



NTF Shimla, March 2015

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

Impact of Medical Colleges

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

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



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

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

A little support goes a long way:



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

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

Friend Indeed:

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



Santosh with his savior Bijoy

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

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

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

DOTS provides a new lease of life

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



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

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

Ray of Hope

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



Vishnu visits the DOT centre.

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

Pharmacists supporting the cause



Pharmacist Mr Deek Barai ,Shreeji Medical,Dombivli ,Maharashtra

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

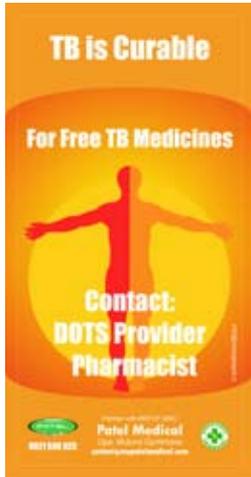
him to go for a check up. Patient was reluctant. Finally, Pharmacist insisted him to go for sputum test and gave referral slip. He followed up the patient and also informed TBHV regarding the same. After a week patient did his

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



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

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



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

Surpassing barriers to fight Tuberculosis



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

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

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

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

Home-based counselling to MDR-TB patient

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

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

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



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

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

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

6

CHAPTER

Planning under RNTCP



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6

CHAPTER

Planning under RNTCP

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

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

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

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

1. Process for the preparation of PIPs

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

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

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

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

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

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

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

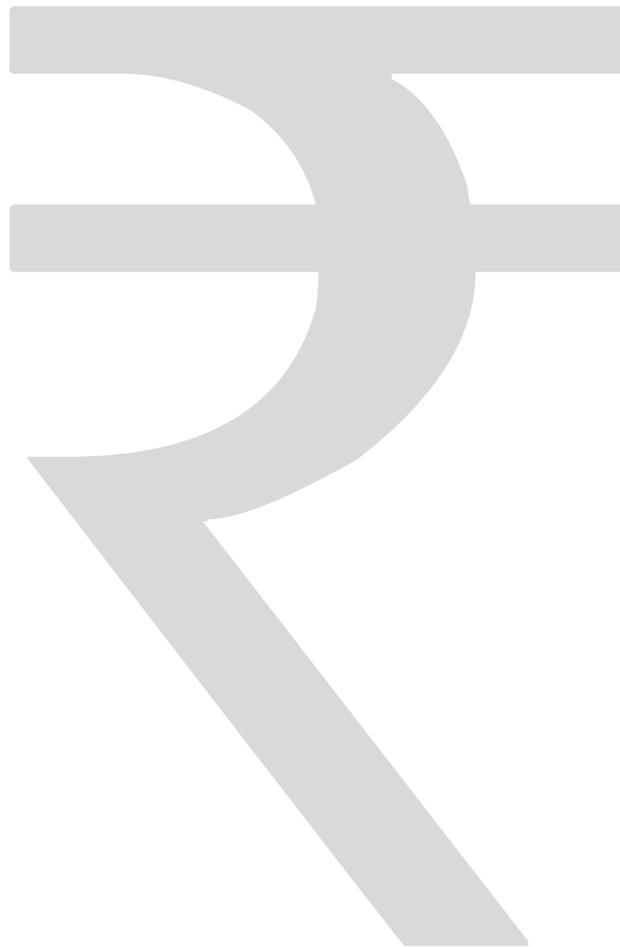
3. RNTCP templates for PIP

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

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

7
CHAPTER

Budgeting and Finance



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7

CHAPTER

Budgeting and Finance

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

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

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

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

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

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

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

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

Financial Performance of RNTCP in 12th Five Year Plan:

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

Rs. in crores

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

*Till December 2015

Donor Supported Projects:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8

CHAPTER

Policy updates and Initiatives 2015



Rollout of Daily Regimen in 104 districts



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



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8

CHAPTER

RNTCP Policy updates and new initiatives during 2015

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

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

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



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

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

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

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



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

Rollout of Daily Regimen in 104 districts



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

Childhood Tuberculosis Treatment :

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

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

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

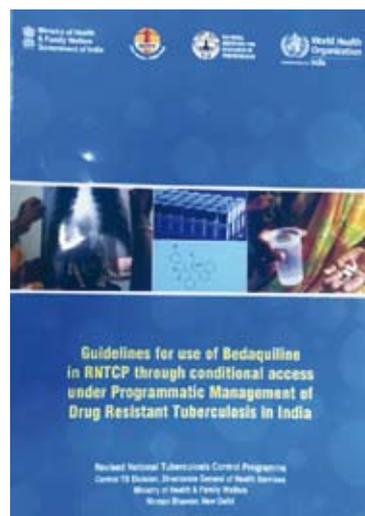


Three hundred more CBNAAT machines have been procured under RNTCP. The plan for distribution of the 300 GeneXpert machines has been prepared taking into consideration the availability of existing machines, geographical coverage of services, current use of CBNAAT policy and presence of Anti-Retroviral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

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

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

Introduction of newer anti-TB drug - Bedaquiline:



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

TB and Comorbidities (NPCDCS and Tobacco) :

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

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

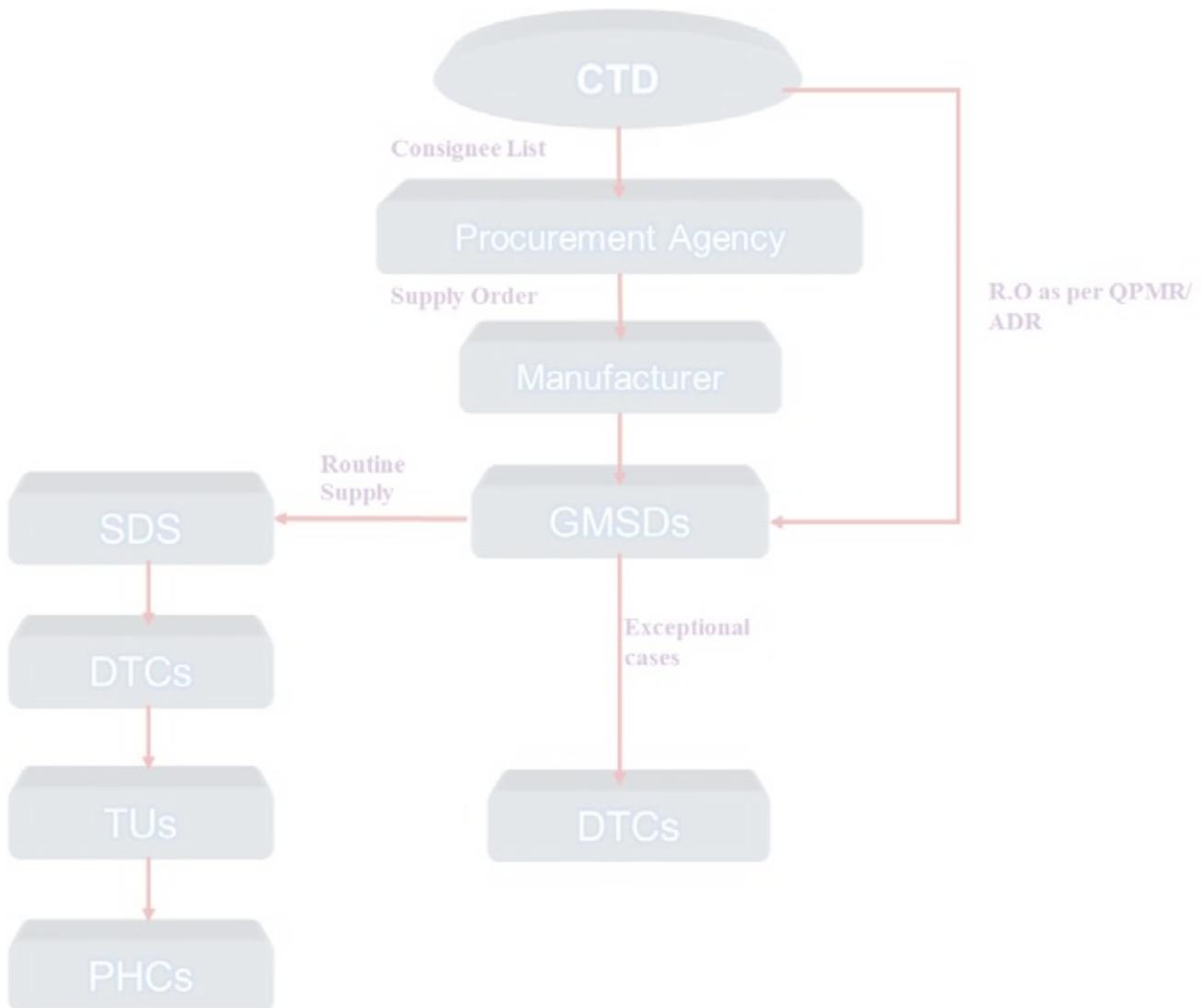
Introduction of Bedaquiline (BDQ-CAP)



9

CHAPTER

Procurement and Supply Chain Management



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9

CHAPTER

Procurement & Supply Chain Management

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

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

Summary of activities related to Procurement &

Supply Chain Management during the year 2015 are briefed below:

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

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

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

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

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

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

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

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

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

4) Procurement of diagnostic services:

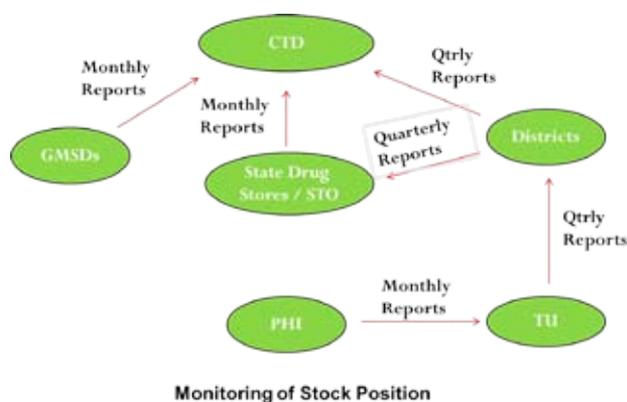
a) CB-NAAT: Cartridge based nucleic acid amplification testing (CB-NAAT) is a rapid molecular assay which detects Mycobacterium

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

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

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

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



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

10

CHAPTER

Advocacy Communication & Social Mobilization

टीबी के लक्षण आँ तुरंत डाक्टर के पास जाँ

टीबी (क्षय रोग) के लक्षण:

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

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

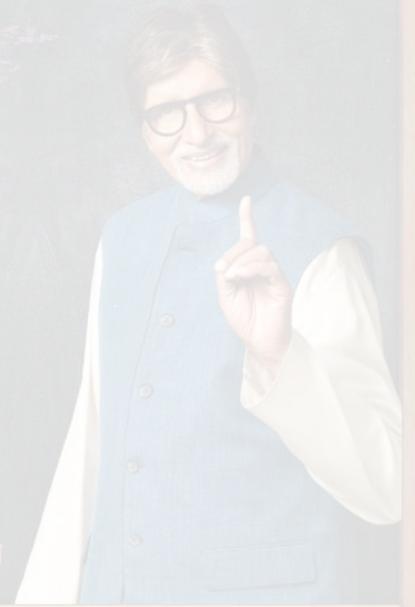
अधूरे उपचार से ड्रग-रेसिस्टेंट टीबी हो सकती है

सावधानी बरतें:

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



टीबी हारेगा, देश जीतेगा



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10

CHAPTER

Advocacy Communication & Social Mobilization

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

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

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

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

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

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

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

National Snapshot:

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

24 March 2015 announcements and launches



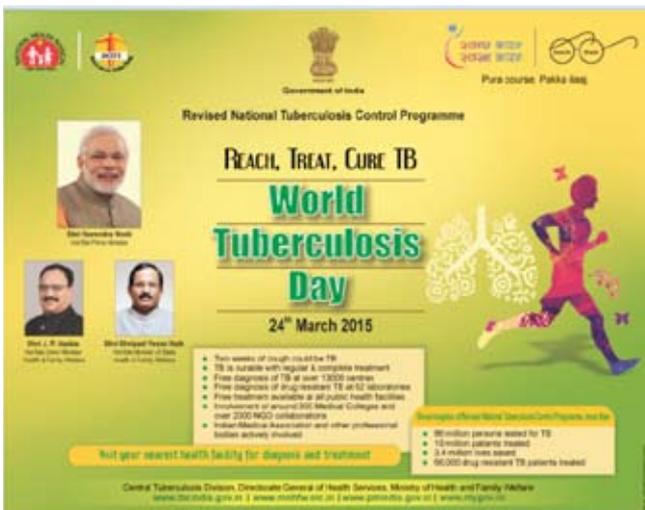
Hon'ble Health & Family Welfare Minister Shri J.P. Nadda launched

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



Campaign with IMA

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



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





Call to Action: Partnering for a TB free India

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

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

Missed-call campaign

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

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



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

State Snapshots:

Maharashtra



Gujarat



Madhya Pradesh



Bihar



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

Assam



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



PRI Meeting in Kokrajhar

Punjab



TB sensitisation workshop in prisons

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

Kerala

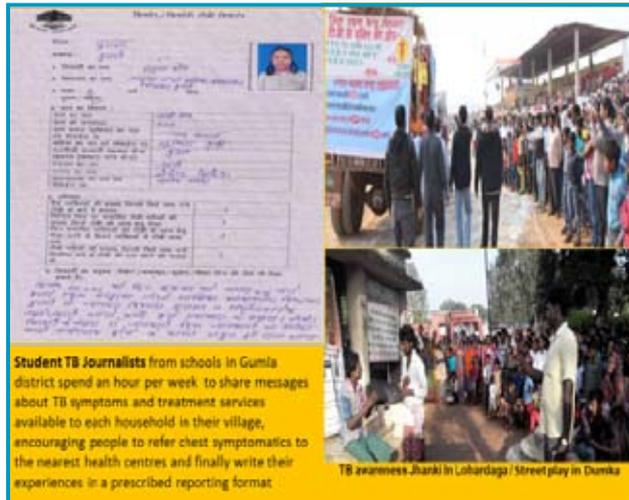


Organized advertisement competition in partnership with Mizoram Film Development Society



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

Jharkhand



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

TB awareness Jhanki in Lohardaga / Street play in Dumka

Telangana



Water filters and water tanks with TB messages given to DOT Providers, Schools and Orphanages with support from partner World Vision

TB Counselling Tool developed in collaboration with TB Kart

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

Delhi



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

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

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

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

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

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

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

11

CHAPTER

Research



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11

CHAPTER

Research

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

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

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

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

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

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

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

Important developments

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

12

CHAPTER

Monitoring and Evaluation



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12

CHAPTER

Monitoring and Evaluation

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

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

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

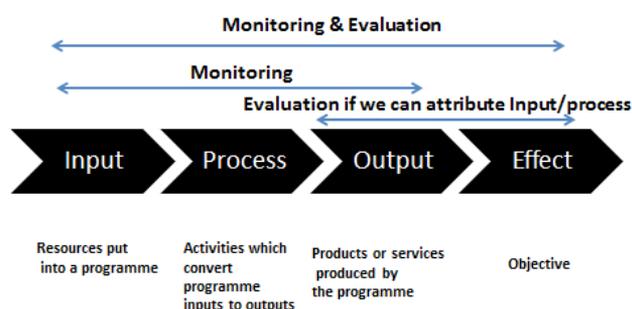
- Learn from past experiences
- Improve service delivery planning and allocation of resources
- Demonstrate results during and after the implementation

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

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

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

The M&E Framework (Logic Model)



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

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



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

Joint Monitoring Mission - April 2015

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

13

CHAPTER

Human Resource Management



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13

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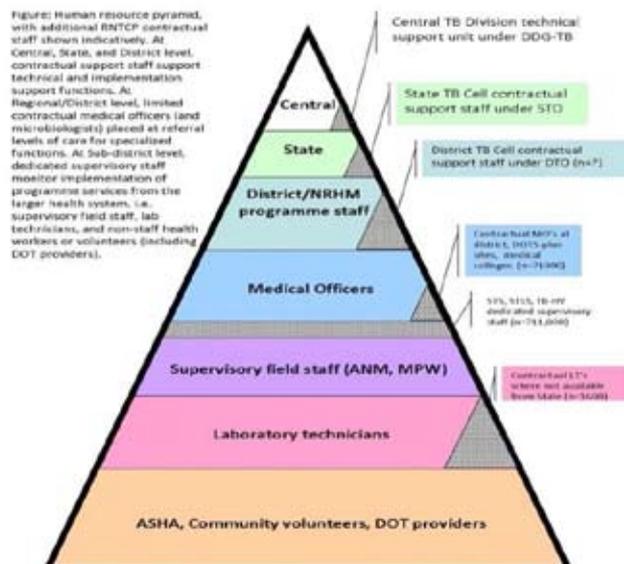
Human Resource Management

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

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

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

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



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

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

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

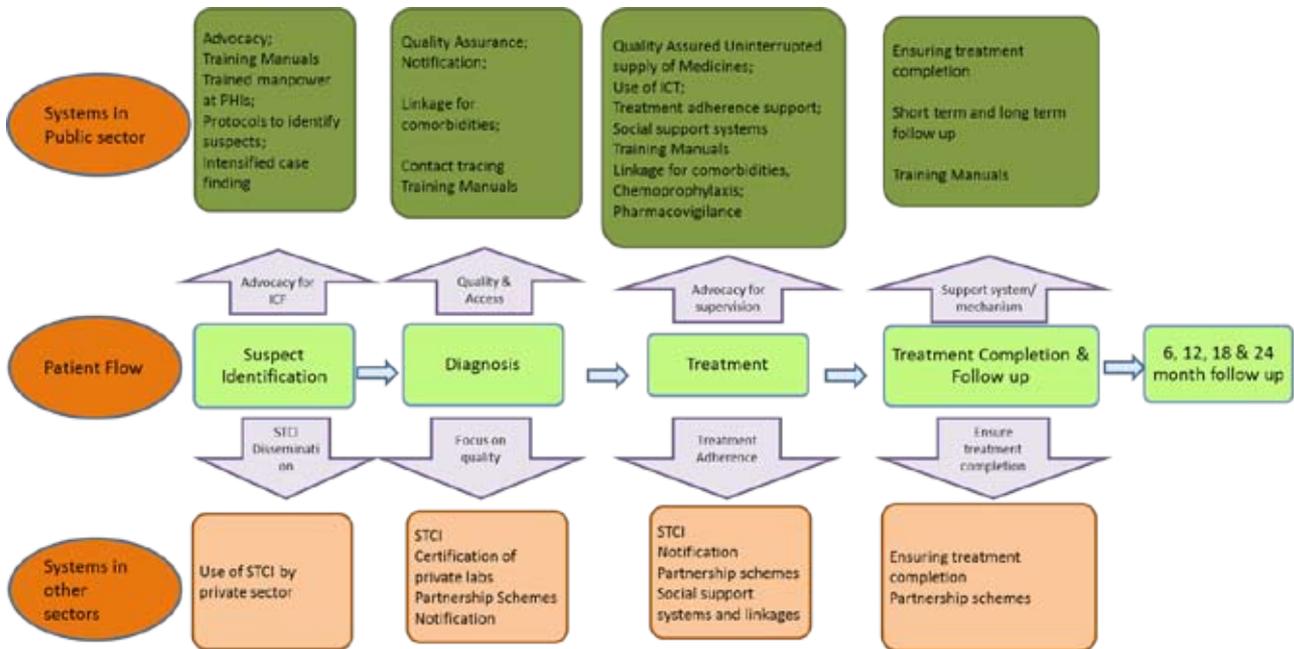
The flow diagram depicts the human resources available at every service point to a patient for getting optimum TB care services:

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

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

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

Delivery of TB Care services through the Public and Private stakeholders



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

14

CHAPTER

Infrastructure



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14

CHAPTER

Infrastructure

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

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

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

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

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

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

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

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

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

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

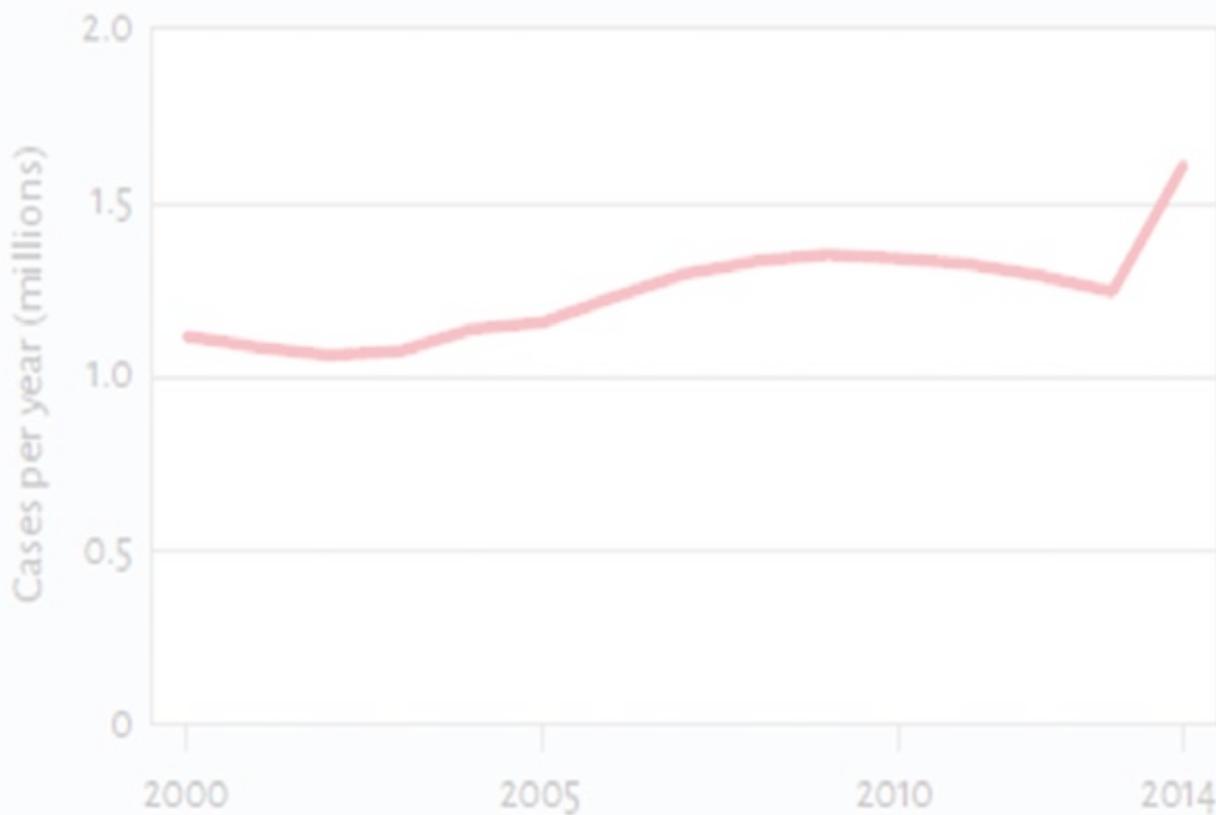
Currently, there are 6 GMSDs at Karnal, Mumbai, Kolkata, Chennai, Guwahati and Hyderabad, 39 SDSs and 729 DDSs for stacking and distribution of drug stocks. Receipts from GMSDs/ SDSs (in other states) are coordinated by Central TB Division (CTD) and are usually in response to quarterly reports/ additional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

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

RNTCP case finding and treatment outcome

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

Case notifications in India, 2000–2014



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15

CHAPTER

RNTCP case finding and treatment outcome

INDEX

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

Table 1 : Performance of RNTCP Case Notification(2015)

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

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

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

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

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