94%	60%	44	67%	10	50%	12	60%	20	67%	76	66%	162	65%
Maharashtra	Malegoan Corporation	70%	8%	3%	100%	67%	51	78%	20	100%	12	60%	23	78%	64	56%	171	68%
Maharashtra	Mira Bhayander	99%	8%	6%	100%	81%	47	72%	20	100%	16	80%	17	57%	95	82%	195	78%
Maharashtra	Mumbai Zone 1	84%	13%	9%	100%	41%												
Maharashtra	Mumbai Zone 2	73%	8%	4%	100%	64%												
Maharashtra	Mumbai Zone 3	76%	7%	4%	100%	74%												
Maharashtra	Mumbai Zone 4	75%	7%	4%	100%	62%												
Maharashtra	Mumbai Zone 5	75%	6%	5%	100%	48%												
Maharashtra	Mumbai Zone 6	82%	5%	5%	100%	72%												
Maharashtra	Nagpur MC	86%	15%	12%	100%	75%	50	78%	20	100%	16	80%	20	67%	74	65%	181	72%
Maharashtra	Nagpur Rural	86%	6%	5%	95%	86%	38	58%	10	50%	20	100%	9	31%	71	62%	148	59%
Maharashtra	Nanded #	59%	11%	5%	93%	94%	46	70%	10	50%	12	60%	0	0%	79	69%	147	59%
Maharashtra	Nanded Waghela MC	59%	19%	7%	100%	100%	35	54%	20	100%	8	40%	5	17%	74	65%	142	57%
Maharashtra	Nandurbar †	64%	9%	4%	95%	62%	55	85%	20	100%	16	80%	20	67%	95	82%	206	82%
Maharashtra	Nashik	83%	5%	3%	97%	92%	49	75%	10	50%	12	60%	18	59%	84	73%	173	69%
Maharashtra	Nashik Corp	80%	8%	6%	92%	65%	51	79%	20	100%	12	60%	10	33%	54	47%	148	59%
Maharashtra	Navi Mumbai	98%	10%	9%	100%	84%	58	89%	20	100%	12	60%	7	23%	64	56%	161	64%
Maharashtra	Osmanabad #	86%	25%	20%	93%	67%	47	73%	10	50%	20	100%	10	33%	89	77%	176	70%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Maharashtra	Parbhani #	19	7479	101	-8%	777	10	-8%	42	40	1421	76	30	18
Maharashtra	Pimpri Chinchwad	18	11414	163	15%	1127	10	1%	64	50	2048	117	38	19
Maharashtra	Pune	32	17290	137	10%	1717	10	5%	54	63	3872	123	54	15
Maharashtra	Pune Rural	46	33842	182	3%	3641	9	0%	78	55	4056	87	45	13
Maharashtra	Raigarh	27	17165	161	98%	2059	8	38%	77	75	3822	143	58	30
Maharashtra	Ratnagiri	16	16498	252	-2%	1349	12	0%	83	82	2462	151	66	38
Maharashtra	Sangli	23	23595	251	-4%	1510	16	15%	64	53	2792	119	46	30
Maharashtra	Sangli MC	5	1811	89	-12%	166	11	18%	33	37	624	123	28	32
Maharashtra	Satara	30	25347	208	-3%	1711	15	8%	56	50	2991	98	40	20
Maharashtra	Sindhudurg	9	10359	301	12%	547	19	0%	64	60	1127	131	48	35
Maharashtra	Solapur	34	19263	141	-2%	1122	17	32%	33	33	2268	67	27	17
Maharashtra	Solapur MC	10	5777	150	2%	828	7	7%	86	50	1085	113	35	28
Maharashtra	Thane	49	23348	119	4%	2689	9	0%	55	61	6596	135	48	36
Maharashtra	Thane MC	18	10682	145	8%	1645	6	1%	89	66	3041	165	45	30
Maharashtra	Ulhasnagar MC	5	3119	152	-4%	550	6	6%	107	79	895	174	55	40
Maharashtra	Wardha	13	15023	286	35%	987	15	32%	75	57	1436	109	44	17
Maharashtra	Washim	12	5788	119	16%	558	10	10%	46	45	1072	88	32	23
Maharashtra	Yavatmal #	28	20634	183	26%	1824	11	29%	65	61	3260	116	48	29
Manipur	Bishnupur	2	679	69	-18%	74	9	36%	30	39	229	94	28	25
Manipur	Chandel †	1	566	97	-25%	58	10	-27%	40	43	159	109	33	33
Manipur	Churachandpur †	3	2232	202	-14%	93	24	42%	34	40	315	114	34	51
Manipur	Imphal East	5	2266	123	-3%	254	9	-9%	55	46	677	147	38	57
Manipur	Imphal West	5	3316	159	-5%	350	9	13%	67	45	546	104	38	23
Manipur	Senapati †	4	732	51	-21%	112	7	-26%	31	32	263	73	23	14
Manipur	Tamenglong †	1	465	82	-6%	51	9	2%	36	34	70	49	28	7
Manipur	Thoubal	4	1250	73	-4%	122	10	29%	29	29	366	86	25	26
Manipur	Ukhrul †	2	490	66	-18%	69	7	-10%	37	33	119	64	25	8
Meghalaya	East Garo Hills †	3	1218	93	-6%	142	9	-17%	44	42	209	64	37	9
Meghalaya	East Khasi Hills †	8	12560	372	17%	1294	10	14%	153	98	2345	277	65	49
Meghalaya	Jaintia Hills †	4	1947	121	4%	236	8	4%	59	52	713	177	41	58

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Maharashtra	Parbhani #	51	15	40	47	4%	92%	71%	91%	68%	630	84%	751	100%	546	82%	569	40%
Maharashtra	Pimpri Chinchwad	133	27	56	113	7%	87%	62%	84%	54%	857	95%	892	99%	561	92%	23	1%
Maharashtra	Pune	128	22	38	188	6%	94%	62%	91%	62%	1908	95%	1927	96%	1538	97%	460	12%
Maharashtra	Pune Rural	50	17	41	121	4%	92%	67%	89%	69%	2242	88%	2472	97%	1642	83%	1112	27%
Maharashtra	Raigarh	89	32	74	159	5%	88%	68%	86%	66%	1791	87%	2052	100%	1337	84%	2385	62%
Maharashtra	Ratnagiri	44	36	69	61	3%	93%	68%	89%	63%	1288	94%	1357	99%	966	87%	1678	68%
Maharashtra	Sangli	74	25	33	161	7%	91%	66%	88%	65%	1137	90%	1254	99%	1059	80%	816	29%
Maharashtra	Sangli MC	134	14	40	42	8%	90%	74%	78%	65%	163	83%	196	100%	125	83%	45	7%
Maharashtra	Satara	73	20	44	90	4%	92%	66%	87%	55%	1446	93%	1562	100%	1062	79%	1902	64%
Maharashtra	Sindhudurg	90	26	56	40	4%	88%	59%	85%	54%	500	94%	527	99%	313	86%	781	69%
Maharashtra	Solapur	42	12	27	91	5%	91%	62%	85%	60%	1043	90%	1155	99%	993	84%	445	20%
Maharashtra	Solapur MC	94	26	67	86	10%	82%	54%	77%	53%	434	87%	490	98%	374	95%	29	3%
Maharashtra	Thane	89	29	55	431	8%	89%	68%	84%	63%	2493	83%	2949	98%	1788	85%	3578	54%
Maharashtra	Thane MC	185	44	91	287	13%	85%	51%	81%	52%	1056	84%	1236	99%	808	96%	1568	52%
Maharashtra	Ulhasnagar MC	85	58	95	36	6%	87%	63%	82%	57%	373	92%	406	100%	298	98%	35	4%
Maharashtra	Wardha	99	24	62	59	5%	92%	72%	85%	63%	677	87%	729	94%	485	81%	1040	72%
Maharashtra	Washim	59	19	56	42	5%	82%	66%	81%	61%	452	80%	503	90%	297	82%	765	71%
Maharashtra	Yavatmal #	75	20	55	110	4%	92%	70%	89%	60%	1459	84%	1614	93%	1157	85%	1959	60%
Manipur	Bishnupur	106	14	52	4	2%	80%	70%	65%	69%	86	86%	100	100%	79	91%	191	83%
Manipur	Chandel †	77	24	46	6	5%	92%	65%	80%	73%	55	85%	65	100%	39	72%	95	60%
Manipur	Churachandpur †	49	17	30	72	27%	87%	64%	89%	68%	114	100%	114	100%	118	88%	164	52%
Manipur	Imphal East	107	25	41	48	9%	90%	62%	85%	66%	212	95%	209	94%	154	79%	427	63%
Manipur	Imphal West	119	14	31	8	2%	90%	76%	84%	70%	220	93%	184	78%	160	72%	316	58%
Manipur	Senapati †	91	13	37	12	6%	92%	94%	87%	82%	114	99%	114	99%	96	100%	0	0%
Manipur	Tamenglong †	11	11	31	4	7%	92%	89%	96%	86%	50	98%	45	88%	44	94%	51	73%
Manipur	Thoubal	81	14	19	10	3%	83%	88%	86%	79%	125	98%	125	98%	90	76%	331	90%
Manipur	Ukhrul †	73	13	43	4	4%	60%	71%	81%	61%	64	96%	66	99%	41	68%	78	66%
Meghalaya	East Garo Hills †	25	12	25	12	7%	88%	83%	84%	83%	129	91%	141	100%	53	58%	90	43%
Meghalaya	East Khasi Hills †	334	76	177	222	13%	79%	58%	76%	49%	854	93%	872	95%	432	84%	1393	59%
Meghalaya	Jaintia Hills †	193	30	62	199	34%	77%	55%	83%	58%	190	84%	226	100%	96	60%	406	57%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Maharashtra	Parbhani #	73%	16%	12%	100%	50%	57	87%	10	50%	4	20%	10	33%	85	74%	166	66%
Maharashtra	Pimpri Chinchwad	95%	13%	11%	99%	97%	52	79%	20	100%	16	80%	17	57%	69	60%	173	69%
Maharashtra	Pune	91%	16%	12%	100%	74%	53	81%	20	100%	16	80%	17	55%	92	80%	197	79%
Maharashtra	Pune Rural	77%	18%	11%	99%	73%	49	75%	20	100%	12	60%	12	41%	64	56%	157	63%
Maharashtra	Raigarh	59%	7%	5%	96%	71%	56	86%	10	50%	8	40%	10	33%	62	54%	146	58%
Maharashtra	Ratnagiri	93%	6%	7%	100%	96%	49	76%	10	50%	12	60%	5	17%	88	77%	165	66%
Maharashtra	Sangli	90%	15%	12%	98%	93%	55	84%	20	100%	16	80%	10	33%	63	55%	163	65%
Maharashtra	Sangli MC	97%	32%	21%	100%	52%	33	51%	20	100%	12	60%	26	86%	73	64%	164	66%
Maharashtra	Satara	89%	17%	13%	99%	74%	50	77%	20	100%	16	80%	5	17%	86	75%	177	71%
Maharashtra	Sindhudurg	96%	5%	3%	90%	87%	50	76%	10	50%	12	60%	14	47%	83	72%	169	68%
Maharashtra	Solapur	80%	21%	15%	91%	68%	54	82%	20	100%	16	80%	5	17%	74	65%	169	68%
Maharashtra	Solapur MC	87%	13%	9%	99%	78%	46	70%	20	100%	16	80%	7	23%	59	51%	147	59%
Maharashtra	Thane	65%	8%	3%	92%	67%	55	84%	10	50%	16	80%	9	29%	64	55%	153	61%
Maharashtra	Thane MC	95%	7%	4%	99%	92%	57	87%	20	100%	12	60%	18	60%	54	47%	160	64%
Maharashtra	Ulhasnagar MC	84%	8%	7%	83%	71%	48	73%	20	100%	20	100%	11	37%	65	56%	163	65%
Maharashtra	Wardha	92%	7%	4%	98%	75%	57	87%	20	100%	0	0%	12	40%	68	59%	157	63%
Maharashtra	Washim	60%	11%	6%	97%	76%	55	84%	0	0%	8	40%	10	33%	64	56%	137	55%
Maharashtra	Yavatmal #	66%	13%	10%	100%	67%	48	74%	10	50%	12	60%	0	0%	84	73%	154	62%
Manipur	Bishnupur	76%	6%	0%			36	56%	0	0%	20	100%	0	0%	61	53%	117	47%
Manipur	Chandel †	33%	30%	13%	95%	5%	31	48%	0	0%	16	80%	0	0%	41	36%	88	35%
Manipur	Churachandpur †	63%	25%	17%	100%	100%	47	73%	0	0%	0	0%	0	0%	80	70%	127	51%
Manipur	Imphal East	67%	7%	3%	78%	39%	48	73%	0	0%	8	40%	10	33%	59	52%	125	50%
Manipur	Imphal West	30%	13%	3%	0%	7%	41	62%	0	0%	16	80%	11	35%	43	37%	110	44%
Manipur	Senapati †	82%	3%	1%	67%	67%	48	74%	0	0%	8	40%	0	0%	72	62%	127	51%
Manipur	Tamenglong †	73%	2%	1%	0%	0%	49	75%	0	0%	16	80%	0	0%	96	83%	160	64%
Manipur	Thoubal	67%	3%	1%	0%	0%	53	82%	10	50%	12	60%	10	33%	89	78%	174	70%
Manipur	Ukhrul †	83%	19%	17%	25%	25%	25	39%	0	0%	4	20%	6	20%	98	85%	133	53%
Meghalaya	East Garo Hills †	11%	0%	2%	25%	0%	39	60%	10	50%	16	80%	5	17%	66	57%	136	54%
Meghalaya	East Khasi Hills †	9%	3%	0%			50	78%	20	100%	20	100%	12	40%	43	38%	146	58%
Meghalaya	Jaintia Hills †	8%	2%	0%			46	70%	20	100%	12	60%	5	17%	59	51%	142	57%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Meghalaya	Ri Bhoi †	3	1601	151	-14%	155	10	8%	58	65	392	148	50	17
Meghalaya	South Garo Hills †	1	587	100	33%	45	13	46%	31	55	119	81	51	8
Meghalaya	West Garo Hills †	7	4355	165	-2%	552	8	3%	84	68	702	106	60	15
Meghalaya	West Khasi Hills †	4	2232	141	-10%	195	11	6%	49	53	634	160	40	32
Mizoram	Aizawl †	4	3547	216	-10%	330	11	-7%	80	62	1190	290	49	71
Mizoram	Champhai †	1	776	152	0%	46	17	-14%	36	40	159	125	36	27
Mizoram	Kolasib †	1	801	237	-3%	62	13	-8%	73	72	166	197	54	50
Mizoram	Lawngtlai †	1	431	90	11%	29	15	-22%	24	44	116	97	33	18
Mizoram	Lunglei †	2	1428	228	27%	205	7	15%	131	114	323	206	87	31
Mizoram	Mamit †	1	385	110	-29%	28	14	-5%	32	44	98	112	34	24
Mizoram	Saiha †	1	579	252	-7%	43	13	-8%	75	91	200	349	73	155
Mizoram	Serchhip †	1	377	143	-8%	34	11	-28%	52	47	85	129	38	35
Nagaland	Dimapur †	4	3464	227	-8%	655	5	-5%	172	121	927	243	86	53
Nagaland	Kiphire †	1	538	181	-9%	58	9	10%	78	79	130	175	63	30
Nagaland	Kohima †	3	1257	116	-17%	217	6	-16%	80	67	453	167	51	26
Nagaland	Longleng †	1	205	101	-43%	23	9	10%	45	45	60	118	35	26
Nagaland	Mokokchung †	2	1114	143	-7%	167	7	0%	86	78	303	156	59	39
Nagaland	Mon †	3	3198	317	19%	171	19	41%	68	96	524	208	68	40
Nagaland	Peren †	1	460	121	9%	32	14	-11%	34	43	73	76	32	24
Nagaland	Phek †	2	543	83	-4%	72	8	10%	44	45	129	79	34	8
Nagaland	Tuensang †	2	2324	294	48%	171	14	60%	86	84	637	322	66	89
Nagaland	Wokha †	2	919	138	-32%	94	10	-12%	56	56	136	81	51	23
Nagaland	Zunheboto †	1	904	159	61%	95	10	71%	67	66	153	108	58	25
Orissa	Anugul	13	7834	152	1%	773	10	0%	60	55	1253	97	46	19
Orissa	Balangir #	17	7511	113	-1%	976	8	7%	59	50	2211	133	46	45
Orissa	Baleshwar	23	12253	131	13%	1445	8	11%	62	51	1994	85	41	17
Orissa	Bargarh	15	6222	104	-10%	809	8	-15%	54	54	1749	117	47	27
Orissa	Bhadrak	15	6299	103	19%	504	12	12%	33	31	871	57	27	5
Orissa	Bhubaneshwar MC	8	4470	132	5%	573	8	10%	68	36	732	86	27	10
Orissa	Boudh	4	1499	84	4%	181	8	24%	41	52	382	86	47	14

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Meghalaya	Ri Bhoi †	163	40	95	36	13%	80%	60%	72%	56%	172	88%	164	84%	148	100%	313	80%
Meghalaya	South Garo Hills †	47	11	30	5	5%	92%	92%	91%	57%	64	75%	71	84%	37	59%	62	52%
Meghalaya	West Garo Hills †	61	16	38	44	7%	91%	79%	92%	76%	439	95%	458	100%	415	93%	291	41%
Meghalaya	West Khasi Hills †	236	30	75	75	15%	82%	55%	88%	52%	219	94%	220	95%	198	94%	412	65%
Mizoram	Aizawl †	471	52	61	148	15%	90%	61%	89%	62%	264	100%	264	100%	214	96%	94	8%
Mizoram	Champhai †	176	18	31	27	20%	85%	27%	86%	111%	55	98%	53	95%	24	100%	64	40%
Mizoram	Kolasib †	232	34	71	6	4%	94%	83%	89%		61	100%	61	100%	26	58%	35	21%
Mizoram	Lawngtlai †	104	21	44	12	13%	97%	86%	108%		47	90%	48	92%	27	82%	65	56%
Mizoram	Lunglei †	212	34	115	41	15%	95%		115%	89%	182	100%	182	100%	133	97%	61	19%
Mizoram	Mamit †	161	14	41	11	13%	90%	57%	93%		37	95%	39	100%	32	94%	56	57%
Mizoram	Saiha †	300	45	77	38	22%	89%	70%	153%	94%	53	100%	53	100%	43	98%	25	13%
Mizoram	Serchhip †	133	23	67	11	16%	96%	70%	95%	150%	36	100%	36	100%	21	88%	11	13%
Nagaland	Dimapur †	133	70	168	36	5%	84%	70%	86%	81%	403	82%	488	100%	275	77%	234	25%
Nagaland	Kiphire †	220	27	75	10	9%	97%	100%	95%	84%	61	100%	61	100%	70	100%	70	54%
Nagaland	Kohima †	205	39	72	36	10%	94%	81%	92%	82%	187	99%	182	97%	157	100%	409	90%
Nagaland	Longleng †	79	37	63	5	12%	89%	75%	88%	90%	26	100%	26	100%	32	91%	0	0%
Nagaland	Mokokchung †	97	34	107	43	18%	94%	85%	90%	84%	164	98%	167	100%	139	92%	84	28%
Nagaland	Mon †	173	57	121	70	18%	83%	73%	93%	89%	87	35%	84	34%	54	21%	282	54%
Nagaland	Peren †	8	16	54	5	9%	100%	56%	84%	83%	20	45%	20	45%	4	19%	2	3%
Nagaland	Phek †	73	19	61	2	2%	86%	41%	87%	70%	62	78%	80	100%	56	93%	44	34%
Nagaland	Tuensang †	493	44	83	145	26%	96%	83%	92%	83%	168	98%	168	98%	159	97%	456	72%
Nagaland	Wokha †	7	5	22	8	6%	95%	91%	97%		94	100%	94	100%	117	100%	116	85%
Nagaland	Zunheboto †	37	16	37	23	18%	98%	87%	92%	75%	95	100%	95	100%	86	95%	31	20%
Orissa	Anugul	77	13	35	61	6%	91%	69%	90%	72%	559	79%	706	100%	391	72%	932	74%
Orissa	Balangir #	92	16	21	116	6%	91%	67%	86%	75%	706	83%	847	99%	537	72%	2121	96%
Orissa	Baleshwar	57	12	40	51	3%	89%	80%	88%	76%	1065	88%	1185	98%	792	83%	1933	97%
Orissa	Bargarh	114	14	29	64	4%	89%	69%	89%	67%	717	88%	800	99%	505	78%	1707	98%
Orissa	Bhadrak	68	8	23	21	3%	90%	80%	87%	82%	423	86%	491	100%	296	78%	871	100%
Orissa	Bhubaneshwar MC	123	14	34	97	16%	87%	74%	85%	65%	262	86%	285	93%	196	85%	131	18%
Orissa	Boudh	58	10	20	7	2%	86%	61%	87%	72%	191	82%	233	100%	184	86%	363	95%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Meghalaya	Ri Bhoi †	11%	0%	1%	100%	100%	49	75%	20	100%	20	100%	5	17%	70	61%	164	65%
Meghalaya	South Garo Hills †	13%	0%	0%			53	81%	20	100%	16	80%	20	67%	68	59%	177	71%
Meghalaya	West Garo Hills †	65%	0%	0%			58	89%	20	100%	20	100%	10	33%	62	54%	170	68%
Meghalaya	West Khasi Hills †	11%	0%	0%			53	82%	20	100%	20	100%	0	0%	52	46%	145	58%
Mizoram	Aizawl †	69%	20%	9%	100%	27%	53	82%	20	100%	12	60%	5	17%	63	55%	153	61%
Mizoram	Champhai †	94%	11%	8%	23%	77%	54	83%	20	100%	12	60%	5	17%	62	54%	153	61%
Mizoram	Kolasib †	54%	8%	6%	100%	60%	55	85%	20	100%	12	60%	10	33%	76	66%	173	69%
Mizoram	Lawngtlai †	57%	3%	0%			56	86%	20	100%	16	80%	20	67%	71	62%	183	73%
Mizoram	Lunglei †	95%	3%	1%	100%	100%	58	89%	20	100%	12	60%	5	17%	77	67%	172	69%
Mizoram	Mamit †	54%	11%	1%	100%	100%	51	79%	20	100%	16	80%	15	50%	88	77%	190	76%
Mizoram	Saiha †	65%	2%	0%			55	84%	10	50%	20	100%	8	27%	83	72%	176	70%
Mizoram	Serchhip †	95%	6%	2%	0%	50%	57	88%	20	100%	12	60%	20	67%	88	77%	197	79%
Nagaland	Dimapur †	76%	14%	9%	100%	52%	54	83%	20	100%	0	0%	0	0%	53	46%	127	51%
Nagaland	Kiphire †	66%	6%	0%			53	82%	20	100%	16	80%	5	17%	90	78%	184	74%
Nagaland	Kohima †	89%	12%	6%	100%	73%	58	89%	20	100%	16	80%	20	67%	79	69%	193	77%
Nagaland	Longleng †	95%	0%	3%	100%	0%	41	62%	10	50%	20	100%	0	0%	75	65%	146	58%
Nagaland	Mokokchung †	81%	2%	1%	100%	100%	53	81%	10	50%	16	80%	13	43%	90	78%	181	73%
Nagaland	Mon †	40%	0%	0%			51	79%	20	100%	8	40%	0	0%	51	45%	131	52%
Nagaland	Peren †	75%	5%	1%	0%	0%	43	66%	20	100%	16	80%	17	58%	83	72%	179	72%
Nagaland	Phek †	81%	9%	5%	100%	14%	53	82%	20	100%	12	60%	5	17%	100	87%	190	76%
Nagaland	Tuensang †	68%	4%	2%	14%	79%	48	73%	20	100%	8	40%	20	67%	67	58%	163	65%
Nagaland	Wokha †	66%	0%	0%			53	81%	20	100%	20	100%	0	0%	65	57%	158	63%
Nagaland	Zunheboto †	58%	3%	3%	100%	100%	47	73%	10	50%	20	100%	5	17%	88	77%	170	68%
Orissa	Anugul	43%	2%	1%	44%	44%	44	68%	20	100%	12	60%	15	50%	73	63%	164	66%
Orissa	Balangir #	35%	2%	0%			47	72%	10	50%	0	0%	0	0%	54	47%	110	44%
Orissa	Baleshwar	60%	2%	1%	77%	54%	49	76%	20	100%	12	60%	7	23%	61	53%	150	60%
Orissa	Bargarh	25%	1%	0%	100%	0%	44	68%	10	50%	8	40%	0	0%	58	50%	120	48%
Orissa	Bhadrak	84%	1%	1%	100%	83%	47	72%	20	100%	8	40%	10	33%	89	77%	174	70%
Orissa	Bhubaneshwar MC	79%	2%	1%	100%	43%	46	71%	20	100%	4	20%	12	40%	59	51%	141	56%
Orissa	Boudh	30%	1%	0%			31	47%	20	100%	16	80%	0	0%	61	53%	128	51%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Orissa	Cuttack	26	10947	103	13%	1357	8	11%	51	29	1714	65	24	9
Orissa	Debagarh	3	1289	102	4%	182	7	-9%	58	56	310	98	49	21
Orissa	Dhenkanal	12	6263	130	0%	790	8	-9%	65	64	1228	102	54	12
Orissa	Gajapati # †	6	3336	143	4%	624	5	4%	107	104	1094	188	88	37
Orissa	Ganjam	36	19453	137	0%	2694	7	2%	76	64	5338	150	53	37
Orissa	Jagatsinghpur	11	5200	113	11%	238	22	12%	21	21	485	42	18	4
Orissa	Jajapur	18	5733	78	5%	726	8	-1%	39	41	1499	81	35	13
Orissa	Jharsuguda	6	3681	157	-6%	490	8	-18%	84	76	799	136	65	29
Orissa	Kalahandi #	16	6958	109	-8%	1126	6	-10%	71	65	1838	116	56	26
Orissa	Kandhamal # †	7	4634	156	-3%	705	7	-8%	95	81	1037	140	70	28
Orissa	Kendrapara	15	6785	116	6%	467	15	12%	32	34	761	52	28	7
Orissa	Kendujhar	18	10829	148	-3%	1934	6	-15%	106	89	3128	172	77	44
Orissa	Khordha	14	5624	99	28%	538	10	27%	38	39	1126	79	32	15
Orissa	Koraput # †	14	8668	156	8%	1511	6	0%	108	94	1974	142	80	25
Orissa	Malkangiri †	6	3726	150	23%	728	5	16%	117	134	1089	176	116	22
Orissa	Mayurbhanj # †	25	19271	189	8%	3074	6	14%	121	114	5226	206	102	54
Orissa	Nabarangapur # †	12	4445	90	12%	669	7	7%	54	51	986	80	47	22
Orissa	Nayagarh	10	7513	193	31%	820	9	41%	84	66	1252	129	52	28
Orissa	Nuapada # †	6	3841	157	-5%	519	7	2%	85	74	887	145	67	46
Orissa	Puri	17	7877	115	24%	647	12	13%	38	35	1211	71	28	12
Orissa	Rayagada # †	10	6629	170	-1%	1164	6	-10%	120	105	1570	161	92	28
Orissa	Sambalpur	11	8707	206	9%	1055	8	5%	100	59	1401	133	51	34
Orissa	Sonapur	7	2981	113	2%	293	10	-1%	44	45	614	93	39	21
Orissa	Sundargarh # †	21	15827	188	-1%	2116	7	-2%	101	83	3432	163	71	41
Pondicherry	Pondicherry	13	22829	449	-1%	2690	8	1%	211	63	1430	112	50	15
Punjab	Amritsar	25	19973	198	36%	2999	7	18%	119	85	4347	172	59	27
Punjab	Barnala	6	4327	179	6%	417	10	20%	69	64	642	106	51	16
Punjab	Bathinda	14	9578	170	12%	1154	8	22%	82	75	1988	141	49	32
Punjab	Faridkot	6	5352	214	19%	859	6	3%	137	110	1317	211	81	47
Punjab	Fatehgarh Sahib	6	3782	156	-28%	366	10	-4%	60	64	659	109	50	13

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Orissa	Cuttack	92	9	22	70	5%	88%	60%	84%	59%	601	77%	765	98%	346	64%	1372	80%
Orissa	Debagarh	68	11	34	15	5%	95%	72%	89%	61%	171	94%	181	100%	135	100%	310	100%
Orissa	Dhenkanal	88	13	42	54	5%	92%	72%	91%	74%	661	85%	780	100%	432	70%	1118	91%
Orissa	Gajapati # †	135	30	73	99	11%	79%	51%	83%	46%	531	86%	585	95%	295	73%	909	83%
Orissa	Ganjam	150	22	50	408	9%	87%	60%	86%	63%	1900	82%	2275	98%	1191	67%	4516	85%
Orissa	Jagatsinghpur	61	5	17	12	3%	87%	72%	95%	73%	202	80%	247	98%	179	85%	484	100%
Orissa	Jajapur	87	11	28	68	5%	93%	80%	91%	80%	683	88%	733	95%	480	74%	1185	79%
Orissa	Jharsuguda	92	20	51	29	4%	91%	65%	90%	77%	399	88%	447	98%	315	91%	625	78%
Orissa	Kalahandi #	62	18	38	104	7%	84%	59%	84%	66%	810	78%	1023	98%	403	58%	1447	79%
Orissa	Kandhamal # †	102	17	49	78	9%	89%	61%	87%	78%	487	80%	599	98%	259	56%	970	94%
Orissa	Kendrapara	38	8	24	18	3%	96%	84%	96%	73%	456	92%	497	100%	459	95%	754	99%
Orissa	Kendujhar	114	22	51	107	4%	90%	68%	87%	63%	1433	87%	1638	100%	1018	85%	84	3%
Orissa	Khordha	79	13	34	61	6%	86%	63%	88%	71%	466	82%	566	99%	327	80%	59	5%
Orissa	Koraput # †	66	20	58	116	7%	91%	76%	86%	72%	1122	85%	1305	99%	744	77%	1739	88%
Orissa	Malkangiri †	68	20	77	41	4%	83%	65%	83%	62%	693	83%	716	86%	350	63%	594	55%
Orissa	Mayurbhanj # †	105	23	52	131	3%	90%	76%	90%	81%	2314	79%	2906	100%	1831	73%	4838	93%
Orissa	Nabarangapur # †	14	7	19	40	4%	91%	76%	91%	77%	583	92%	613	97%	374	74%	935	95%
Orissa	Nayagarh	96	25	63	59	6%	73%	44%	69%	36%	506	77%	635	97%	160	47%	40	3%
Orissa	Nuapada # †	68	15	37	52	7%	91%	75%	92%	82%	390	84%	463	100%	214	59%	115	13%
Orissa	Puri	62	15	33	71	7%	88%	74%	87%	61%	551	88%	620	99%	325	81%	1211	100%
Orissa	Rayagada # †	87	20	62	102	7%	89%	78%	85%	76%	772	74%	1042	100%	551	71%	1397	89%
Orissa	Sambalpur	124	16	36	52	4%	91%	66%	87%	54%	536	84%	624	98%	381	73%	1410	101%
Orissa	Sonapur	89	10	25	34	6%	83%	70%	85%	73%	258	86%	296	99%	161	72%	41	7%
Orissa	Sundargarh # †	113	23	52	99	3%	90%	77%	90%	78%	1333	76%	1729	98%	1033	72%	3198	93%
Pondicherry	Pondicherry	113	19	65	87	7%	89%	83%	85%	68%	669	80%	725	86%	678	95%	0	0%
Punjab	Amritsar	193	37	110	265	8%	91%	77%	89%	74%	2154	99%	2184	100%	1545	99%	3157	73%
Punjab	Barnala	89	17	54	45	8%	88%	74%	88%	82%	366	94%	375	96%	291	82%	0	0%
Punjab	Bathinda	82	39	105	80	6%	91%	79%	90%	80%	989	93%	1063	100%	1020	100%	536	27%
Punjab	Faridkot	158	43	120	55	5%	91%	77%	88%	77%	683	98%	691	99%	525	100%	508	39%
Punjab	Fatehgarh Sahib	102	20	68	24	4%	79%	59%	78%	59%	387	96%	403	100%	311	89%	326	49%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Orissa	Cuttack	41%	1%	0%			32	49%	10	50%	4	20%	11	35%	55	48%	111	45%
Orissa	Debagarh	14%	0%	0%			53	82%	20	100%	4	20%	0	0%	47	41%	124	50%
Orissa	Dhenkanal	55%	1%	0%			54	84%	10	50%	8	40%	10	33%	74	64%	156	63%
Orissa	Gajapati # †	20%	9%	1%	93%	73%	55	84%	10	50%	4	20%	5	17%	70	61%	144	57%
Orissa	Ganjam	63%	10%	2%	31%	44%	40	62%	20	100%	16	80%	10	33%	51	44%	137	55%
Orissa	Jagatsinghpur	26%	4%	1%	100%	100%	57	88%	10	50%	16	80%	30	100%	84	73%	197	79%
Orissa	Jajapur	40%	1%	0%	100%	67%	53	81%	20	100%	12	60%	14	46%	77	67%	176	70%
Orissa	Jharsuguda	13%	2%	0%	100%	100%	57	87%	20	100%	8	40%	0	0%	52	45%	136	54%
Orissa	Kalahandi #	39%	2%	0%	88%	75%	50	77%	20	100%	16	80%	1	4%	51	45%	139	56%
Orissa	Kandhamal # †	21%	1%	0%			53	81%	10	50%	12	60%	0	0%	56	49%	131	52%
Orissa	Kendrapara	66%	1%	0%			51	79%	0	0%	8	40%	5	17%	77	67%	141	57%
Orissa	Kendujhar	7%	1%	0%			54	83%	10	50%	12	60%	7	24%	44	39%	127	51%
Orissa	Khordha	94%	1%	0%	0%	50%	49	76%	20	100%	4	20%	5	17%	73	63%	151	60%
Orissa	Koraput # †	75%	2%	1%	100%	100%	44	67%	10	50%	8	40%	5	17%	52	45%	118	47%
Orissa	Malkangiri †	12%	2%	0%			44	67%	20	100%	0	0%	10	33%	64	56%	138	55%
Orissa	Mayurbhanj # †	52%	1%	0%	80%	87%	39	61%	10	50%	12	60%	5	17%	85	74%	151	60%
Orissa	Nabarangapur # †	29%	0%	0%			47	73%	10	50%	16	80%	0	0%	71	61%	144	58%
Orissa	Nayagarh	37%	2%	0%			51	79%	20	100%	20	100%	10	33%	55	48%	156	63%
Orissa	Nuapada # †	52%	0%	0%			41	64%	10	50%	8	40%	0	0%	81	71%	141	56%
Orissa	Puri	65%	1%	0%			47	72%	10	50%	12	60%	15	50%	61	53%	145	58%
Orissa	Rayagada # †	29%	3%	0%	0%	0%	43	66%	20	100%	12	60%	0	0%	52	45%	127	51%
Orissa	Sambalpur	23%	0%	0%			58	89%	20	100%	12	60%	0	0%	58	51%	148	59%
Orissa	Sonapur	27%	0%	0%			49	75%	10	50%	16	80%	0	0%	53	46%	128	51%
Orissa	Sundargarh # †	39%	0%	0%			51	79%	10	50%	4	20%	0	0%	68	59%	134	54%
Pondicherry	Pondicherry	96%	2%	2%	100%	100%	55	85%	20	100%	20	100%	20	67%	57	49%	172	69%
Punjab	Amritsar	92%	1%	1%	78%	80%	50	77%	0	0%	20	100%	20	67%	74	64%	164	65%
Punjab	Barnala	80%	2%	2%	100%	100%	57	87%	0	0%	16	80%	10	33%	44	38%	127	51%
Punjab	Bathinda	87%	1%	1%	80%	80%	45	69%	0	0%	16	80%	0	0%	66	58%	127	51%
Punjab	Faridkot	98%	1%	1%	100%	94%	43	67%	20	100%	16	80%	7	24%	70	61%	157	63%
Punjab	Fatehgarh Sahib	74%	4%	2%	91%	82%	53	82%	10	50%	12	60%	7	23%	65	56%	147	59%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Punjab	Firozpur	21	12710	155	10%	1509	8	8%	74	70	2455	120	50	22
Punjab	Gurdaspur	23	15374	165	-2%	1781	9	5%	77	78	2890	124	54	20
Punjab	Hoshiarpur	16	10610	166	2%	1157	9	2%	72	66	1770	111	48	25
Punjab	Jalandhar	22	15170	172	11%	2179	7	8%	99	81	3429	155	58	27
Punjab	Kapurthala	8	6548	198	12%	625	10	15%	76	71	1036	125	55	20
Punjab	Ludhiana	35	23127	164	9%	3147	7	-5%	89	82	5662	160	60	28
Punjab	Mansa	8	6095	196	-7%	604	10	-1%	78	70	952	122	52	18
Punjab	Moga	10	5688	142	9%	679	8	43%	68	65	1122	112	50	15
Punjab	Mohali	10	6471	162	26%	627	10	7%	63	76	1537	154	53	18
Punjab	Muktsar	9	5567	152	-6%	876	6	-5%	96	86	1145	125	63	17
Punjab	Nawanshahr	6	4603	185	6%	549	8	10%	88	90	874	141	67	19
Punjab	Patiala	19	14407	188	0%	2122	7	-6%	111	69	2610	136	50	14
Punjab	Rupnagar	7	6498	235	2%	633	10	12%	92	82	923	134	63	15
Punjab	Sangrur	17	16658	249	25%	1278	13	13%	76	80	2720	162	56	30
Punjab	Tarn Taran	11	7673	169	-1%	871	9	8%	77	85	1491	132	62	16
Rajasthan	Ajmer	26	15365	146	-15%	3267	5	1%	124	90	4817	183	62	45
Rajasthan	Alwar	37	17911	120	-1%	2977	6	-2%	80	79	5653	151	70	45
Rajasthan	Banswara # †	19	10326	138	14%	2417	4	15%	129	124	3432	184	105	43
Rajasthan	Baran	12	7594	152	-13%	1456	5	-6%	117	104	2229	179	76	40
Rajasthan	Barmer	27	10360	98	-17%	1099	9	-3%	41	43	2271	86	36	28
Rajasthan	Bharatpur	26	11925	115	2%	1952	6	7%	75	72	3589	138	55	43
Rajasthan	Bhilwara	25	17655	180	-3%	3460	5	7%	141	126	5521	225	82	48
Rajasthan	Bikaner	24	16039	166	3%	2282	7	8%	95	67	2534	105	48	8
Rajasthan	Bundi	11	5178	114	-15%	909	6	-9%	80	78	1635	144	58	35
Rajasthan	Chittaurgarh	15	11104	180	11%	1413	8	10%	91	108	2973	193	69	45
Rajasthan	Churu	21	7681	92	-14%	1457	5	-7%	70	67	2502	120	41	31
Rajasthan	Dausa	17	10645	160	2%	1111	10	32%	67	59	2183	131	46	48
Rajasthan	Dhaulpur	12	8726	177	1%	1471	6	7%	120	104	1994	162	74	35
Rajasthan	Dungarpur # †	14	6955	123	1%	1741	4	19%	123	120	2669	189	96	50
Rajasthan	Ganganagar	20	11088	138	-7%	1510	7	6%	75	74	2784	139	55	36

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Punjab	Firozpur	67	31	90	91	5%	89%	66%	85%	70%	1341	90%	1465	99%	995	89%	831	34%
Punjab	Gurdaspur	80	30	99	103	5%	92%	79%	90%	74%	1735	95%	1826	100%	1384	87%	619	21%
Punjab	Hoshiarpur	54	25	81	61	4%	93%	86%	88%	78%	1043	96%	1111	102%	846	95%	755	43%
Punjab	Jalandhar	147	34	100	140	5%	91%	78%	87%	74%	1705	93%	1773	97%	1214	81%	984	29%
Punjab	Kapurthala	117	22	73	44	5%	90%	79%	87%	70%	598	99%	602	100%	481	94%	289	28%
Punjab	Ludhiana	156	33	94	413	9%	91%	74%	88%	72%	2712	92%	2914	99%	1954	95%	1535	27%
Punjab	Mansa	113	25	79	28	4%	93%	77%	94%	89%	526	95%	556	100%	491	100%	35	4%
Punjab	Moga	83	26	69	51	6%	90%	88%	90%	87%	650	96%	647	96%	706	94%	353	31%
Punjab	Mohali	190	35	99	68	6%	91%	75%	88%	67%	641	82%	779	100%	522	91%	488	32%
Punjab	Muktsar	70	28	96	48	5%	91%	71%	91%	76%	752	94%	797	100%	517	88%	313	27%
Punjab	Nawanshahr	85	34	106	27	4%	89%	69%	87%	67%	566	97%	576	99%	421	90%	190	22%
Punjab	Patiala	172	27	85	132	6%	86%	69%	83%	62%	1252	91%	1312	96%	963	91%	539	21%
Punjab	Rupnagar	127	24	82	43	6%	93%	75%	88%	78%	518	90%	575	100%	511	94%	248	27%
Punjab	Sangrur	154	37	107	108	5%	90%	78%	87%	78%	1319	96%	1363	99%	900	94%	240	9%
Punjab	Tarn Taran	85	32	102	62	6%	85%	65%	92%	79%	956	96%	956	96%	779	99%	169	11%
Rajasthan	Ajmer	129	44	118	221	6%	90%	73%	88%	73%	1918	80%	2299	96%	1862	80%	252	5%
Rajasthan	Alwar	101	12	40	172	3%	93%	78%	92%	85%	2510	84%	2810	94%	2230	89%	906	16%
Rajasthan	Banswara # †	52	23	82	128	4%	91%	76%	93%	85%	2013	86%	2250	96%	1523	69%	416	12%
Rajasthan	Baran	88	41	125	98	6%	91%	83%	91%	80%	1243	93%	1302	97%	1009	85%	730	33%
Rajasthan	Barmer	38	13	30	60	3%	92%	73%	93%	84%	951	83%	1113	97%	908	83%	82	4%
Rajasthan	Bharatpur	55	27	75	176	6%	93%	81%	91%	82%	1523	80%	1873	98%	1276	77%	939	26%
Rajasthan	Bhilwara	160	54	179	208	5%	91%	76%	89%	75%	2771	89%	3076	99%	2507	87%	652	12%
Rajasthan	Bikaner	94	26	80	118	6%	91%	65%	90%	77%	1448	89%	1537	94%	1079	83%	419	17%
Rajasthan	Bundi	87	30	89	66	5%	90%	72%	87%	67%	839	92%	898	99%	718	85%	248	15%
Rajasthan	Chittaurgarh	131	45	161	68	3%	90%	78%	87%	77%	1359	80%	1582	94%	1381	75%	283	10%
Rajasthan	Churu	59	33	105	134	7%	91%	77%	89%	79%	1237	88%	1220	87%	1038	88%	264	11%
Rajasthan	Dausa	68	20	54	77	4%	91%	81%	88%	76%	713	72%	953	96%	830	76%	397	18%
Rajasthan	Dhaulpur	59	38	125	115	8%	92%	81%	88%	79%	1081	83%	1274	98%	819	72%	275	14%
Rajasthan	Dungarpur # †	46	31	110	85	4%	91%	71%	90%	79%	1311	75%	1746	100%	1307	79%	477	18%
Rajasthan	Ganganagar	89	26	80	86	4%	92%	81%	88%	82%	1396	92%	1484	98%	1236	89%	437	16%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Punjab	Firozpur	83%	1%	1%	95%	68%	40	61%	20	100%	16	80%	6	21%	56	49%	138	55%
Punjab	Gurdaspur	80%	2%	1%	83%	70%	38	58%	0	0%	16	80%	8	26%	66	58%	128	51%
Punjab	Hoshiarpur	85%	1%	1%	92%	33%	52	80%	10	50%	20	100%	26	88%	46	40%	155	62%
Punjab	Jalandhar	69%	1%	1%	75%	50%	54	83%	10	50%	16	80%	12	39%	84	73%	176	70%
Punjab	Kapurthala	85%	2%	2%	100%	81%	57	88%	0	0%	16	80%	8	27%	74	64%	155	62%
Punjab	Ludhiana	82%	1%	1%	83%	83%	56	86%	20	100%	16	80%	9	29%	69	60%	170	68%
Punjab	Mansa	83%	1%	1%	80%	70%	56	87%	10	50%	20	100%	16	54%	77	67%	179	72%
Punjab	Moga	69%	2%	1%	75%	94%	48	73%	20	100%	20	100%	5	17%	77	67%	169	68%
Punjab	Mohali	82%	2%	2%	88%	100%	50	77%	10	50%	20	100%	5	17%	57	49%	141	57%
Punjab	Muktsar	70%	0%	0%	0%	50%	46	71%	0	0%	20	100%	12	41%	83	72%	161	64%
Punjab	Nawanshahr	87%	1%	1%	100%	100%	45	69%	20	100%	12	60%	20	67%	74	64%	171	68%
Punjab	Patiala	76%	1%	0%	77%	92%	57	87%	0	0%	20	100%	10	33%	64	56%	151	60%
Punjab	Rupnagar	76%	4%	1%	100%	70%	47	72%	20	100%	20	100%	10	33%	59	51%	156	62%
Punjab	Sangrur	94%	1%	0%	100%	60%	49	75%	0	0%	12	60%	5	17%	92	80%	157	63%
Punjab	Tarn Taran	101%	3%	1%	100%	71%	58	89%	20	100%	12	60%	5	17%	80	70%	175	70%
Rajasthan	Ajmer	57%	1%	0%			22	33%	10	50%	8	40%	20	67%	36	31%	96	38%
Rajasthan	Alwar	45%	1%	0%			51	79%	20	100%	16	80%	7	23%	80	70%	174	70%
Rajasthan	Banswara # †	17%	1%	0%	90%	10%	53	82%	20	100%	8	40%	7	23%	65	56%	153	61%
Rajasthan	Baran	16%	1%	0%			48	73%	20	100%	20	100%	11	37%	59	51%	157	63%
Rajasthan	Barmer	59%	0%	0%			36	56%	20	100%	16	80%	10	33%	71	62%	154	61%
Rajasthan	Bharatpur	4%	2%	0%			48	73%	20	100%	8	40%	16	53%	69	60%	161	64%
Rajasthan	Bhilwara	46%	3%	1%	67%	63%	52	80%	10	50%	16	80%	17	57%	52	45%	147	59%
Rajasthan	Bikaner	14%	0%	0%			49	75%	10	50%	16	80%	18	60%	43	37%	135	54%
Rajasthan	Bundi	37%	1%	0%	100%	100%	48	74%	20	100%	16	80%	15	50%	63	55%	162	65%
Rajasthan	Chittaurgarh	65%	1%	1%	40%	60%	52	80%	20	100%	12	60%	7	23%	88	76%	179	71%
Rajasthan	Churu	10%	0%	0%			43	66%	20	100%	16	80%	7	23%	39	34%	126	50%
Rajasthan	Dausa	11%	0%	0%			45	70%	10	50%	16	80%	10	33%	33	29%	114	46%
Rajasthan	Dhaulpur	20%	2%	0%	0%	0%	52	80%	20	100%	8	40%	15	50%	58	50%	153	61%
Rajasthan	Dungarpur # †	13%	3%	0%	50%	100%	52	80%	20	100%	20	100%	19	62%	71	61%	181	73%
Rajasthan	Ganganagar	49%	0%	0%			46	70%	20	100%	16	80%	9	29%	68	59%	159	63%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Rajasthan	Hanumangarh	18	10434	144	3%	1880	6	0%	104	87	2654	146	58	33
Rajasthan	Jaipur	37	42636	292	2%	5308	8	15%	145	68	5405	148	47	34
Rajasthan	Jaipur DTC II	31	22569	180	-7%	2812	8	6%	90	77	4903	157	54	34
Rajasthan	Jaisalmer	7	4152	152	-8%	336	12	0%	49	44	498	73	32	12
Rajasthan	Jalore	19	5990	80	-17%	1077	6	2%	58	64	2218	119	50	32
Rajasthan	Jhalawar	14	6390	111	-10%	1269	5	6%	88	70	1739	121	48	34
Rajasthan	Jhunjhunun	22	11503	132	-2%	1607	7	1%	74	68	2612	120	45	25
Rajasthan	Jodhpur	38	19013	127	-10%	2446	8	7%	65	48	4300	115	37	37
Rajasthan	Karauli	15	9952	168	-5%	1326	8	9%	89	75	2269	153	51	58
Rajasthan	Kota	20	12231	154	-7%	1868	7	6%	94	74	2961	149	53	43
Rajasthan	Nagaur	34	12747	95	-4%	2058	6	0%	61	49	3139	93	34	24
Rajasthan	Pali	21	7774	94	-19%	1194	7	10%	58	57	2272	109	44	32
Rajasthan	Pratapgarh-RJ	9	2789	79		883	3		101	105	1406	160	84	31
Rajasthan	Rajsamand	12	5168	110	-2%	1184	4	-1%	100	92	1794	152	65	36
Rajasthan	Sawai Madhopur	14	8677	159	-9%	1461	6	1%	107	96	2315	170	68	38
Rajasthan	Sikar	27	13481	124	-10%	1744	8	6%	64	46	2533	93	31	26
Rajasthan	Sirohi	11	6493	154	2%	995	7	17%	94	87	1447	137	66	29
Rajasthan	Tonk	14	9903	171	-8%	1834	5	8%	127	133	3531	244	95	66
Rajasthan	Udaipur	31	28139	226	3%	7574	4	10%	243	113	6184	198	85	49
Sikkim	East Sikkim	3	4474	394	12%	493	9	-8%	174	139	995	350	95	64
Sikkim	North Sikkim †	0	298	170	-15%	39	8	-19%	89	123	157	359	110	78
Sikkim	South Sikkim #	1	1652	279	10%	154	11	15%	104	90	399	269	59	67
Sikkim	West Sikkim #	1	1150	209	3%	96	12	19%	70	89	281	204	64	18
Tamil Nadu	Chennai	47	67006	353	0%	6274	11	-9%	132	70	6435	136	54	24
Tamil Nadu	Coimbatore	35	23288	165	2%	2122	11	-1%	60	47	2628	75	37	9
Tamil Nadu	Cuddalore	26	35638	338	17%	1730	21	-17%	66	64	3414	129	49	35
Tamil Nadu	Dharmapuri	15	11508	189	-1%	782	15	-14%	51	50	1420	93	36	21
Tamil Nadu	Dindigul	22	22316	255	-5%	2422	9	-7%	111	73	3252	148	60	45
Tamil Nadu	Erode	23	22890	250	-8%	2753	8	-14%	120	65	2490	109	49	24
Tamil Nadu	Kanchipuram	40	26527	164	87%	2617	10	-9%	65	57	4644	115	43	25

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Rajasthan	Hanumangarh	72	38	122	176	9%	90%	75%	87%	72%	1468	91%	1516	94%	1099	83%	95	4%
Rajasthan	Jaipur	149	30	84	317	7%	93%	75%	90%	71%	1884	75%	2448	98%	2007	85%	324	6%
Rajasthan	Jaipur DTC II	139	34	96	248	6%	93%	78%	89%	74%	1917	79%	2328	95%	2116	87%	775	16%
Rajasthan	Jaisalmer	53	15	54	23	6%	87%	68%	86%	90%	270	86%	272	87%	258	87%	53	11%
Rajasthan	Jalore	33	29	62	32	2%	92%	75%	94%	83%	1108	91%	1208	99%	1191	88%	147	7%
Rajasthan	Jhalawar	42	28	95	53	4%	91%	66%	87%	73%	873	84%	1024	99%	791	83%	223	13%
Rajasthan	Jhunjhunun	76	30	99	111	6%	90%	64%	87%	65%	1193	78%	1495	98%	1076	92%	165	6%
Rajasthan	Jodhpur	93	18	46	193	5%	92%	77%	92%	73%	1519	84%	1767	97%	1443	74%	347	8%
Rajasthan	Karauli	46	33	102	96	5%	88%	76%	90%	76%	894	79%	1156	103%	752	71%	666	29%
Rajasthan	Kota	99	29	90	191	8%	90%	80%	89%	76%	1264	85%	1292	86%	1043	81%	677	23%
Rajasthan	Nagaur	53	22	62	122	5%	90%	74%	88%	75%	1461	88%	1566	94%	1331	84%	508	16%
Rajasthan	Pali	61	18	55	58	3%	91%	81%	91%	82%	1000	84%	1168	98%	1083	81%	203	9%
Rajasthan	Pratapgarh-RJ	58	31	95	33	3%	89%	84%			655	69%	793	84%	70		20	1%
Rajasthan	Rajsamand	77	31	107	53	4%	90%	77%	89%	79%	791	73%	1063	98%	768	77%	355	20%
Rajasthan	Sawai Madhopur	106	37	117	72	4%	90%	74%	91%	79%	1165	88%	1303	98%	994	85%	355	15%
Rajasthan	Sikar	52	23	66	94	5%	88%	73%	86%	70%	1092	84%	1083	84%	984	76%	152	6%
Rajasthan	Sirohi	45	32	91	30	3%	93%	81%	90%	77%	851	91%	919	98%	826	89%	279	19%
Rajasthan	Tonk	149	47	163	119	4%	92%	77%	87%	73%	1869	96%	1956	100%	1624	93%	729	21%
Rajasthan	Udaipur	116	36	117	245	5%	92%	78%	93%	85%	2553	72%	3390	95%	2062	58%	1974	32%
Sikkim	East Sikkim	394	92	211	71	10%	80%	59%	76%	48%	403	96%	416	99%	216	94%	293	29%
Sikkim	North Sikkim †	365	80	128	14	11%	85%	47%	77%	58%	62	100%	62	100%	35	100%	61	39%
Sikkim	South Sikkim #	324	62	162	37	12%	89%	65%	91%	61%	140	95%	145	98%	132	96%	214	54%
Sikkim	West Sikkim #	331	39	125	15	7%	91%	76%	96%	86%	96	73%	107	82%	116	87%	153	54%
Tamil Nadu	Chennai	138	24	73	370	7%	91%	75%	85%	68%	2794	82%	3398	100%	2209	86%	570	9%
Tamil Nadu	Coimbatore	57	14	42	69	3%	89%	70%	83%	61%	1440	86%	1668	100%	1175	91%	717	27%
Tamil Nadu	Cuddalore	92	22	61	256	9%	94%	88%	89%	83%	1411	83%	1653	97%	990	86%	189	6%
Tamil Nadu	Dharmapuri	67	20	60	56	5%	87%	75%	80%	60%	664	86%	758	98%	346	70%	70	5%
Tamil Nadu	Dindigul	94	20	59	246	9%	90%	68%	86%	70%	1373	84%	1629	100%	855	76%	2018	62%
Tamil Nadu	Erode	53	23	73	41	2%	89%	59%	84%	47%	1390	91%	1487	97%	988	92%	806	32%
Tamil Nadu	Kanchipuram	109	19	57	234	6%	91%	67%	88%	66%	1739	75%	2210	95%	1564	87%	648	14%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Rajasthan	Hanumangarh	47%	1%	0%			43	67%	20	100%	16	80%	7	23%	40	35%	126	51%
Rajasthan	Jaipur	81%	1%	0%	8%	38%	54	83%	20	100%	12	60%	10	33%	72	63%	168	67%
Rajasthan	Jaipur DTC II	71%	1%	0%	100%	100%	58	88%	20	100%	16	80%	20	67%	66	58%	180	72%
Rajasthan	Jaisalmer	7%	0%	0%			38	58%	20	100%	8	40%	5	17%	62	54%	133	53%
Rajasthan	Jalore	12%	10%	1%	48%	79%	42	65%	20	100%	16	80%	20	67%	75	65%	173	69%
Rajasthan	Jhalawar	8%	1%	0%			22	34%	10	50%	20	100%	7	23%	37	32%	96	39%
Rajasthan	Jhunjhunun	18%	3%	0%	63%	38%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Rajasthan	Jodhpur	11%	7%	0%			43	66%	20	100%	12	60%	17	57%	54	47%	146	58%
Rajasthan	Karauli	1%	0%	0%			43	67%	20	100%	8	40%	20	67%	42	37%	134	53%
Rajasthan	Kota	12%	4%	0%			52	80%	20	100%	12	60%	5	17%	54	47%	143	57%
Rajasthan	Nagaur	5%	4%	0%			36	56%	10	50%	16	80%	17	57%	38	33%	117	47%
Rajasthan	Pali	3%	4%	0%			40	61%	20	100%	12	60%	15	50%	60	52%	146	58%
Rajasthan	Pratapgarh-RJ	18%	3%	0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Rajasthan	Rajsamand	44%	0%	0%			48	73%	20	100%	20	100%	10	33%	58	51%	156	62%
Rajasthan	Sawai Madhopur	12%	1%	0%	100%	100%	52	80%	20	100%	16	80%	20	67%	47	41%	155	62%
Rajasthan	Sikar	8%	4%	0%			44	68%	20	100%	16	80%	5	17%	48	42%	133	53%
Rajasthan	Sirohi	24%	3%	0%	100%	100%	44	68%	20	100%	16	80%	17	57%	75	65%	172	69%
Rajasthan	Tonk	95%	0%	0%	22%	44%	53	82%	20	100%	12	60%	14	47%	52	46%	151	61%
Rajasthan	Udaipur	47%	1%	0%	81%	81%	49	75%	20	100%	16	80%	10	33%	60	53%	155	62%
Sikkim	East Sikkim	29%	2%	0%			55	84%	20	100%	20	100%	7	23%	58	50%	159	64%
Sikkim	North Sikkim †	31%	0%	0%			57	88%	20	100%	16	80%	15	50%	89	77%	197	79%
Sikkim	South Sikkim #	19%	1%	0%			50	77%	20	100%	20	100%	10	33%	62	54%	162	65%
Sikkim	West Sikkim #	27%	0%	0%			53	82%	20	100%	20	100%	10	33%	81	70%	184	74%
Tamil Nadu	Chennai	89%	3%	2%	99%	93%	50	77%	20	100%	4	20%	10	33%	65	56%	149	60%
Tamil Nadu	Coimbatore	87%	7%	5%	99%	55%	49	76%	20	100%	16	80%	7	23%	54	47%	146	58%
Tamil Nadu	Cuddalore	66%	5%	3%	90%	79%	41	62%	10	50%	16	80%	5	17%	74	64%	145	58%
Tamil Nadu	Dharmapuri	92%	12%	10%	100%	46%	44	67%	20	100%	12	60%	7	23%	61	53%	144	58%
Tamil Nadu	Dindigul	92%	13%	8%	63%	48%	51	79%	10	50%	20	100%	10	33%	63	55%	154	62%
Tamil Nadu	Erode	96%	11%	5%	97%	65%	53	82%	20	100%	8	40%	27	90%	49	43%	158	63%
Tamil Nadu	Kanchipuram	89%	3%	2%	87%	75%	54	82%	20	100%	12	60%	11	38%	52	45%	149	60%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Tamil Nadu	Kanyakumari	19	20731	274	-8%	1156	18	1%	61	44	1229	65	38	9
Tamil Nadu	Karur	11	5063	116	-9%	430	12	-7%	39	54	1182	108	46	35
Tamil Nadu	Krishnagiri	19	9725	127	-15%	745	13	-17%	39	41	1473	77	31	17
Tamil Nadu	Madurai	31	26386	214	-2%	2898	9	-4%	94	62	3411	111	47	25
Tamil Nadu	Nagapattinam	16	10677	163	-3%	756	14	6%	46	51	1532	94	39	30
Tamil Nadu	Namakkal	17	10556	151	11%	704	15	11%	40	51	1477	85	41	18
Tamil Nadu	Perambalur	13	9588	179	24%	749	13	15%	56	57	1419	106	46	22
Tamil Nadu	Pudukottai	16	13260	202	13%	819	16	12%	50	49	1427	87	39	25
Tamil Nadu	Ramanathapuram	14	12413	229	1%	696	18	-9%	51	62	1305	96	51	22
Tamil Nadu	Salem	35	21023	149	11%	2102	10	3%	60	53	3187	90	42	17
Tamil Nadu	Sivaganga	14	9778	180	-8%	839	12	-9%	62	51	1270	93	44	27
Tamil Nadu	Thanjavur	24	28930	297	5%	1898	15	-5%	78	61	2509	103	50	21
Tamil Nadu	The Nilgiris	7	10263	344	56%	174	59	82%	23	23	390	52	19	12
Tamil Nadu	Theni	13	10618	210	-17%	1060	10	-18%	84	63	1585	126	51	32
Tamil Nadu	Thiruvallur	38	26193	173	-18%	1467	18	-17%	39	56	4121	109	45	23
Tamil Nadu	Thiruvarur	13	7607	148	2%	745	10	-3%	58	53	1462	114	42	39
Tamil Nadu	Tiruchirappalli	28	21344	194	-30%	1816	12	-27%	66	60	3552	129	53	36
Tamil Nadu	Tirunelveli	31	21245	170	-10%	1860	11	-13%	60	52	3072	99	41	26
Tamil Nadu	Tiruppur	25	8093	81	-13%	617	13	1%	25	43	1983	79	34	19
Tamil Nadu	Tiruvanamalai	25	20883	209	-7%	1729	12	-10%	69	71	3105	124	54	27
Tamil Nadu	Toothukudi	18	12251	174	-5%	1279	10	-9%	73	63	1746	99	53	22
Tamil Nadu	Vellore	40	47906	301	-35%	2446	20	-26%	61	64	5746	144	54	33
Tamil Nadu	Villupuram	35	16939	121	3%	1581	11	7%	45	69	4680	133	52	33
Tamil Nadu	Virudhunagar	20	16143	205	-76%	1509	11	-76%	77	62	2430	123	51	42
Tripura	Dhalai †	4	2437	160	22%	139	18	25%	36	38	197	52	34	8
Tripura	North Tripura	7	3276	117	14%	234	14	13%	33	34	431	62	30	16
Tripura	South Tripura	9	4377	124	-3%	273	16	35%	31	36	437	50	31	4
Tripura	West Tripura	17	11086	159	-2%	1152	10	1%	66	53	1492	86	45	12
Uttar Pradesh	Agra	45	39264	220	-8%	6159	6	4%	138	112	8134	182	70	18
Uttar Pradesh	Aligarh	37	30578	204	-6%	4355	7	-6%	116	100	7292	195	84	57

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Tamil Nadu	Kanyakumari	39	8	27	59	6%	90%	74%	87%	65%	738	88%	822	98%	623	80%	822	67%
Tamil Nadu	Karur	51	15	40	23	2%	94%	81%	92%	70%	461	76%	602	99%	376	75%	96	8%
Tamil Nadu	Krishnagiri	57	15	42	52	4%	88%	71%	83%	68%	680	85%	776	97%	524	87%	289	20%
Tamil Nadu	Madurai	75	19	64	256	9%	89%	66%	80%	57%	1584	81%	1602	82%	1315	96%	395	12%
Tamil Nadu	Nagapattinam	42	14	52	69	5%	91%	41%	89%	53%	718	84%	814	96%	400	59%	58	4%
Tamil Nadu	Namakkal	50	13	44	29	2%	90%	74%	85%	66%	730	81%	898	100%	655	95%	272	18%
Tamil Nadu	Perambalur	95	14	46	85	7%	91%	76%	86%	75%	679	88%	730	94%	506	88%	435	31%
Tamil Nadu	Pudukottai	39	13	39	71	6%	88%	57%	88%	65%	590	73%	710	88%	485	80%	450	32%
Tamil Nadu	Ramanathapuram	40	13	48	153	14%	92%	58%	88%	60%	691	81%	856	100%	614	92%	455	35%
Tamil Nadu	Salem	63	15	47	130	5%	91%	65%	86%	56%	1654	87%	1887	99%	934	70%	1093	34%
Tamil Nadu	Sivaganga	53	9	29	70	6%	91%	70%	86%	75%	557	80%	572	82%	428	76%	393	31%
Tamil Nadu	Thanjavur	55	18	49	119	6%	89%	71%	84%	59%	1498	98%	1527	100%	942	84%	896	36%
Tamil Nadu	The Nilgiris	57	7	17	46	14%	86%	89%	80%	68%	168	96%	175	100%	157	99%	173	44%
Tamil Nadu	Theni	83	22	55	49	4%	87%	60%	82%	58%	655	81%	759	93%	473	78%	196	12%
Tamil Nadu	Thiruvallur	97	17	50	178	5%	92%	71%	85%	63%	1564	72%	2154	99%	1341	80%	893	22%
Tamil Nadu	Thiruvarur	59	18	46	150	12%	89%	69%	83%	60%	589	86%	682	99%	415	83%	186	13%
Tamil Nadu	Tiruchirappalli	118	10	27	282	9%	91%	73%	86%	65%	1501	91%	1598	97%	1215	92%	394	11%
Tamil Nadu	Tirunelveli	66	15	48	112	4%	88%	56%	83%	59%	1276	77%	1613	98%	823	64%	1181	38%
Tamil Nadu	Tiruppur	43	15	39	56	3%	92%	73%	84%	48%	946	86%	1094	99%	730	82%	218	11%
Tamil Nadu	Tiruvanamalai	82	23	70	155	6%	94%	82%	89%	75%	1391	78%	1758	98%	1186	87%	1178	38%
Tamil Nadu	Toothukudi	46	13	44	83	5%	87%	65%	85%	55%	1047	93%	1097	97%	733	85%	349	20%
Tamil Nadu	Vellore	164	16	43	146	3%	90%	78%	92%	74%	2473	96%	2587	100%	1905	91%	4085	71%
Tamil Nadu	Villupuram	92	25	71	202	5%	91%	74%	90%	75%	1903	77%	2315	94%	1652	82%	1410	30%
Tamil Nadu	Virudhunagar	57	16	49	285	14%	92%	73%	84%	56%	955	77%	1204	97%	422	44%	365	15%
Tripura	Dhalai †	19	6	16	6	3%	88%	56%	92%	92%	132	92%	130	90%	117	83%	112	57%
Tripura	North Tripura	32	7	17	10	3%	85%	60%	86%	68%	207	86%	223	93%	171	84%	281	65%
Tripura	South Tripura	29	6	21	5	1%	91%	80%	88%	83%	248	77%	315	98%	250	75%	192	44%
Tripura	West Tripura	70	11	37	29	2%	88%	74%	86%	73%	772	82%	939	100%	676	80%	515	35%
Uttar Pradesh	Agra	121	61	172	679	13%	90%	62%	89%	65%	4448	88%	5049	100%	3146	82%	6527	80%
Uttar Pradesh	Aligarh	120	24	70	444	7%	92%	78%	92%	83%	3529	93%	3781	100%	2916	93%	2462	34%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Tamil Nadu	Kanyakumari	87%	2%	1%	100%	100%	26	41%	10	50%	12	60%	7	22%	57	50%	112	45%
Tamil Nadu	Karur	97%	12%	11%	60%	40%	48	74%	20	100%	16	80%	10	33%	66	57%	160	64%
Tamil Nadu	Krishnagiri	78%	11%	8%	96%	57%	49	76%	20	100%	8	40%	15	49%	76	66%	167	67%
Tamil Nadu	Madurai	76%	10%	6%	20%	78%	54	83%	20	100%	8	40%	7	23%	53	46%	142	57%
Tamil Nadu	Nagapattinam	66%	7%	4%	100%	56%	53	82%	20	100%	16	80%	14	45%	76	66%	179	72%
Tamil Nadu	Namakkal	100%	14%	12%	100%	68%	45	69%	10	50%	12	60%	10	33%	66	57%	142	57%
Tamil Nadu	Perambalur	90%	12%	6%	91%	75%	45	69%	20	100%	8	40%	7	23%	79	69%	159	64%
Tamil Nadu	Pudukottai	85%	6%	7%	76%	74%	55	85%	20	100%	20	100%	18	60%	77	67%	190	76%
Tamil Nadu	Ramanathapuram	93%	4%	3%	29%	71%	53	82%	20	100%	16	80%	17	57%	43	37%	149	59%
Tamil Nadu	Salem	96%	15%	11%	100%	77%	45	69%	20	100%	12	60%	10	33%	64	55%	150	60%
Tamil Nadu	Sivaganga	92%	5%	7%	89%	86%	50	76%	20	100%	20	100%	10	33%	47	41%	147	59%
Tamil Nadu	Thanjavur	93%	6%	5%	99%	73%	55	85%	20	100%	16	80%	18	59%	57	49%	166	66%
Tamil Nadu	The Nilgiris	97%	6%	3%	100%	90%	53	82%	20	100%	12	60%	10	33%	69	60%	164	66%
Tamil Nadu	Theni	88%	16%	10%	100%	37%	24	37%	20	100%	12	60%	18	59%	43	37%	117	47%
Tamil Nadu	Thiruvallur	93%	4%	3%	100%	100%	52	80%	10	50%	12	60%	10	33%	66	58%	151	60%
Tamil Nadu	Thiruvarur	74%	5%	2%	100%	88%	48	73%	20	100%	12	60%	10	33%	51	44%	141	56%
Tamil Nadu	Tiruchirappalli	72%	9%	7%	90%	68%	56	86%	20	100%	12	60%	10	33%	61	53%	159	64%
Tamil Nadu	Tirunelveli	85%	6%	5%	100%	100%	39	61%	20	100%	8	40%	20	67%	44	38%	132	53%
Tamil Nadu	Tiruppur	97%	8%	7%	100%	68%	47	72%	20	100%	8	40%	15	50%	46	40%	136	54%
Tamil Nadu	Tiruvanamalai	93%	5%	4%	99%	93%	31	48%	10	50%	12	60%	29	95%	73	64%	155	62%
Tamil Nadu	Toothukudi	97%	3%	4%	100%	90%	52	80%	20	100%	20	100%	15	50%	54	47%	161	64%
Tamil Nadu	Vellore	94%	3%	3%	65%	32%	58	89%	10	50%	8	40%	10	33%	41	36%	127	51%
Tamil Nadu	Villupuram	80%	5%	6%	85%	89%	27	41%	20	100%	16	80%	10	33%	74	65%	147	59%
Tamil Nadu	Virudhunagar	91%	6%	3%	78%	85%	52	80%	20	100%	16	80%	10	33%	58	50%	156	62%
Tripura	Dhalai †	49%	0%	0%			54	83%	20	100%	16	80%	5	17%	88	76%	183	73%
Tripura	North Tripura	65%	2%	2%	88%	88%	54	83%	10	50%	12	60%	0	0%	86	75%	162	65%
Tripura	South Tripura	46%	1%	0%	0%	100%	44	68%	20	100%	16	80%	0	0%	43	38%	123	49%
Tripura	West Tripura	61%	1%	0%	100%	100%	49	75%	10	50%	12	60%	5	17%	60	52%	136	54%
Uttar Pradesh	Agra	24%	1%	0%			52	81%	0	0%	16	80%	10	33%	47	41%	125	50%
Uttar Pradesh	Aligarh	25%	0%	0%			45	69%	20	100%	12	60%	0	0%	68	59%	145	58%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Uttar Pradesh	Allahabad	61	49444	204	3%	6089	8	13%	100	87	8554	141	64	31
Uttar Pradesh	Ambedkar Nagar	24	11666	119	30%	1684	7	25%	69	66	2067	85	61	9
Uttar Pradesh	Amethi	24	6474	68		1127	6		47	51	1854	78	45	19
Uttar Pradesh	Auraiya	14	9184	164	-6%	1491	6	3%	107	102	1892	135	77	16
Uttar Pradesh	Azamgarh	47	19716	105	-7%	2752	7	5%	59	55	4702	100	47	27
Uttar Pradesh	Baghpat	13	6743	127	-5%	1170	6	10%	88	88	1758	133	63	17
Uttar Pradesh	Bahraich #	35	17439	123	-2%	2913	6	4%	82	79	4886	138	66	45
Uttar Pradesh	Ballia	33	14854	113	13%	2024	7	17%	62	64	3600	110	60	35
Uttar Pradesh	Balrampur	22	10062	115	2%	1213	8	12%	55	54	2164	99	51	36
Uttar Pradesh	Banda #	18	9951	136	-15%	1357	7	6%	74	66	2151	117	46	21
Uttar Pradesh	Barabanki #	33	20656	156	-8%	3373	6	0%	102	99	5546	167	77	42
Uttar Pradesh	Bareilly	45	31752	175	-16%	4546	7	-4%	100	73	5566	122	53	29
Uttar Pradesh	Basti #	25	11150	111	-15%	1797	6	-2%	72	65	3326	133	59	45
Uttar Pradesh	Bijnor #	38	21862	146	-13%	2865	8	3%	76	78	4181	111	64	9
Uttar Pradesh	Budaun #	38	25190	167	-31%	3321	8	-5%	88	89	5050	134	65	30
Uttar Pradesh	Bulandshahr	36	21187	149	-14%	3404	6	-7%	96	96	7087	199	80	63
Uttar Pradesh	Chandauli	20	8064	101	0%	1223	7	12%	62	57	1876	94	47	16
Uttar Pradesh	Chitrakoot	10	6642	165	12%	792	8	-2%	79	71	1378	137	56	27
Uttar Pradesh	Deoria	32	11478	91	-2%	1800	6	18%	57	52	2311	73	47	8
Uttar Pradesh	Etah	18	16895	236	-3%	2468	7	6%	138	120	3214	179	93	29
Uttar Pradesh	Etawah	16	14200	221	18%	2503	6	-5%	156	106	2562	159	71	18
Uttar Pradesh	Faizabad	25	14075	140	5%	2159	7	3%	86	79	3283	131	69	32
Uttar Pradesh	Farrukhabad	19	9564	124	-14%	1494	6	0%	78	68	2319	121	53	26
Uttar Pradesh	Fatehpur #	27	17496	163	-11%	2363	7	-7%	88	80	3043	114	65	18
Uttar Pradesh	Firozabad	25	13922	137	-2%	2375	6	3%	93	88	4259	168	62	29
Uttar Pradesh	Gautam Budh Nagar	17	14083	207	8%	2122	7	8%	124	110	3963	232	81	43
Uttar Pradesh	Ghaziabad	33	25067	189	2%	3949	6	0%	119	136	9368	283	107	57
Uttar Pradesh	Ghazipur	37	11375	77	-4%	2036	6	8%	55	53	2769	75	47	12
Uttar Pradesh	Gonda	35	15253	109	3%	2313	7	19%	66	62	5142	147	54	69
Uttar Pradesh	Gorakhpur	45	22440	124	-16%	3372	7	1%	75	62	3633	80	56	9

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Uttar Pradesh	Allahabad	57	31	96	421	6%	91%	72%	88%	72%	5000	94%	5342	100%	3221	79%	7124	83%
Uttar Pradesh	Ambedkar Nagar	28	8	25	54	3%	93%	89%	93%	85%	1449	89%	1553	95%	1139	85%	1428	69%
Uttar Pradesh	Amethi	28	8	26	59	4%	90%	79%			1012	83%	1107	91%	626		422	23%
Uttar Pradesh	Auraiya	41	32	115	63	4%	91%	76%	90%	84%	1309	89%	1476	100%	1142	88%	1713	91%
Uttar Pradesh	Azamgarh	32	18	32	202	5%	91%	73%	87%	77%	2454	95%	2546	98%	1815	77%	2456	52%
Uttar Pradesh	Baghpat	89	31	105	64	5%	91%	84%	89%	81%	982	84%	1176	100%	692	62%	1264	72%
Uttar Pradesh	Bahraich #	52	13	52	157	4%	89%	74%	87%	77%	2619	94%	2798	100%	2270	92%	3603	74%
Uttar Pradesh	Ballia	36	5	14	158	5%	96%	89%	92%	90%	2001	95%	2053	98%	1674	87%	1860	52%
Uttar Pradesh	Balrampur	27	5	17	83	4%	90%	71%	85%	66%	1210	100%	1210	100%	1001	94%	1421	66%
Uttar Pradesh	Banda #	93	27	87	133	8%	93%	84%	91%	81%	1150	92%	1244	100%	815	64%	1634	76%
Uttar Pradesh	Barabanki #	79	28	87	348	8%	93%	86%	92%	87%	2614	80%	3278	100%	2497	82%	3572	64%
Uttar Pradesh	Bareilly	43	30	83	256	6%	84%	66%	87%	70%	2867	86%	3311	99%	2962	100%	4635	83%
Uttar Pradesh	Basti #	72	11	28	183	6%	92%	76%	88%	74%	1480	89%	1656	100%	1275	80%	2780	84%
Uttar Pradesh	Bijnor #	79	19	55	298	9%	91%	78%	87%	75%	2667	91%	2926	100%	2607	96%	3381	81%
Uttar Pradesh	Budaun #	22	33	98	212	6%	94%	86%	92%	84%	1447	43%	1572	46%	1454	39%	1624	32%
Uttar Pradesh	Bulandshahr	118	27	69	371	6%	94%	84%	94%	86%	3184	92%	3426	99%	2724	87%	4297	61%
Uttar Pradesh	Chandauli	50	17	42	77	5%	88%	77%	87%	74%	1052	91%	1154	100%	943	88%	1584	84%
Uttar Pradesh	Chitrakoot	101	28	68	24	2%	90%	82%	89%	80%	682	92%	740	100%	395	75%	1363	99%
Uttar Pradesh	Deoria	35	10	25	111	6%	94%	80%	91%	82%	1472	88%	1671	100%	1322	73%	2301	100%
Uttar Pradesh	Etah	83	36	119	280	11%	91%	85%	95%	93%	1848	84%	2200	100%	1660	83%	2284	71%
Uttar Pradesh	Etawah	114	41	149	119	6%	91%	70%	86%	63%	1535	88%	1746	100%	1074	83%	2041	80%
Uttar Pradesh	Faizabad	50	18	46	159	6%	91%	77%	89%	74%	1724	86%	2016	100%	1472	90%	2603	79%
Uttar Pradesh	Farrukhabad	94	18	62	149	8%	85%	78%	84%	76%	1140	86%	1219	92%	935	83%	1088	47%
Uttar Pradesh	Fatehpur #	43	20	67	106	4%	89%	81%	93%	90%	2031	93%	2180	100%	1610	88%	2339	77%
Uttar Pradesh	Firozabad	111	47	111	746	24%	91%	71%	90%	78%	2008	88%	2259	99%	1435	80%	3822	90%
Uttar Pradesh	Gautam Budh Nagar	238	50	130	224	7%	93%	73%	93%	81%	1750	91%	1925	100%	1360	82%	2709	68%
Uttar Pradesh	Ghaziabad	266	53	121	661	9%	95%	88%	92%	86%	4177	92%	4351	96%	3693	70%	6493	69%
Uttar Pradesh	Ghazipur	25	10	26	90	4%	89%	77%	88%	78%	1815	93%	1957	100%	1379	81%	2657	96%
Uttar Pradesh	Gonda	41	14	35	351	8%	90%	84%	94%	86%	1859	84%	2186	99%	1635	81%	3325	65%
Uttar Pradesh	Gorakhpur	26	9	28	141	4%	88%	68%	87%	61%	2449	86%	2854	100%	2025	73%	2569	71%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Uttar Pradesh	Allahabad	67%	1%	0%	21%	58%	44	67%	10	50%	12	60%	5	18%	57	50%	128	51%
Uttar Pradesh	Ambedkar Nagar	50%	0%	0%			45	69%	10	50%	8	40%	0	0%	70	60%	133	53%
Uttar Pradesh	Amethi	27%	1%	0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Uttar Pradesh	Auraiya	9%	1%	0%			49	75%	20	100%	12	60%	0	0%	54	47%	135	54%
Uttar Pradesh	Azamgarh	0%	100%	0%	0%	60%	45	69%	0	0%	16	80%	0	0%	58	50%	118	47%
Uttar Pradesh	Baghpat	64%	2%	0%	83%	100%	40	61%	10	50%	8	40%	4	12%	70	61%	132	53%
Uttar Pradesh	Bahraich #	0%		0%			42	64%	0	0%	16	80%	0	0%	49	43%	107	43%
Uttar Pradesh	Ballia	16%	4%	0%			45	69%	0	0%	4	20%	0	0%	60	53%	109	44%
Uttar Pradesh	Balrampur	0%	50%	0%			48	74%	10	50%	16	80%	8	28%	79	69%	161	65%
Uttar Pradesh	Banda #	76%	1%	0%	0%	20%	45	69%	0	0%	4	20%	2	8%	87	76%	138	55%
Uttar Pradesh	Barabanki #	14%	0%	0%			49	76%	0	0%	16	80%	10	33%	67	58%	142	57%
Uttar Pradesh	Bareilly	0%	100%	0%			45	70%	10	50%	8	40%	0	0%	34	29%	97	39%
Uttar Pradesh	Basti #	9%	3%	0%	0%	100%	40	62%	0	0%	12	60%	0	0%	80	69%	132	53%
Uttar Pradesh	Bijnor #	29%	1%	0%	0%	0%	49	75%	0	0%	12	60%	0	0%	67	58%	128	51%
Uttar Pradesh	Budaun #	32%	0%	0%			45	70%	0	0%	12	60%	10	33%	88	77%	156	62%
Uttar Pradesh	Bulandshahr	4%	1%	0%			56	86%	10	50%	0	0%	10	33%	58	51%	134	54%
Uttar Pradesh	Chandauli	60%	0%	0%	0%	100%	46	71%	10	50%	12	60%	0	0%	66	57%	134	54%
Uttar Pradesh	Chitrakoot	73%	1%	0%			52	81%	0	0%	8	40%	0	0%	89	77%	150	60%
Uttar Pradesh	Deoria	57%	4%	1%	0%	67%	47	73%	10	50%	16	80%	0	0%	62	54%	135	54%
Uttar Pradesh	Etah	35%	1%	0%			56	86%	10	50%	8	40%	0	0%	67	58%	141	56%
Uttar Pradesh	Etawah	78%	1%	0%	0%	33%	46	70%	10	50%	12	60%	10	33%	71	62%	149	59%
Uttar Pradesh	Faizabad	33%	2%	0%	100%	100%	44	67%	0	0%	12	60%	0	0%	74	65%	130	52%
Uttar Pradesh	Farrukhabad	11%	2%	0%			28	43%	10	50%	20	100%	4	13%	43	37%	105	42%
Uttar Pradesh	Fatehpur #	50%	1%	0%			47	72%	10	50%	12	60%	1	3%	67	58%	137	55%
Uttar Pradesh	Firozabad	14%	2%	0%			42	64%	10	50%	12	60%	10	34%	68	59%	142	57%
Uttar Pradesh	Gautam Budh Nagar	46%	0%	0%			44	68%	0	0%	12	60%	0	0%	58	51%	114	46%
Uttar Pradesh	Ghaziabad	5%	1%	0%			30	46%	20	100%	16	80%	10	33%	68	59%	144	57%
Uttar Pradesh	Ghazipur	14%	4%	1%	0%	60%	28	44%	10	50%	12	60%	0	0%	72	63%	122	49%
Uttar Pradesh	Gonda	34%	1%	0%	0%	0%	46	71%	0	0%	8	40%	0	0%	84	73%	138	55%
Uttar Pradesh	Gorakhpur	15%	16%	0%	0%	50%	41	63%	0	0%	20	100%	1	5%	49	42%	111	44%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Uttar Pradesh	Hamirpur	11	6454	144	-26%	995	6	-10%	89	77	1423	127	65	32
Uttar Pradesh	Hapur	14	6303	110		1075	6		75	76	1983	139	63	32
Uttar Pradesh	Hardoi #	42	26651	160	-1%	4055	7	6%	97	93	7170	172	78	62
Uttar Pradesh	Hathras	16	9000	141	4%	1374	7	11%	86	84	1655	104	69	6
Uttar Pradesh	Jalaun #	17	9976	147	-6%	1406	7	-2%	83	83	2604	153	65	45
Uttar Pradesh	Jaunpur	46	19874	109	1%	2878	7	17%	63	59	5814	128	53	45
Uttar Pradesh	Jhansi #	20	10552	130	-22%	2057	5	-12%	101	78	2390	117	61	19
Uttar Pradesh	Jyotiba Phule Nagar #	19	17085	228	1%	1924	9	6%	103	101	2509	134	80	24
Uttar Pradesh	Kannauj	17	9124	135	-15%	1339	7	-10%	79	78	1881	111	64	17
Uttar Pradesh	Kanpur Dehat #	18	9893	135	-10%	1542	6	8%	84	81	1876	103	66	9
Uttar Pradesh	Kanpur Nagar	47	29368	158	-14%	5166	6	2%	111	77	6096	131	55	18
Uttar Pradesh	Kanshiram Nagar	15	6998	119	-8%	1091	6	3%	75	70	1538	105	59	21
Uttar Pradesh	Kaushambi	16	12013	185	-9%	1463	8	8%	90	89	2642	163	70	41
Uttar Pradesh	Kheri	41	26771	164	6%	3878	7	10%	95	91	5829	143	75	33
Uttar Pradesh	Kushinagar	36	16231	112	9%	2691	6	6%	74	71	3446	95	65	15
Uttar Pradesh	Lalitpur #	12	8183	165	-1%	1057	8	8%	85	84	1480	119	72	18
Uttar Pradesh	Lucknow	47	39038	209	4%	6177	6	3%	132	82	6818	146	58	28
Uttar Pradesh	Maharajganj #	27	9353	86	-6%	1470	6	0%	54	56	2096	77	49	13
Uttar Pradesh	Mahoba #	9	4953	139	-8%	715	7	0%	80	73	788	88	53	5
Uttar Pradesh	Mainpuri	19	10067	134	13%	1036	10	38%	55	68	2088	111	54	23
Uttar Pradesh	Mathura	26	13929	135	-6%	2071	7	1%	80	66	2928	113	52	29
Uttar Pradesh	Mau #	22	12019	134	1%	1591	8	-7%	71	59	1994	89	55	21
Uttar Pradesh	Meerut	35	30538	218	-6%	4224	7	-3%	120	107	6813	194	85	41
Uttar Pradesh	Mirzapur	25	17413	171	-5%	2264	8	-2%	89	87	3862	152	68	45
Uttar Pradesh	Moradabad #	49	24594	127	-18%	4185	6	-6%	86	80	4885	101	66	8
Uttar Pradesh	Muzaffarnagar	29	24885	216	7%	3057	8	8%	106	118	5677	197	91	35
Uttar Pradesh	Pilibhit #	21	14929	180	-11%	2058	7	-4%	99	84	2838	137	63	27
Uttar Pradesh	Pratapgarh #	32	17107	132	-19%	2289	7	-6%	71	69	3811	118	59	23
Uttar Pradesh	Rae Bareli #	25	12691	126	14%	1919	7	17%	76	71	3593	143	59	54
Uttar Pradesh	Rampur	24	18759	197	2%	2463	8	-1%	104	95	4007	169	73	47

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Uttar Pradesh	Hamirpur	51	17	52	55	4%	89%	81%	88%	80%	781	89%	865	99%	643	72%	640	45%
Uttar Pradesh	Hapur	89	21	52	96	6%	95%	92%			1049	97%	1087	100%	0		1452	73%
Uttar Pradesh	Hardoi #	40	22	61	195	3%	92%	81%	89%	79%	3550	91%	3848	99%	3090	88%	5413	75%
Uttar Pradesh	Hathras	29	22	60	91	7%	94%	87%	93%	86%	1233	92%	1318	98%	1036	94%	1461	88%
Uttar Pradesh	Jalaun #	53	30	79	126	6%	91%	78%	88%	75%	1288	89%	1441	100%	1003	88%	1976	76%
Uttar Pradesh	Jaunpur	71	12	26	200	4%	92%	75%	89%	75%	2329	86%	2487	92%	2358	87%	4196	72%
Uttar Pradesh	Jhansi #	36	29	72	56	3%	90%	66%	88%	72%	1447	90%	1571	98%	1152	80%	1591	67%
Uttar Pradesh	Jyotiba Phule Nagar #	26	24	87	49	2%	96%	89%	91%	87%	1767	93%	1904	100%	1589	92%	1404	56%
Uttar Pradesh	Kannauj	52	17	58	95	6%	95%	89%	92%	85%	1199	91%	1323	100%	1142	93%	1505	80%
Uttar Pradesh	Kanpur Dehat #	32	20	63	73	5%	94%	81%	91%	85%	1375	92%	1490	100%	1548	98%	1448	77%
Uttar Pradesh	Kanpur Nagar	90	35	95	355	8%	85%	68%	80%	65%	3325	91%	3594	98%	2872	89%	3696	61%
Uttar Pradesh	Kanshiram Nagar	48	13	45	111	8%	92%	88%	94%	97%	882	86%	996	97%	830	88%	901	59%
Uttar Pradesh	Kaushambi	49	39	76	111	6%	95%	94%	96%	96%	1374	94%	1456	100%	1480	94%	2642	100%
Uttar Pradesh	Kheri	36	26	69	227	5%	91%	82%	92%	86%	3324	88%	3765	100%	2532	79%	5072	87%
Uttar Pradesh	Kushinagar	29	8	26	146	5%	91%	83%	92%	84%	2303	89%	2565	99%	1756	82%	3166	92%
Uttar Pradesh	Lalitpur #	25	22	49	48	4%	89%	76%	94%	87%	1012	97%	1022	98%	847	95%	1283	87%
Uttar Pradesh	Lucknow	110	33	99	371	7%	84%	63%	82%	62%	3530	91%	3864	100%	2950	100%	2043	30%
Uttar Pradesh	Maharajganj #	17	10	30	88	5%	94%	87%	94%	90%	1305	86%	1461	96%	1235	90%	1499	72%
Uttar Pradesh	Mahoba #	29	23	82	30	5%	90%	86%	90%	84%	542	82%	597	91%	491	83%	654	83%
Uttar Pradesh	Mainpuri	42	24	69	67	4%	89%	79%	92%	81%	1237	93%	1289	97%	650	66%	2099	101%
Uttar Pradesh	Mathura	47	20	61	81	3%	89%	67%	82%	66%	1541	88%	1745	100%	1246	88%	2019	69%
Uttar Pradesh	Mau #	23	7	22	67	4%	93%	80%	93%	85%	1127	83%	1352	100%	908	81%	1478	74%
Uttar Pradesh	Meerut	139	33	89	309	5%	93%	85%	92%	86%	3439	91%	3754	100%	3198	92%	5827	86%
Uttar Pradesh	Mirzapur	37	30	78	157	5%	95%	88%	95%	94%	2093	94%	2209	99%	1834	92%	2762	72%
Uttar Pradesh	Moradabad #	41	17	58	183	4%	91%	79%	89%	78%	3624	93%	3904	100%	2539	70%	3438	70%
Uttar Pradesh	Muzaffarnagar	141	37	118	281	6%	92%	74%	88%	73%	2614	76%	2945	85%	2460	70%	3732	66%
Uttar Pradesh	Pilibhit #	46	35	93	115	5%	90%	82%	87%	77%	1727	97%	1785	100%	1228	84%	2108	74%
Uttar Pradesh	Pratapgarh #	55	21	48	160	5%	91%	79%	94%	85%	2112	92%	2296	100%	1522	71%	3232	85%
Uttar Pradesh	Rae Bareli #	52	17	49	120	4%	89%	81%	88%	81%	1523	85%	1781	99%	1292	64%	2900	81%
Uttar Pradesh	Rampur	67	32	94	177	5%	91%	73%	88%	74%	2058	90%	2287	100%	1607	87%	2717	68%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Uttar Pradesh	Hamirpur	12%	1%	0%			20	31%	10	50%	12	60%	0	0%	35	30%	77	31%
Uttar Pradesh	Hapur	7%	0%	0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Uttar Pradesh	Hardoi #	36%	0%	0%			46	71%	0	0%	20	100%	0	0%	65	56%	131	52%
Uttar Pradesh	Hathras	85%	0%	0%	0%	100%	46	71%	0	0%	16	80%	10	33%	87	76%	159	64%
Uttar Pradesh	Jalaun #	47%	1%	0%			47	73%	0	0%	12	60%	0	0%	57	50%	116	46%
Uttar Pradesh	Jaunpur	34%	1%	0%	0%	100%	44	67%	0	0%	16	80%	10	33%	62	54%	132	53%
Uttar Pradesh	Jhansi #	26%	0%	0%			40	62%	20	100%	0	0%	5	17%	45	39%	111	44%
Uttar Pradesh	Jyotiba Phule Nagar #	28%	0%	0%	0%	0%	46	72%	10	50%	16	80%	0	1%	65	57%	138	55%
Uttar Pradesh	Kannauj	3%	2%	0%	0%	0%	31	48%	0	0%	8	40%	14	47%	70	61%	124	49%
Uttar Pradesh	Kanpur Dehat #	44%	0%	0%			29	45%	10	50%	16	80%	0	0%	49	43%	105	42%
Uttar Pradesh	Kanpur Nagar	29%	1%	0%	0%	0%	34	52%	10	50%	12	60%	12	41%	40	35%	108	43%
Uttar Pradesh	Kanshiram Nagar	60%	0%	0%	100%	100%	28	42%	0	0%	16	80%	0	0%	68	59%	112	45%
Uttar Pradesh	Kaushambi	33%	0%	0%			45	69%	10	50%	16	80%	0	0%	65	57%	136	54%
Uttar Pradesh	Kheri	15%	0%	0%			41	63%	0	0%	8	40%	0	0%	70	61%	119	47%
Uttar Pradesh	Kushinagar	6%	6%	0%	100%	100%	44	68%	0	0%	4	20%	10	33%	73	64%	131	53%
Uttar Pradesh	Lalitpur #	57%	0%	0%			47	73%	10	50%	4	20%	0	0%	73	63%	134	54%
Uttar Pradesh	Lucknow	33%	1%	0%	20%	40%	41	63%	0	0%	16	80%	20	67%	55	48%	132	53%
Uttar Pradesh	Maharajganj #	2%	17%	0%	0%	0%	46	71%	0	0%	12	60%	0	0%	79	68%	137	55%
Uttar Pradesh	Mahoba #	36%	19%	0%			48	74%	0	0%	4	20%	10	33%	72	63%	135	54%
Uttar Pradesh	Mainpuri	47%	2%	0%			33	50%	0	0%	8	40%	0	0%	76	66%	117	47%
Uttar Pradesh	Mathura	11%	4%	0%			35	53%	0	0%	16	80%	13	43%	42	37%	105	42%
Uttar Pradesh	Mau #	74%	2%	1%	0%	69%	40	62%	10	50%	16	80%	0	0%	56	48%	122	49%
Uttar Pradesh	Meerut	52%	0%	0%	0%	82%	44	68%	0	0%	12	60%	15	50%	71	62%	142	57%
Uttar Pradesh	Mirzapur	18%	2%	0%			45	69%	0	0%	16	80%	0	0%	74	64%	135	54%
Uttar Pradesh	Moradabad #	2%	1%	0%			41	63%	10	50%	20	100%	0	0%	59	51%	130	52%
Uttar Pradesh	Muzaffarnagar	35%	1%	0%	0%	8%	34	52%	10	50%	16	80%	10	33%	72	63%	142	57%
Uttar Pradesh	Pilibhit #	38%	0%	0%			39	60%	10	50%	16	80%	0	0%	53	46%	118	47%
Uttar Pradesh	Pratapgarh #	29%	2%	0%	44%	83%	29	45%	10	50%	8	40%	0	0%	74	65%	122	49%
Uttar Pradesh	Rae Bareli #	43%	0%	0%			48	74%	0	0%	20	100%	0	0%	56	49%	124	50%
Uttar Pradesh	Rampur	36%	0%	0%	0%	50%	39	60%	10	50%	16	80%	4	12%	75	65%	144	57%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
Uttar Pradesh	Saharanpur	35	21529	153	-19%	3213	7	-3%	91	88	5100	145	65	20
Uttar Pradesh	Sant Kabir Nagar #	17	8631	124	5%	1134	8	12%	65	61	2038	117	54	31
Uttar Pradesh	Sant Ravidas Nagar	16	13219	209	-11%	1484	9	12%	94	93	2615	165	75	47
Uttar Pradesh	Shahjahanpur	31	20318	166	-6%	2822	7	2%	92	84	4300	141	72	36
Uttar Pradesh	Shamli	13	6335	119		999	6		75	76	1622	121	56	22
Uttar Pradesh	Shravasti #	11	4567	101	-14%	810	6	-7%	71	67	1032	91	56	13
Uttar Pradesh	Siddharthnagar #	26	12856	124	18%	1736	7	9%	67	66	2539	98	59	23
Uttar Pradesh	Sitapur #	46	32853	180	3%	3942	8	1%	87	83	7153	157	68	51
Uttar Pradesh	Sonbhadra	19	8674	114	4%	1428	6	13%	75	72	1858	98	62	13
Uttar Pradesh	Sultanpur	24	13049	134	17%	2136	6	-3%	88	78	2644	109	66	17
Uttar Pradesh	Unnao #	32	16953	134	-8%	2916	6	-4%	92	93	4435	140	71	26
Uttar Pradesh	Varanasi	37	24055	160	-3%	3535	7	-4%	94	72	4878	130	60	28
Uttarakhand	Almora	6	4714	186	-15%	579	8	-3%	92	88	889	141	69	18
Uttarakhand	Bageshwar	3	1764	167	-2%	204	9	2%	77	80	357	135	58	24
Uttarakhand	Chamoli	4	2096	132	-10%	239	9	9%	60	74	548	138	55	27
Uttarakhand	Champawat	3	1775	168	6%	176	10	-17%	67	72	292	111	49	11
Uttarakhand	Dehradun	17	17053	247	1%	2564	7	2%	149	68	2936	170	51	40
Uttarakhand	Garhwal	7	6521	234	5%	912	7	3%	131	79	933	134	53	23
Uttarakhand	Hardwar	20	9682	124	4%	1536	6	2%	78	72	2607	133	52	30
Uttarakhand	Nainital	10	7828	202	0%	1614	5	-4%	166	108	2019	208	64	39
Uttarakhand	Pithoragarh	5	3109	157	-5%	398	8	0%	81	73	538	109	48	15
Uttarakhand	Rudraprayag	2	1342	139	-9%	130	10	29%	54	72	294	122	49	20
Uttarakhand	Tehri Garhwal	6	4110	164	-5%	460	9	-11%	73	86	941	150	58	22
Uttarakhand	Udhamsingh Nagar	17	10129	151	1%	1393	7	-6%	83	66	2292	137	48	39
Uttarakhand	Uttarkashi	3	2002	149	-10%	287	7	-12%	86	83	593	177	57	35
West Bengal	Bankura	36	26129	180	-5%	2765	9	-5%	76	67	4041	111	59	17
West Bengal	Barddhaman	78	52198	167	-8%	5441	10	-1%	70	61	8565	110	49	22
West Bengal	Birbhum	35	20667	146	-15%	2877	7	-2%	81	71	3996	113	61	23
West Bengal	Dakshin Dinajpur	17	12058	179	-3%	1515	8	6%	90	86	2374	141	75	23
West Bengal	Darjiling #	19	16431	221	1%	2261	7	4%	121	97	3554	191	69	27

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
Uttar Pradesh	Saharanpur	117	31	98	239	6%	92%	83%	90%	82%	2824	90%	3118	99%	2648	88%	4143	81%
Uttar Pradesh	Sant Kabir Nagar #	57	17	37	104	6%	86%	73%	88%	72%	888	80%	1016	92%	672	74%	1453	71%
Uttar Pradesh	Sant Ravidas Nagar	52	31	75	130	6%	97%	92%	96%	93%	1354	91%	1483	100%	1596	100%	2091	80%
Uttar Pradesh	Shahjahanpur	55	19	52	219	6%	93%	89%	90%	82%	2179	84%	2556	98%	1946	88%	2690	63%
Uttar Pradesh	Shamli	70	25	81	59	5%	90%	79%			889	87%	1025	100%	609		1322	82%
Uttar Pradesh	Shravasti #	41	12	45	43	5%	93%	76%	91%	81%	666	87%	764	100%	601	87%	799	77%
Uttar Pradesh	Siddharthnagar #	21	10	30	144	6%	96%	89%	94%	79%	1591	92%	1734	100%	1247	90%	1593	63%
Uttar Pradesh	Sitapur #	45	27	62	341	6%	90%	83%	93%	87%	3424	90%	3798	100%	2566	89%	4770	67%
Uttar Pradesh	Sonbhadra	27	15	40	80	5%	93%	88%	93%	86%	1281	93%	1374	100%	893	73%	1802	97%
Uttar Pradesh	Sultanpur	29	18	51	105	5%	92%	79%	92%	81%	1790	93%	1891	98%	1369	65%	0	0%
Uttar Pradesh	Unnao #	61	28	89	207	6%	91%	84%	90%	81%	2711	92%	2952	100%	2340	91%	3361	76%
Uttar Pradesh	Varanasi	85	21	52	359	9%	92%	73%	87%	71%	2422	89%	2726	100%	1972	84%	3463	71%
Uttarakhand	Almora	108	26	75	52	7%	97%	88%	93%	81%	518	93%	555	100%	489	93%	455	51%
Uttarakhand	Bageshwar	115	25	89	23	8%	91%	97%	92%	81%	206	98%	209	99%	167	85%	135	38%
Uttarakhand	Chamoli	101	30	84	23	5%	90%	84%	86%	84%	254	84%	299	99%	192	79%	293	53%
Uttarakhand	Champawat	76	31	96	18	9%	89%	82%	86%	76%	166	86%	190	99%	83	80%	151	52%
Uttarakhand	Dehradun	184	33	80	194	8%	86%	75%	86%	73%	1109	90%	1159	95%	882	89%	2215	75%
Uttarakhand	Garhwal	91	35	111	34	5%	86%	73%	86%	73%	463	82%	516	91%	298	70%	516	55%
Uttarakhand	Hardwar	81	30	87	142	7%	89%	73%	86%	68%	1289	89%	1444	99%	879	88%	1913	73%
Uttarakhand	Nainital	149	67	187	101	7%	81%	61%	73%	52%	1032	96%	1066	99%	422	68%	761	38%
Uttarakhand	Pithoragarh	62	30	111	41	11%	87%	66%	89%	77%	337	90%	376	100%	277	88%	274	51%
Uttarakhand	Rudraprayag	88	31	96	12	5%	93%	61%	88%	77%	155	88%	177	100%	142	91%	202	69%
Uttarakhand	Tehri Garhwal	124	39	117	47	7%	91%	84%	91%	89%	468	85%	529	96%	363	81%	754	80%
Uttarakhand	Udhamsingh Nagar	65	33	79	124	7%	89%	75%	86%	57%	1090	96%	1095	96%	804	95%	924	40%
Uttarakhand	Uttarkashi	185	39	110	28	6%	91%	76%	89%	78%	250	88%	282	100%	162	78%	468	79%
West Bengal	Bankura	91	13	38	117	3%	93%	81%	93%	77%	1983	80%	2362	95%	1928	89%	1182	29%
West Bengal	Barddhaman	68	21	55	273	4%	90%	73%	87%	68%	3886	79%	4888	99%	3030	71%	2702	32%
West Bengal	Birbhum	46	18	53	99	3%	87%	63%	83%	60%	2073	79%	2367	91%	1812	82%	528	13%
West Bengal	Dakshin Dinajpur	93	19	55	60	3%	86%	66%	83%	67%	1046	70%	1175	78%	1049	86%	438	18%
West Bengal	Darjiling #	199	45	124	257	9%	89%	66%	86%	53%	1608	86%	1779	95%	1219	87%	1761	50%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
Uttar Pradesh	Saharanpur	12%	2%	0%	0%	100%	41	63%	0	0%	16	80%	10	33%	65	56%	131	53%
Uttar Pradesh	Sant Kabir Nagar #	14%	5%	0%	17%	33%	42	65%	0	0%	16	80%	0	0%	64	56%	122	49%
Uttar Pradesh	Sant Ravidas Nagar	25%	5%	0%	18%	0%	47	72%	0	0%	12	60%	0	0%	64	55%	123	49%
Uttar Pradesh	Shahjahanpur	34%	0%	0%			33	50%	10	50%	12	60%	0	0%	61	53%	116	46%
Uttar Pradesh	Shamli	28%	1%	0%			0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Uttar Pradesh	Shravasti #	10%	3%	1%	0%	0%	31	47%	10	50%	16	80%	10	33%	59	51%	125	50%
Uttar Pradesh	Siddharthnagar #	25%	7%	0%	67%	42%	42	64%	10	50%	16	80%	11	35%	65	57%	144	57%
Uttar Pradesh	Sitapur #	29%	0%	0%	100%	100%	45	69%	10	50%	16	80%	2	5%	75	65%	147	59%
Uttar Pradesh	Sonbhadra	39%	2%	0%			45	69%	0	0%	8	40%	0	0%	69	60%	121	48%
Uttar Pradesh	Sultanpur	37%	1%	0%	0%	0%	37	57%	10	50%	20	100%	11	37%	67	59%	145	58%
Uttar Pradesh	Unnao #	17%	1%	0%			43	66%	0	0%	12	60%	0	0%	70	61%	125	50%
Uttar Pradesh	Varanasi	19%	2%	0%	0%	0%	38	59%	0	0%	16	80%	7	24%	60	52%	121	49%
Uttarakhand	Almora	45%	0%	0%			50	77%	10	50%	16	80%	20	67%	50	44%	146	59%
Uttarakhand	Bageshwar	57%	0%	0%			49	75%	20	100%	12	60%	0	0%	78	68%	159	63%
Uttarakhand	Chamoli	47%	1%	1%	33%	0%	49	76%	10	50%	16	80%	10	33%	72	62%	157	63%
Uttarakhand	Champawat	71%	2%	0%			43	66%	20	100%	16	80%	20	67%	57	49%	156	62%
Uttarakhand	Dehradun	58%	1%	1%	83%	83%	46	71%	20	100%	4	20%	10	33%	46	40%	126	50%
Uttarakhand	Garhwal	42%	1%	0%	100%	0%	35	54%	10	50%	0	0%	10	33%	34	29%	89	36%
Uttarakhand	Hardwar	63%	1%	0%	100%	100%	43	67%	10	50%	12	60%	20	67%	58	50%	143	57%
Uttarakhand	Nainital	46%	1%	0%	50%	0%	46	71%	10	50%	16	80%	7	23%	38	33%	116	47%
Uttarakhand	Pithoragarh	52%	0%	0%	100%	100%	43	66%	20	100%	16	80%	12	40%	50	43%	140	56%
Uttarakhand	Rudraprayag	68%	1%	0%			46	71%	0	0%	16	80%	10	33%	53	46%	125	50%
Uttarakhand	Tehri Garhwal	58%	1%	0%	50%	50%	53	82%	10	50%	16	80%	25	82%	63	55%	167	67%
Uttarakhand	Udhamsingh Nagar	54%	1%	0%	100%	100%	43	67%	20	100%	16	80%	10	34%	47	41%	136	54%
Uttarakhand	Uttarkashi	49%	0%	0%			47	72%	20	100%	16	80%	10	33%	54	47%	147	59%
West Bengal	Bankura	52%	0%	0%	0%	33%	51	79%	20	100%	12	60%	7	23%	69	60%	159	64%
West Bengal	Barddhaman	46%	2%	0%	90%	88%	49	76%	20	100%	16	80%	0	0%	61	53%	146	59%
West Bengal	Birbhum	38%	1%	0%	89%	78%	56	86%	20	100%	16	80%	10	33%	44	38%	146	58%
West Bengal	Dakshin Dinajpur	21%	3%	0%	71%	86%	43	67%	20	100%	16	80%	10	35%	46	40%	136	54%
West Bengal	Darjiling #	60%	3%	1%	97%	97%	46	71%	10	50%	12	60%	8	28%	51	44%	127	51%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Popu-lation (in lakh) covered by RNTCP[1]	No. of suspects examined	Suspects examined per lakh population	Rate of change in suspects examined per lakh population (compared to same quarter in previous year)	No of Smear positive patients diagnosed[2]	Suspects examined per smear positive case diagnosed	Rate of change in suspects examined per s+ case diagnosed (compared to same quarter in previous year)	Annual Smear positive case detection rate (from PMR)	Annual smear positive case notification rate [from CFR: sm + cases (NSP + Rel + TAD) / Pop]	Total patients registered for treatment[3]	Annual total case notification rate	Annual new smear positive case notification rate	Annual new smear negative case notification rate
West Bengal	Haora	49	27556	141	-6%	3013	9	4%	62	54	4961	101	39	14
West Bengal	Hugli	56	26818	120	-7%	3317	8	2%	59	54	5425	97	43	16
West Bengal	Jalpaiguri #	39	34792	222	-8%	3915	9	-5%	100	92	6271	160	74	23
West Bengal	Koch Bihar #	29	18571	163	-9%	1711	11	-5%	60	51	2675	94	44	15
West Bengal	Kolkata	45	37679	208	-8%	4837	8	-2%	107	68	5721	126	47	12
West Bengal	Maldah #	40	25620	159	-10%	3462	7	-7%	86	75	4724	117	63	15
West Bengal	Medinipur East	51	21110	103	-9%	1488	14	3%	29	26	2218	43	22	5
West Bengal	Medinipur West	60	29397	122	-7%	3970	7	-3%	66	58	6323	105	49	21
West Bengal	Murshidabad	72	45288	158	-5%	4841	9	1%	67	63	7469	104	53	15
West Bengal	Nadia	52	35933	172	-10%	2875	12	-5%	55	50	4464	85	40	12
West Bengal	North 24 Parganas	102	51185	126	1%	5240	10	9%	51	50	8599	84	40	8
West Bengal	Puruliya	30	18891	160	3%	1955	10	0%	66	61	3305	112	52	29
West Bengal	South 24 Parganas	82	37908	115	-12%	3808	10	-9%	46	45	6091	74	37	10
West Bengal	Uttar Dinajpur	30	14546	120	-9%	1768	8	-1%	58	54	2498	82	46	13
Grand Total		12285	**7867194**	160	**-2%**	**933905**	**8**	**2%**	76	65	**1467585**	119	51	26
Summary of performance of Poor & Backward districts		2771	1418693	512	-1%	178354	8	5%	257	235	283626	409	193	102
Summary of performance of Tribal Districts		558	329962	591	6%	45074	7	8%	323	291	75701	542	242	139
North Zone		3051	2019094	662	-3%	281556	7	2%	369	326	445612	584	251	117
South Zone		2552	2056891	806	-5%	189467	11	-5%	297	244	283242	444	194	96
West Zone		3471	2178393	628	3%	271500	8	7%	313	263	428965	494	202	113
East Zone		2749	1376402	501	0%	159336	9	3%	232	205	253512	369	170	81
North-East Zone		462	236414	511	-3%	32046	7	1%	277	238	56254	487	194	112

† Tribal Districts (more than 50% tribal population) # Poor/Backward District # † Tribal & Poor/Backward Districts

Estimated New Smear Positive cases / lakh population based on ARTI data for North Zone (Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Uttar Pradesh, Uttaranchal) is 95; East Zone (Andaman & Nicobar, Arunachal Pradesh, Assam, Bihar, Jharkhand, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, West Bengal) is 75; South Zone (Andhra Pradesh, Karnataka, Lakshdweep, Pondicherry, Tamil Nadu) is 75 and West Zone (Chhattisgarh, Dadra & Nagar Haveli, Daman & Diu, Goa, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan) is 80; Orissa is 85, Kerala is 50

1 Projected population based on census population of 2011 is used for calculation of case-detection rate. 1 lakh = 100,000 population

2 Smear positive patients diagnosed include new smear positive cases and smear positive retreatment cases

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

4 Sputum Conversion rate is not expected for new districts that began implementing RNTCP in 4th quarter 2011

5 Cure rate and Success rate are not expected for new districts that began implementing RNTCP after 4th quarter 2010

Values for grey areas are not expected

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Annual new extra pulmonary case notification rate	Annual previously treated case notification rate	Annual previously treated smear positive case notification rate	No (%) of pediatric cases out of all New cases		3 month conversion rate of new smear positive patients[4]	3 month conversion rate of retreatment patients[4]	Treatment Success rate of new smear positive patients[5]	Treatment success rate among smear positive previously treated cases[5]	No (%) of all Smear Positive cases started RNTCP DOTS within 7 days of diagnosis		No (%) of all Smear Positive cases registered within one month of starting RNTCP DOTS treatment		No (%) of all cured Smear Positive cases having end of treatment follow- up sputum done within 7 days of last dose		No (%) of cases (all forms of TB) registered receiving DOT through a community volunteer	
West Bengal	Haora	88	27	74	293	8%	85%	67%	83%	59%	2447	87%	2740	97%	1952	90%	2166	44%
West Bengal	Hugli	74	19	50	141	3%	87%	63%	85%	62%	2277	74%	3038	98%	2179	82%	1500	28%
West Bengal	Jalpaiguri #	125	32	91	315	6%	89%	68%	85%	65%	3367	89%	3489	92%	2821	89%	835	13%
West Bengal	Koch Bihar #	89	13	34	48	2%	87%	71%	86%	60%	1073	72%	1377	93%	1017	81%	390	15%
West Bengal	Kolkata	131	35	100	416	10%	81%	58%	81%	60%	2894	88%	3269	100%	2405	97%	1613	28%
West Bengal	Maldah #	70	21	60	193	5%	89%	64%	85%	67%	2305	73%	2771	88%	2007	78%	557	12%
West Bengal	Medinipur East	30	8	22	57	3%	84%	62%	81%	60%	1108	78%	1328	94%	806	69%	381	17%
West Bengal	Medinipur West	72	18	41	145	3%	90%	70%	88%	68%	2649	75%	2790	79%	2190	75%	749	12%
West Bengal	Murshidabad	77	17	50	279	4%	91%	72%	88%	69%	3671	78%	4557	97%	3169	78%	1268	17%
West Bengal	Nadia	67	17	44	121	3%	90%	66%	88%	66%	2193	82%	2641	99%	1920	84%	775	17%
West Bengal	North 24 Parganas	72	18	52	350	5%	84%	58%	82%	63%	4953	92%	5351	100%	4172	95%	3349	39%
West Bengal	Puruliya	46	20	41	124	5%	92%	76%	89%	75%	1468	80%	1765	96%	1232	82%	523	16%
West Bengal	South 24 Parganas	54	13	39	199	4%	86%	64%	85%	61%	2918	76%	3799	99%	2665	87%	1716	28%
West Bengal	Uttar Dinajpur	44	13	36	113	5%	86%	64%	85%	62%	1401	84%	1602	96%	1133	82%	332	13%
Grand Total		**76**	23	**61**	81489	**7%**	**90%**	**72%**	**88%**	**71%**	**717137**	**88%**	**791312**	**97%**	**559120**	**83%**	**735822**	**50%**
Summary of performance of Poor & Backward districts		42	71	46	15295	7%	90%	74%	89%	75%	142798	86%	160459	97%	108442	78%	185505	65%
Summary of performance of Tribal Districts		73	87	55	4642	7%	90%	73%	89%	74%	35718	86%	39956	96%	25685	76%	46533	61%
North Zone		100	116	80	25358	7%	91%	76%	89%	76%	227242	90%	246829	98%	184347	86%	233408	52%
South Zone		75	79	56	16158	7%	90%	70%	86%	67%	139573	87%	153865	96%	104815	83%	163645	58%
West Zone		76	103	66	24533	7%	91%	70%	88%	69%	204493	88%	224140	97%	160925	83%	175340	41%
East Zone		50	66	40	12167	6%	88%	69%	88%	70%	120806	84%	139594	97%	91237	79%	141763	56%
North-East Zone		88	92	51	3273	7%	87%	67%	84%	65%	25023	88%	26884	95%	17796	80%	21666	39%

Performance of RNTCP Case Detection (2012), Smear Conversion (Fourth quarter 2011 to Third quarter 2012), Treatment Outcomes (2011) and Composite Indicators of Performance

State	District	Proportion of all registered TB cases with known HIV status	Proportion of TB patients known to be HIV infected among tested	Proportion of TB patients known to be HIV infected among registered	Proportion of HIV infected TB patients put on CPT(RT report)	Proportion of HIV infected TB patients put on ART(RT report)	Human Resource Management Score(%)		Financial Management Score(%)		Drugs & Logistics Management Score (%)		Case Finding Efforts Score (%)		Quality of Services Score (%)		Composite Score for Performance Assessment (%)	
West Bengal	Haora	79%	2%	1%	90%	67%	56	86%	20	100%	16	80%	10	33%	92	80%	194	77%
West Bengal	Hugli	52%	3%	1%	76%	76%	29	45%	20	100%	8	40%	7	23%	82	72%	147	59%
West Bengal	Jalpaiguri #	55%	1%	1%	94%	72%	45	69%	20	100%	12	60%	10	33%	69	60%	156	62%
West Bengal	Koch Bihar #	55%	1%	0%	80%	80%	51	78%	20	100%	16	80%	7	23%	66	57%	159	64%
West Bengal	Kolkata	84%	6%	4%	99%	80%	45	69%	20	100%	16	80%	7	23%	66	57%	154	61%
West Bengal	Maldah #	44%	2%	0%	67%	58%	48	75%	20	100%	4	20%	7	23%	60	52%	140	56%
West Bengal	Medinipur East	42%	3%	1%	63%	83%	37	57%	20	100%	12	60%	10	33%	74	64%	153	61%
West Bengal	Medinipur West	32%	1%	1%	50%	68%	49	75%	20	100%	4	20%	5	17%	55	48%	133	53%
West Bengal	Murshidabad	64%	1%	0%	100%	95%	51	78%	10	50%	16	80%	7	23%	90	78%	174	70%
West Bengal	Nadia	46%	2%	0%	82%	55%	55	84%	10	50%	12	60%	5	17%	79	69%	161	64%
West Bengal	North 24 Parganas	73%	3%	1%	88%	80%	56	86%	20	100%	12	60%	7	23%	59	51%	154	62%
West Bengal	Puruliya	65%	0%	0%	100%	0%	52	80%	20	100%	16	80%	7	23%	54	47%	149	60%
West Bengal	South 24 Parganas	34%	1%	1%	91%	91%	51	78%	20	100%	16	80%	19	64%	55	48%	161	65%
West Bengal	Uttar Dinajpur	71%	3%	1%	76%	79%	50	77%	10	50%	12	60%	10	33%	60	52%	143	57%
Grand Total		**56%**	**5%**	**2%**	**92%**	**74%**												
Summary of performance of Poor & Backward districts		36%	4%	1%	82%	91%												
Summary of performance of Tribal Districts		46%	3%	1%	86%	79%												

North Zone	43%	1%	0%	66%	73%
South Zone	88%	9%	7%	94%	74%
West Zone	60%	6%	3%	95%	76%
East Zone	40%	2%	1%	63%	72%
North-East Zone	38%	3%	1%	82%	53%

Referral of TB Suspects from ICTCs to RNTCP diagnosis units (2012)

State	Total Clients Attending ICTC	No of TB suspects referred to RNTCP			Of those referred Number diagnosed as having						Out of those diagnosed TB number receiving	
					Sputum positive TB		Sputum negative TB		Extra Pulmonary TB			
		HIV Positive	HIV Negative	Total	HIV Positive	HIV Negative	HIV Positive	HIV Negative	HIV Positive	HIV Negative	HIV Positive	HIV Negative
Arunachal Pradesh	4311	0	22	22	0	1	0	2	0	0	0	0
Assam	117575	602	2506	3108	16	72	18	78	10	2	24	50
Bihar	301576	4011	4743	8754	64	275	174	565	5	41	48	159
Chandigarh	31125	348	590	938	6	10	1	0	1	0	8	5
Chattisgarh	27710	329	784	1113	15	61	18	78	1	17	9	30
Daman and Diu	124	0	2	2	1	0	0	0	0	0	0	0
Delhi	202145	457	2425	2882	11	89	3	16	14	19	22	97
Goa	20116	236	592	828	3	4	0	2	10	8	12	14
Gujarat	365006	4015	24751	28766	150	1751	95	181	102	66	274	1699
Haryana	161679	1579	3386	4965	53	367	13	154	16	83	21	221
Himachal Pradesh	10096	29	113	142	1	8	0	5	0	1	0	5
Jharkhand	137055	996	3703	4699	35	649	129	441	9	96	25	131
Karnataka	1214659.982	24231	84544	108775	1169	4284	359	813	317	448	1752	5262
Kerala	271276	1142	3303	4445	52	80	13	7	33	5	91	89
Madhya Pradesh	424115	3128	8677	11805	88	578	120	596	45	59	154	603
Maharashtra	1256139	24822	99069	123891	1060	6276	751	1668	558	697	2030	7619
Manipur	42964	933	452	1385	15	6	7	4	8	4	23	13
Meghalaya	15066	128	34	162	3	0	15	5	4	0	2	0
Mizoram	15808	241	34	275	6	0	50	20	3	1	5	3
Mumbai	192660	8227	12527	20754	143	666	104	321	115	126	283	927
Nagaland	43613	253	948	1201	57	9	21	5	5	14	76	634
Orissa	197720	1444	6276	7720	72	492	53	425	33	51	93	507
Puducherry	30474	355	448	803	2	0	7	102	0	0	2	0
Punjab	217223	3755	4603	8358	66	99	3	2	21	6	80	97
Rajasthan	243141	3542	6978	10520	59	441	93	337	23	28	127	357
Sikkim	8003	0	9	9	0	0	0	1	0	0	0	0
Tamil Nadu	1415124	13951	71019	84970	505	3348	379	853	167	181	864	3445
Tripura	34581	163	1176	1339	2	49	0	3	0	9	0	18
Uttarakhand	27277	48	573	621	3	53	1	45	1	6	2	29
UttarPradesh	537855	3360	8083	11443	158	607	61	168	41	43	146	505
West Bengal	255311	1469	3221	4690	47	183	37	138	39	41	84	230
Total	**8768536**	**129952**	**399797**	**529749**	**5209**	**24414**	**3087**	**7925**	**1659**	**2190**	**7843**	**27118**

(Note:Only 8 of the 20 states submitted ICF reports for December 2012 from ART centres)

Source of data: Monthly reports on TB-HIV cross referrals submitted by individual ICTC to the respective State SACS

Referral of TB Suspects from ART to RNTCP diagnosis units (2012)

State	Total Number of ART centre Attendees (Cummulative for the period)	Number of TB Suspects referred from ART to RNTCP	Number of cases detected				Out of (d), number of TB patients receiving RNTCP treatment within the district (e)	Out of (d), number of TB patients referred outside district for RNTCP treatment (f)	Out of (f), number started on treatment (g)	Out of (d), number of TB patients receiving Non-RNTCP (h)	Out of (d), number of patients (HIV TB Co infected) started on CPT	Out of (d), number of patients (HIV TB Co infected) started on ART
			Sputum positive TB cases	Sputum negative TB cases	Extra-pulmonary TB cases	Total Number of TB cases (d)						
Andhra Pradesh	1081717	21451	2360	1646	926	4932	3821	489	1262	259	3084	2330
Arunachal Pradesh	24	0	0	0	0	0	0	0	0	0	0	0
Assam	19092	231	18	62	79	158	35	92	84	35	76	64
Bihar	100362	2373	167	320	340	804	205	358	244	43	0	0
Chandigarh	0	0	0	0	0	0	0	0	0	0	0	0
Chattisgarh	0	0	0	0	0	0	0	0	0	0	0	0
Daman and Diu	0	0	0	0	0	0	0	0	0	0	0	0
Delhi	0	0	0	0	0	0	0	0	0	0	0	0
Goa	16835	223	12	1	13	25	11	14	14	0	13	11
Gujarat	259701	7825	403	412	992	1807	1169	486	376	49	523	432
Haryana	12230	149	31	30	58	119	24	95	95	19	0	0
Himachal Pradesh	5401	90	10	2	5	17	9	8	8	0	11	10
Jharkhand	24903	523	69	204	22	295	52	23	28	34	0	0
Karnataka	813528	14785	968	1260	1062	3290	2645	217	250	102	1059	886
Kerala	86129	1483	94	33	159	286	177	86	96	15	101	82
Madhya Pradesh	50737	1508	97	85	89	271	104	124	117	5	57	49
Maharashtra	1101843	44356	1328	2418	2382	6128	4961	779	347	153	2764	2227
Manipur	4630	103	4	5	3	12	9	6	9	3	0	0
Meghalaya	4378	24	2	0	3	5	3	2	2	1	2	5
Mizoram	3262	36	2	4	2	8	32	0	18	1	0	0
Mumbai	241748	2490	129	319	656	1104	684	145	116	29	356	209
Nagaland	6777	194	24	24	8	55	37	5	5	16	15	10
Orissa	39708	1575	166	129	270	564	356	176	206	28	106	81
Puducherry	8314	175	8	0	0	7	4	2	2	1	6	6
Punjab	166632	1206	90	107	161	353	78	214	208	38	44	29
Rajasthan	76762	2121	137	237	159	533	330	186	194	27	138	125
Sikkim	690	4	1	0	2	3	9	0	0	8	0	0
Tamil Nadu	829669	20842	915	1823	1037	3775	2635	1076	291	47	1435	1047
Tripura	291	44	4	1	0	5	0	5	5	0	0	0
Uttarakhand	3184	84	4	9	26	39	15	22	17	0	0	0
UttarPradesh	71944	1313	164	135	206	505	186	254	130	86	0	0
West Bengal	79004	1303	94	77	187	358	173	153	153	31	119	90
Total	**5109495**	**126511**	**7301**	**9343**	**8847**	**25458**	**17764**	**5017**	**4277**	**1030**	**9909**	**7693**

(Note:Only 11 of the 24 states above submitted ICF reports for December 2012 from ICTC's)

Source of data: Monthly reports on TB-HIV cross referrals submitted by individual ART to the respective State SACS

Treatment outcome of HIV positive TB patients registered in First Quarter 2011

States	All TB-HIV NSP Total Case Registered	Treatment Success	Died	Failure	Defaulted	Transferred Out
Andhra Pradesh	1125	80%	14%	2%	4%	0%
Assam	2	100%	0%	0%	0%	0%
Chandigarh	0	0%	0%	0%	0%	0%
Delhi	30	73%	3%	0%	10%	7%
Goa	11	73%	9%	0%	18%	0%
Gujarat	210	74%	15%	1%	7%	2%
Karnataka	700	73%	17%	3%	5%	1%
Kerala	30	57%	17%	10%	3%	13%
Maharashtra	822	73%	16%	1%	6%	1%
Manipur	8	75%	25%	0%	0%	0%
Mizoram	6	67%	0%	17%	0%	17%
Nagaland	8	88%	0%	0%	13%	0%
Pondicherry	6	83%	17%	0%	0%	0%
Punjab	31	87%	6%	0%	6%	3%
Tamil Nadu	347	75%	19%	1%	4%	0%
West Bengal	52	75%	10%	2%	10%	0%
Grand Total	**3388**	**76%**	**15%**	**2%**	**5%**	**1%**

States	All TB-HIV Total Case Registered	Treatment Success	Died	Failure	Defaulted	Transferred out
Andhra Pradesh	2763	82%	11%	1%	4%	1%
Assam	12	75%	17%	0%	8%	0%
Chandigarh	5	100%	0%	0%	0%	0%
Delhi	134	84%	5%	1%	7%	1%
Goa	34	76%	12%	0%	3%	9%
Gujarat	813	76%	11%	3%	9%	1%
Karnataka	2350	72%	16%	1%	8%	3%
Kerala	82	62%	15%	2%	5%	7%
Maharashtra	2927	76%	13%	1%	8%	2%
Manipur	24	83%	17%	0%	0%	0%
Mizoram	40	83%	8%	3%	8%	0%
Nagaland	27	93%	0%	0%	7%	0%
Pondicherry	7	86%	14%	0%	0%	0%
Punjab	66	70%	20%	0%	8%	0%
Tamil Nadu	1483	81%	12%	1%	5%	0%
West Bengal	239	67%	13%	3%	6%	11%
Grand Total	**11006**	**77%**	**13%**	**1%**	**6%**	**2%**

Treatment Outcome of HIV Infected TB patients (Second Quarter 2011-Fourth Quarter 2011)

Treatment outcome among all HIV infected New TB cases

State	Total New Cases	Treatment Success	Died	Failure	Defaulted	Switch to CAT 4	Transferred out
Andaman & Nicobar	0	0%	0%	0%	0%	0%	0%
Andhra Pradesh	5548	84%	11%	1%	3%	0%	1%
Arunachal Pradesh	0	0%	0%	0%	0%	0%	0%
Assam	22	82%	14%	0%	5%	0%	0%
Bihar	113	87%	11%	0%	3%	0%	2%
Chandigarh	11	55%	27%	0%	9%	0%	9%
Chhattisgarh	34	68%	29%	3%	0%	0%	0%
Dadar & Nagar Haveli	0	0%	0%	0%	0%	0%	0%
Daman & Diu	1	0%	100%	0%	0%	0%	0%
Delhi	252	78%	8%	2%	5%	4%	3%
Goa	59	83%	14%	0%	3%	0%	0%
Gujarat	1763	79%	12%	1%	7%	0%	1%
Haryana	132	87%	7%	2%	5%	0%	0%
Himachal Pradesh	24	100%	8%	0%	0%	0%	0%
Jammu & Kashmir	85	99%	0%	0%	1%	0%	0%
Jharkhand	130	78%	15%	1%	4%	2%	1%
Karnataka	4487	76%	15%	1%	7%	0%	1%
Kerala	154	71%	7%	4%	10%	0%	8%
Lakshadweep	0	0%	0%	0%	0%	0%	0%
Madhya Pradesh	108	63%	27%	2%	5%	4%	0%
Maharashtra	4874	79%	13%	1%	5%	1%	1%
Manipur	67	78%	6%	6%	6%	1%	3%
Meghalaya	4	0%	0%	0%	0%	100%	0%
Mizoram	46	83%	4%	2%	9%	2%	0%
Nagaland	98	85%	5%	1%	6%	1%	2%
Orissa	95	74%	16%	2%	3%	4%	1%
Pondicherry	20	95%	5%	0%	0%	0%	0%
Punjab	178	75%	15%	2%	4%	0%	4%
Rajasthan	129	78%	16%	1%	8%	0%	0%
Sikkim	0	0%	0%	0%	0%	0%	0%
Tamil Nadu	2269	82%	11%	1%	5%	0%	0%
Tripura	10	90%	0%	0%	10%	0%	0%
Uttar Pradesh	169	70%	18%	0%	7%	3%	1%
Uttarakhand	120	91%	2%	0%	8%	0%	0%
West Bengal	449	75%	12%	1%	6%	4%	2%
Grand Total	21451	80%	12%	1%	5%	0%	1%

Treatment outcome among all HIV infected Re-treatment TB cases

States	Total Retreatment Cases	Treatment Success	Died	Failure	TAD	Transfer Out	Switch to CAT 4
Andaman & Nicobar	0	0%	0%	0%	0%	0%	0%
Andhra Pradesh	2886	78%	6%	13%	2%	1%	1%
Arunachal Pradesh	0	0%	0%	0%	0%	0%	0%
Assam	33	64%	15%	18%	3%	0%	0%
Bihar	104	83%	3%	8%	3%	4%	0%
Chandigarh	5	80%	0%	20%	0%	0%	0%
Chhattisgarh	22	64%	14%	18%	0%	5%	0%
Dadar & Nagar Haveli	1	0%	0%	0%	0%	100%	0%
Daman & Diu	5	60%	0%	40%	0%	0%	0%
Delhi	287	78%	5%	10%	2%	3%	3%
Goa	24	67%	17%	13%	0%	4%	0%
Gujarat	889	70%	13%	13%	2%	1%	0%
Haryana	152	71%	8%	9%	3%	3%	7%
Himachal Pradesh	12	67%	0%	33%	0%	0%	0%
Jammu & Kashmir	18	78%	11%	0%	0%	11%	0%
Jharkhand	85	82%	5%	5%	0%	7%	1%
Karnataka	2436	69%	10%	16%	2%	2%	0%
Kerala	155	68%	8%	15%	1%	2%	5%
Lakshadweep	0	0%	0%	0%	0%	0%	0%
Madhya Pradesh	125	136%	7%	12%	1%	0%	0%
Maharashtra	4555	75%	9%	14%	1%	1%	0%
Manipur	72	85%	4%	8%	0%	1%	1%
Meghalaya	2	100%	0%	0%	50%	0%	0%
Mizoram	108	81%	6%	9%	3%	0%	1%
Nagaland	72	89%	7%	3%	1%	0%	0%
Orissa	134	76%	10%	13%	0%	0%	0%
Pondicherry	4	75%	0%	25%	0%	0%	0%
Punjab	164	79%	8%	15%	0%	0%	0%
Rajasthan	102	72%	7%	13%	3%	0%	6%
Sikkim	0	0%	0%	0%	0%	0%	0%
Tamil Nadu	1721	79%	8%	12%	1%	0%	1%
Tripura	5	80%	20%	0%	0%	0%	0%
Uttar Pradesh	105	70%	9%	13%	1%	3%	5%
Uttarakhand	77	83%	9%	3%	5%	0%	0%
West Bengal	280	71%	9%	15%	5%	1%	0%
Total	14640	75%	8%	13%	2%	1%	0%

PMDT Implementation, Diagnosis, 6 months interim, 12 months Culture Conversion and Treatment Outcome of MDR TB Case (Reported by DR-TB Centres of Implementing States)

State	*Indicators on Coverage of MDR TB Services*						*Indicators on MDR TB Case Finding*							*Indicators on 6 months interim report*						
	Total Population (In lacs)	Total number of districts	Number of districts implementing PMDT services	Population of districts implementing PMDT services (in lacs)	% population with access to MDR TB services under RNTCP in 2012	Number of DR TB Centres functional in the state	Number of S+ Re-treatment cases registered in districts implementing PMDT services in 2012	Number of MDR TB Suspects subjected to C-DST in 2012	Proportion of **S+ RT cases registered** in districts implementing PMDT services who were **tested for MDR-TB $**	Number of MDR TB Cases detected in 2012	Number of MDR TB Cases detected that were registered and initiated on treatment in 2012 #	% MDR TB Cases detected that were registered and initiatied on treatment in 2012#	Number of XDR TB Cases detected that were registered and initiated on treatment in 2012 #	Number of MDR TB Case registered and initiated on Cat IV in the 4 cohorts 6-9 months prior (2Q11-1Q12) (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	4	1	1	4	100%	1	85	22	26%	8	6	75%	0	7	2	29%	0	0%	1	14%
Andhra Pradesh	853	24	24	853	100%	6	14738	10380	70%	1382	1227	89%	1	591	366	62%	62	10%	55	9%
Arunachal Pradesh	14	14	14	14	100%	2	290	276	95%	102	122	120%	0	13	12	92%	0	0%	0	0%
Assam	316	24	23	305	97%	1	3580	699	20%	210	182	87%	0	12	10	83%	1	8%	0	0%
Bihar	1061	38	38	1061	100%	2	7918	290	4%	132	118	89%	0							
Chandigarh^	11	1	1	11	100%	1	371	516	139%	62	62	100%	0	9	7	59%	1	11%	0	0%
Chhattisgarh	260	18	18	260	100%	1	1592	341	21%	43	41	95%	0	7	5	71%	0	0%	0	0%
Delhi^	170	26	26	170	100%	4	6590	11846	180%	1793	1670	93%	38	805	539	67%	74	9%	74	9%
Goa	15	2	2	15	100%	1	262	152	58%	40	31	78%	0	12	6	50%	2	17%	0	0%
Gujarat* (+DD&DNH)^	620	33	33	620	100%	4	13202	18190	138%	2122	1709	81%	33	781	420	54%	76	10%	76	10%
Haryana	258	21	21	258	100%	1	7497	550	7%	168	126	75%	0	98	64	65%	12	12%	4	4%
Himachal Pradesh	69	12	12	69	100%	2	2204	342	16%	118	96	81%	0	56	34	61%	5	9%	1	2%
Jammu & Kashmir	128	14	14	128	100%	2	1785	707	40%	81	73	90%	0	9	1	59%	2	22%	0	0%
Jharkhand	337	24	23	329	98%	1	2919	731	25%	167	136	81%	0	34	19	56%	4	12%	1	3%
Karnataka	619	31	31	619	100%	2	9265	1040	11%	156	90	58%	4	57	31	54%	6	11%	4	7%
Kerala (+LK)^	336	15	15	336	100%	2	2470	6332	256%	282	299	106%	8	200	116	58%	13	7%	13	7%
Madhya Pradesh	739	50	39	596	81%	2	10149	1515	15%	370	346	94%	0	70	49	70%	2	3%	2	3%
Mahara-shtra^	1139	78	78	1139	100%	11	16360	23387	143%	4439	3353	76%	39	830	321	39%	87	10%	74	9%
Manipur	28	9	9	28	100%	1	241	98	41%	35	26	74%	0	6	3	50%	0	0%	2	33%
Meghalaya	30	7	7	30	100%	2	666	210	32%	104	88	85%	0	6	4	67%	0	0%	1	17%
Mizoram	11	8	8	11	100%	1	177	167	94%	47	50	106%	0	10	6	60%	2	20%	0	0%
Nagaland	20	11	11	20	100%	1	460	241	52%	77	41	53%	0	7	6	86%	0	0%	1	14%
Orissa	424	31	31	424	100%	2	4131	923	22%	171	142	83%	0	69	37	54%	4	6%	1	1%
Puducherry^	13	1	1	13	100%	1	207	396	191%	65	29	45%	0	8	3	38%	2	25%	1	13%
Punjab	280	20	20	280	100%	3	6570	1533	23%	331	276	83%	0	24	17	71%	1	4%	4	17%
Rajasthan	699	34	34	699	100%	7	15526	14818	95%	2538	1987	78%	0	500	327	65%	44	9%	44	9%
Sikkim	6	4	4	6	100%	1	267	228	85%	127	99	78%	0	9	8	89%	0	0%	1	11%
Tamil Nadu	732	31	31	732	100%	3	9360	6867	73%	972	692	71%	2	192	111	58%	7	4%	6	3%
Tripura	37	4	4	37	100%	1	254	37	15%	14	16	114%	0	2	1	50%	0	0%	0	0%
Uttar Pradesh	2032	74	20	656	32%	2	33750	370	1%	110	109	99%	0	58	34	59%	11	19%	6	10%
Uttarakhand	103	13	13	103	100%	1	2550	437	17%	100	87	87%	0	21	14	67%	1	5%	1	5%
West Bengal	923	19	19	923	100%	4	12209	2006	16%	1007	730	72%	6	217	152	70%	16	7%	9	4%
India Total	**12285**	**692**	**625**	**10748**	**87%**	**76**	**187645**	**105647**	**56%**	**17373**	**14059**	**81%**	**131**	**4720**	**2725**	**58%**	**435**	**9%**	**382**	**8%**

* Data from Daman-Diu & Dadra Nagar Haveli is included in Gujarat; Data from Lakshadweep is included in Kerala
$ This indicator will be more relevant when S+ve RT cases are considered as MDR TB suspects in all districts in the state

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

PMDT Implementation, Diagnosis, 6 months interim, 12 months Culture Conversion and Treatment Outcome of MDR TB Case (Reported by DR-TB Centres of Implementing States)

State	*Indicators on 12 months Culture Conversion Report*											*Indicators on Treatment Outcome of MDR TB Cases*									
	Number of MDR TB cases registered in the cohort, 12-15 months prior (4Q10-3Q11) (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**		Number of MDR TB cases registered in the cohort, 31-33 months prior (3Q09-2Q10) ©	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																					
Andhra Pradesh	376	211	56%	19	5%	41	11%	60	16%	40	11%	177	72	8	45%	44	25%	42	24%	5	3%
Arunachal Pradesh																					
Assam																					
Bihar																					
Chandigarh^																					
Chhattisgarh																					
Delhi^	393	232	59%	15	4%	27	7%	52	13%	55	14%	369	180	23	55%	53	14%	80	22%	12	3%
Goa																					
Gujarat* (+DD&DNH)^	648	264	41%	127	20%	58	9%	115	18%	73	11%	409	111	30	34%	130	32%	76	19%	49	12%
Haryana	66	41	62%	4	6%	2	3%	15	23%	4	6%	54	19	1	37%	13	24%	13	24%	8	15%
Himachal Pradesh	34	18	53%	3	9%	2	6%	8	24%	3	9%										
Jammu & Kashmir																					
Jharkhand	21	10	48%	4	19%	1	5%	6	29%	0	0%										
Karnataka	12	4	33%	0	0%	4	33%	4	33%	0	0%										
Kerala (+LK)^	122	74	61%	8	7%	21	17%	11	9%	6	5%	110	38	30	62%	19	17%	15	14%	1	1%
Madhya Pradesh	14	11	79%	0	0%	0	0%	2	14%	1	7%										
Mahara-shtra^	411	165	40%	37	9%	73	18%	64	16%	56	14%	147	49	18	46%	30	20%	38	26%	10	7%
Manipur																					
Meghalaya																					
Mizoram																					
Nagaland																					
Orissa	43	23	53%	5	12%	13	30%	1	2%	0	0%	9	3	2	56%	2	22%	0	0%	2	22%
Puducherry^	4	1	25%	0	0%	0	0%	2	50%	1	25%										
Punjab																					
Rajasthan	211	127	60%	11	5%	29	14%	19	9%	24	11%	186	88	12	54%	38	20%	40	22%	6	3%
Sikkim																					
Tamil Nadu	159	86	54%	7	4%	41	26%	14	9%	11	7%	107	25	20	42%	32	30%	15	14%	8	7%
Tripura																					
Uttar Pradesh	27	10	37%	4	15%	4	0%	8	0%	1	0%										
Uttarakhand																					
West Bengal	246	148	60%	24	10%	23	9%	30	12%	21	9%	120	52	14	55%	17	14%	17	14%	18	15%
India Total	**2787**	**1425**	**51%**	**268**	**10%**	**339**	**12%**	**411**	**15%**	**296**	**11%**	**1688**	**637**	**158**	**47%**	**378**	**22%**	**336**	**20%**	**119**	**7%**

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

$ This indicator will be more relevant when S+ve RT cases are considered as MDR TB suspects in all districts in the state

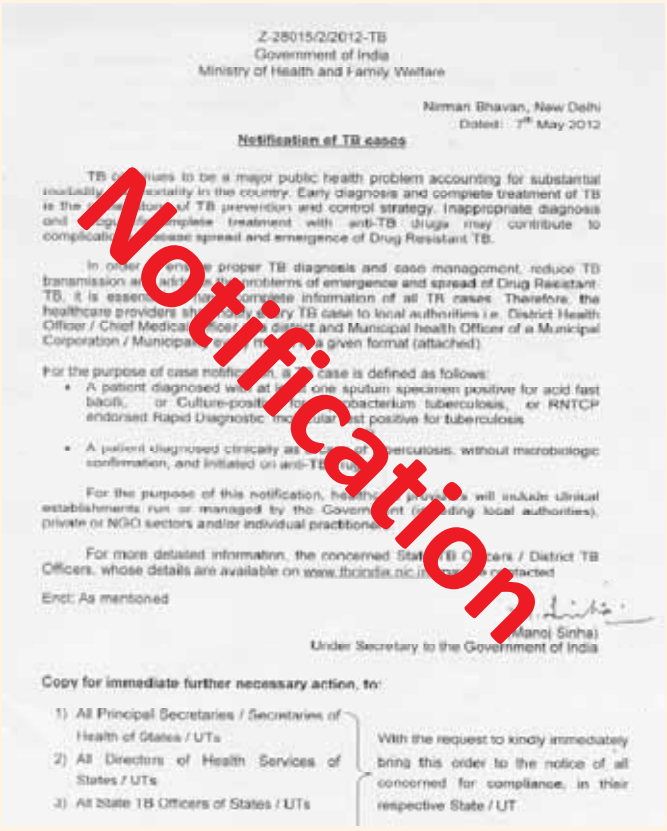
These numbers are NOT from the same cohort of patients from which MDR diagnosed are reported, but rather from treatment initiation registers only. The current PMDT information system does not allow for cohort-based reporting of MDR TB suspects, hence this should not yet be taken as a proportion of MDR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

Performance of the RNTCP certified laboratories- January-September 2012

	Diagnostic Culture	Follow-up culture	Solid DST Processed	LPA DST done	Liquid DST Done	Total H+R Sens	Total H+R Res	Total H only Res	Total R only Res
January to September 2012	72315	39387	1539	40269	383	25424	8028	3743	2498
Performance Indicator									

	Numerator	Denominator	Percentage
Specimens (all) received within 7 days of sputum collection (with CPC)	**19952**	**20092**	**99.30**
Specimens (all) received within 72 hours of sputum collection in 4-8 C (without CPC*)	109714	111733	98.19
Number of specimen rejected at the lab due to various reason(eg. Leakage, inadequate quantity, etc)	8778	110651	7.93
Specimens (all) with cultures reported as Mtb. complex	17233	68639	25.10
Smear-positive diagnostic specimens reported as culture-positive	8037	15901	50.54
Specimens (all) with culture-contaminated results	3281	65077	5.04
Specimens (all) with culture results reported as NTM	2998	71937	4.16
Patients (with diagnostic specimens) with DST completed within the benchmark turn-around time	19803	25472	77.74
Patients (all) with final culture results reported to providers within 1 days of declaration of result	46556	53549	86.94
Patients with final DST results reported to providers within 1 days of declaration of result	36599	39209	93.34
Number and Percentage of invalid LPA results	1862	44778	4.15
Number of events of LPA contamination in the quarter	63	18430	0.34

Central TB Division



Z-28015/2/2012-TB
Government of India
Ministry of Health and Family Welfare

Nirman Bhawan, New Delhi
Dated: 7th May 2012

Notification of TB cases

TB continues to be a major public health problem accounting for substantial morbidity and mortality in the country. Early diagnosis and complete treatment of TB is the cornerstone of TB prevention and control strategy. Inappropriate diagnosis and irregular/incomplete treatment with anti-TB drugs may contribute to complications, disease spread and emergence of Drug Resistant TB.

In order to ensure proper TB diagnosis and case management, reduce TB transmission and address the problems of emergence and spread of Drug Resistant TB, it is essential to have complete information of all TB cases. Therefore, the healthcare providers shall notify every TB case to local authorities i.e. District Health Officer / Chief Medical Officer of the district and Municipal health Officer of a Municipal Corporation / Municipality in a given format (attached).

For the purpose of case notification, a TB case is defined as follows:

- A patient diagnosed with at least one sputum specimen positive for acid fast bacilli, or Culture-positive for Mycobacterium tuberculosis, or RNTCP endorsed Rapid Diagnostic molecular test positive for tuberculosis.
- A patient diagnosed clinically as suffering from tuberculosis, without microbiologic confirmation, and initiated on anti-TB treatment.

For the purpose of this notification, health care providers will include clinical establishments run or managed by the Government (including local authorities), private or NGO sectors and/or individual practitioners.

For more detailed information, the concerned State TB Officers / District TB Officers, whose details are available on www.tbcindia.nic.in may be contacted.

Encl: As mentioned

(Manoj Sinha)
Under Secretary to the Government of India

Copy for immediate further necessary action, to:

1) All Principal Secretaries / Secretaries of Health of States / UTs
2) All Directors of Health Services of States / UTs
3) All State TB Officers of States / UTs

With the request to kindly immediately bring this order to the notice of all concerned for compliance, in their respective State / UT

Notification

NIKSHAY

सत्यमेव जयते

Central TB Division

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