Ministry of Health
& Family Welfare
Government of India

Revised National TB Control Programme

Technical and Operational Guidelines for Tuberculosis Control in India

2016

Central TB Division, Directorate General of Health Services
Ministry of Health & Family Welfare, New Delhi, India
www.tbcindia.gov.in

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Preface

The first technical & operational guidelines for Revised National TB Control Programme (RNTCP) were developed during the initial years of implementation of the programme & were updated in 2005. The current document outlines the guidelines on TB care in line with RNTCP National Strategic Plan for Tuberculosis Control 2012-17.

These guidelines were conceived by programme managers working at the national, state and district levels. Experts from national institutes, national and intermediate reference laboratories, medical colleges and partners were involved in the process of preparing it.

Standards for TB Care in India, National Strategic Plan document, Recommendations of the Joint Monitoring Mission 2012 and policy decisions taken in the National Committee on Diagnosis and Management of Tuberculosis under RNTCP, National Technical Working Group on TB-HIV, National Technical Working Group on Pediatric TB,Expert committee on regulation of newer anti-TB drugs were used as a foundation for developing this document. Existing technical and operational guidelines, training module for medical officers, National PMDT guidelines, National Air borne infection control guidelines, Revised pediatric TB guidelines, National guidelines on partnerships, Guidelines for Quality Assurance of smearmicroscopy for diagnosing tuberculosis, National Framework for Joint HIV/TBCollaborative Activities and Guidelines for use of Bedaquiline in RNTCP through conditional access under programmatic management of drug resistant TB in India have also been referred.

The document covers strategies and guidelines for diagnosis and treatment of all forms of TB including pulmonary, extra-pulmonary, drug resistant TB, TB with comorbidities, pediatric TB, etc. Programme management aspects covering patient support systems, human resource management, partnerships for TB control, advocacy, communication and social mobilization, infection control measures, planning and finance are also incorporated.

These technical and operational guidelines are intended to be used by all the personnel engaged in control of TB in the country. This is a living document open to further improvements and will be updated as lessons are learned through its use in the field.

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Introduction

Tuberculosis

Tuberculosis (TB) is an infectious disease caused predominantly by *Mycobacterium tuberculosis*. Tuberculosis is most commonly transmitted by inhalation of infected droplet nucleiwhich are discharged in the air when a patient with untreated TBcoughs or sneezes. TB disease usually affects the lungs,but can involve any part of the body.Pulmonary TB which affects lungs is an infectious form of disease. Extra-pulmonary TB can affect thelymph nodes, pleura, bones and joints, the genito-urinary tract, the nervous system(meningitis, tuberculoma), abdominal TB (intestines, mesentry, solid organs), skin, etc. All those who get infected do not necessarily develop TB disease. The life time risk ofbreaking down to disease among those infected with TB is 10–15%, which gets increasedto 10% per year amongst those co-infected with HIV. Other determinants such as diabetesmellitus, smoking tobacco products, alcohol abuse and malnutrition also increase the risk ofprogression from infection to TB disease.

Burden of TB

India accounts for one fourth of the global TB burden i.e. 2.2 million out of 9.6 million new cases annually. In India, more than 40% of population is infected (prevalence of infection) with *Mycobacterium tuberculosis*. It is estimated that there are 2.5 million prevalent cases of all forms of TB disease. It is also estimated that about 2.2 lakhs people die due to TB annually (mortality). The table below shows the estimated figures for TB burden globally and for India provided by WHO for the year 2014

	Incidence	Prevalence	Mortality
Global	9.6 million (176/lakh/year)	13 million (227/lakh/year)	1.1 million (21/lakh/year)
India	2.2 million (167/lakh/year)	2.5 million (195/lakh/year)	2.2 lakhs (17/lakh/year)

Source: Global TB Report 2015

TB now ranks alongside HIV as a leading cause of deathworldwide. TB kills more adults in India than any other infectious disease.
In India, every day:

- more than 6000 develop TB disease
- more than 600 people die of TB (i.e. 2 death every 5 minutes)

India has highest burden of both TB and MDR TB and second highest of HIV associated TB based on estimates reported in Global TB Report 2015. An estimated 71,000 cases of MDR-TB emerge annually from the notified cases of pulmonary TB in India. Based on sub-national DR surveys carried out in three states of India, ~3% among new TB cases and 12%-17% among previously-treated TB cases have MDR-TB. India bears second highest number of estimated HIV associated TB in the world. An estimated 1.1 lac HIV associated TB occurred in 2014 and 31,000 estimated number of patients died among them.

TB control strategy

The National Tuberculosis Programme of India (NTP) was initiated in 1962 and was originally designed for domiciliary treatment, using self- administered standard drug regimens.The NTP hadcreated an extensive infrastructure for TB control with a network of more than 446 District TB Centres, 330 TB clinics and more than 47,600 TB beds. The NTP had also raised the awareness of TB and TB treatment facilities, and had succeeded in placing more than 1.3 million patients on treatment annually. Despite the NTP being in existence since 1962, no appreciable change in the epidemiological situation of TB in the country had been observed. The HIV-AIDS epidemic and the spread of multi-drug resistance TB were threatening to further worsen the situation.

In view of this, in 1992, GoI, with WHO and SIDA reviewed the TB situation and the performance of the NTP. The observations revealed that the NTP, though technically sound, suffered from managerial weaknesses, inadequate funding, an over-reliance on X-Ray for diagnosis, had frequent interrupted supplies of drugs, and low rates of treatment completion. The Government decided to give a new thrust to TB control activities by revitalising the NTP, with assistance from international agencies. In 1993, the Revised National TB Control Programme was piloted in a population of 2.4 million in five states. This was later expanded to cover 13 million people by 1995, and 20 million by 1996.

In 1997, the RNTCP was launched as a national programme with a plan to scale up in a phased manner. The RNTCP thus formulated, adopted the internationally recommended Directly Observed Treatment Short-course (DOTS) strategy, as the most systematic and cost-effective approach to revitalise the TB control programme in India. Political and administrative commitment to ensure the provision of organised and comprehensive TB control services; reliable and early diagnosis through smear microscopy of self-reporting chest symptomatics in the general health services; an uninterrupted supply of good quality anti-TB drugs through patient wise boxes (PWBs); effective and patient-friendly treatment with SCC given under direct observation; and accountability through proper recording and reporting, and effective supervision were emphasised.

The objectives of the RNTCP were to achieve at least 85 percent cure rate among the new smear-positive cases initiated on treatment, and thereafter a case detection rate of at least 70 percent of such cases. The RNTCP was built on the infrastructure and systems built through the NTP. Major additions to the RNTCP, over and above the structures established under the NTP, was the establishment of a sub-district supervisory unit, known as a TB Unit, with dedicated RNTCP supervisors posted, and decentralization of both diagnostic and treatment services, with treatment given under the support of DOT providers. The entire country was covered by the end of 2005. The programme has made rapid strides ever since its implementation.The programme has consistently been achieving global benchmarks of case detection and treatment success rates since 2007.

The widespread implementation of the DOTS strategy has proved to be an effective tool in controlling TB on a mass scale and practiced in over 200 countries. The prime task for the next

decade was to achieve the Millennium Development Goals (MDGs) and related STOP TB Partnership targets for TB control. The target under MDG for tuberculosis is to halt and begin reversal of incidence of tuberculosis, malaria and other major diseases by 2015. The indicators were to reduce the prevalence and death rates by 50% between 1990 and 2015.

Meeting these targets required a coherent control strategy. The WHO released STOP TB Strategy in 2006 with six principal components to realize the global TB-related MDGs by 2015. These were pursuing high quality DOTS expansion and enhancement;Addressing TB/HIV, MDR-TB and other challenges;Contributing to health system strengthening;Engaging all care providers;Empowering patients and communities; andEnabling and promoting research.

India adopted the components of STOP TB Strategy and strived to achieve targets under it. National AIDS Control Programme (NACP) and RNTCP have developed "National framework of joint TB/HIV Collaborative activities" in 2007 which were revised in February 2008 to redefine the scope of TB/HIV collaborative activities being implemented in the country. Programmatic management of drug resistant (DR) TB services began in 2007 andnational coverage has been achieved in March 2013. Scope of engagement of all care providers was expanded with revisions in schemes for involvement of private providers and NGOs in 2008 and Global Fund supported engagement of professional associations like Indian Medical Association (IMA) and Catholic Bishop Conference of India (CBCI). Task force mechanisms were established to engage medical colleges to support patient care, training, advocacy and research.

Emboldened by its achievements, the programme in 12th Five Year Plan (2012-17) has articulated National Strategic Plan with a vision of TB Free India. The goal of the NSP is to achieve universal access to quality TB diagnosis and treatment for all TB patients in the community. The objectives of the National Strategic Plan are

1. To achieve 90% notification rate for all cases
2. To achieve 90% success rate for all new and 85% for re-treatment cases
3. To significantly improve the successful outcomes of treatment of DR-TB Cases
4. To achieve decreased morbidity and mortality of HIV-associated TB
5. To improve outcomes of TB care in the private sector

To achieve these objectives RNTCP further strengthened and improved the quality of basic DOTS services, align the sub-district level management unit with health system under National Health Mission [NHM], deploy improved rapid diagnostics to the field level, increase efforts to engage all care providers, strengthen urban TB Control, expand diagnosis and treatment of DR-TB, improving communication, outreach, and social mobilization and promoting research for development and implementation of improved tools and strategies. The Gazette of India, Ministry of Health and Family Welfare has notified for prohibiting the import of serodiagnostictest kits for TB and the manufacture, sale, distribution and use of such kits for TB, on 7th June 2012. A Government Order issued by the GOI in May 2012 mandates all healthcare providers to notify every TB case diagnosed and/or treated, to local authorities. To support TB notification and strengthen TB surveillance in general, a case based web based TB notification system – NIKSHAY was established to provide platform for notification from both public and private sector, decrease lead time of data transmission and increase use of information for programme management for betterment of care of delivery of services at local level.

RNTCP and World Health Organization jointly prepared Standards for TB Care in India (STCI) in 2014, which lays down uniform standards for TB care for all stakeholders in the country.

Standards for TB Care in India (STCI)

The vision of RNTCP is that the people suffering from TB receive the highest standards of care and support from all healthcare providers of their choice. It is spelt out in the National Strategic Plan (2012-17) to extend the umbrella of quality TB care and control to include those provided by the private sector.

The private sector holds a factual predominance of health care service delivery in India. There is very little information about TB patients from the private sector available to the programme and little is known about their quality of treatment, including treatment outcomes. The need for quality and standards for TB care is made particularly acute where a large unorganized private sector accounts for almost half of the TB care delivered in India.

Thus, it was felt essential to develop and disseminate the standards forTB care that is particularly relevant in Indian context, acceptable to the medical fraternity in both the public and private sector in India. Also, the availability of new diagnostic tools and strategies for early TB diagnosis, emerging evidences on existing regimens and newer regimens, and the need for better patient support strategies including addressing social inclusiveness necessitated the development of Standards for TB Care in India.

The standards in STCI differ from existing guidelines in that the standards present what should be done whereas guidelines describe how the action is to be accomplished. These standards represent the first what is expected from the Indian healthcare system. It is expected that the standards laid down in STCI are clear and usable and will be accessible to all TB providers as an easy reference.

Twenty six standards developed after a National Workshop with support from various public health administrators, programme managers, representatives from various professional associations (IMA, API, College of Physicians Association of India, IAP, FOGCI, etc.), academicians and specialists from public and private sectors (pulmonologists, physicians, surgeons, paediatricians, gynaecologists, orthopaedic surgeons, microbiologists, public health specialist etc.), donors, technical and implementation partners &pharmaceutical companies and pharmacists. There are six standards for diagnosis (standard 1 to 6), five for treatment (standard 7 to 11), nine for public health (standard 12 to 20) & six for social inclusion (standard 21 to 26).

The country achieved targets for TB under MDG and Stop TB Partnership. Post-MDG, the Global strategy & targets for prevention of TB care & control were endorsed by all member states at 2014 World Health Assembly. Achieving this global target is feasible only with the drastic decline in the TB deaths, cases & elimination of the catastrophic expenditures leading to elimination of economic & social burden of TB. To reach these ambitious goals, End TB strategy spells out the three pillars & components as in the table as below. Government of India is signatory to end TB strategy and is fully committed to implement its components under the programme.

END TB STRATEGY				
VISION	**A WORLD FREE OF TB** - Zero deaths, disease and suffering due to TB			
GOAL	**END THE GLOBAL TB EPIDEMIC**			
INDICATORS	**Milestones**		**Targets**	
	2020	2035	SDG 2030	End TB 2035
Reduction in number of TB deaths compared with 2015 (%)	35%	75%	90%	95%
Reduction in TB incidence rate compared with 2015 (%)	20% (<85/100,000)	50% (<55/100,000)	80% (<20/100,000)	90% (<10/100,000)
TB-affected family facing catastrophic costs due to TB (%)	0	0	0	0

PRINCIPLES

1. *Government stewardship and accountability, with monitoring and evaluation*
2. *Strong coalition with civil society organizations and communities*
3. *Protection and promotion of human rights, ethics and equity*
4. *Adaptation of strategy and targets at country level, with global collaboration*

PILLARS AND COMPONENTS

1. INTEGRATED, PATIENT-CENTRED CARE AND PREVENTION

A. Early diagnosis of tuberculosis including universal drug-susceptibility testing, and systematic screening of contacts and high-risk groups
B. Treatment of all people with tuberculosis including drug-resistant tuberculosis, and patient support
C. Collaborative tuberculosis/HIV activities, and management of co-morbidities
D. Preventive treatment of persons at high risk, and vaccination against tuberculosis

2. BOLD POLICIES AND SUPPORTIVE SYSTEMS

A. Political commitment with adequate resources for tuberculosis care and prevention
B. Engagement of communities, civil society organizations, and public and private care providers
C. Universal health coverage policy, and regulatory frameworks for case notification, vital registration, quality and rational use of medicines, and infection control
D. Social protection, poverty alleviation and actions on other determinants of tuberculosis

3. INTENSIFIED RESEARCH AND INNOVATION

A. Discovery, development and rapid uptake of new tools, interventions and strategies
B. Research to optimize implementation and impact, and promote innovations

Health System structure & functions for delivery of TB care

Healthcare is one of India's largest service sectors. Under the Indian Constitution, health is a state subject. Each state has its own healthcare delivery system in which both public and private (for profit as well as non-profit) actors operate.

Delivery of TB care in the public sector-

The organisation at the national level consists of the Union Ministry of Health and Family welfare (MoHFW). In each State, the organisation is under the State Department of Health and Family Welfare that is headed by a State Minister and with a Secretariat under the charge of the Secretary/ Commissioner (Health and Family Welfare).

a) **In 2005, National Rural Health Mission (NRHM**) was launched to provide accessible, affordable, accountable, effective and reliable primary health care facilities, to the rural population, especially vulnerable groups. In addition, the National Urban Health Mission (NUHM) was also launched to further strengthen urban health structure and both NUHM and NRHM have been clubbed together under National Health Mission (NHM) from 2013. The vision of NHM is "Attainment of Universal Access to Equitable, Affordable and Quality health care services, accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health".

b) **NHM** further aims to provide support to the existing national programmes of health and family welfare including RCH-**II**, malaria, blindness control, iodine deficiency, filariasis, kala- azar, tuberculosis, and leprosy and for integrated disease surveillance

c) RNTCP is one of the components under the National Health Mission which is a flagship scheme under Govt. of India. 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, disease burden and socio economic status. The financial management procedures for RNTCP are well established and administered by the Finance Cell of the CTD. These procedures are documented in manuals and guidelines available on the program's website.

I. Institutional arrangements: Overall responsibility for financial management of the program is with the Central Tuberculosis Division (CTD), Directorate General of Health Services, Ministry of Health & Family Welfare (DGHS) a part of the National Health Mission of the MoHFW. At state level these are through state TB cell and at district level through district TB cell.

ii. Budget and release of funds: Program expenditures are budgeted in the Demand for Grants of the MoHFW under the Disease flexi-pool funding arrangement under two separate budget lines for Externally Aided Component (EAC) and General Component (GC).

iii. Fund flow: Fund flow for the program will remain within the existing financial management systems of MoHFW, which operates through the Centralized Pay and Accounts Office. Funds are being released to state in 2-3 instalments. All the states are required to submit the annual audit report to CTD by 30th September.

RNTCP organogram

RNTCP structure comprises of five levels: National, State, district, sub-district and peripheral health institution level.

National Level

Central TB Division (CTD) of Directorate General Health Services (DGHS) is the technical arm of the Ministry of Health and Family Welfare (MoHFW). CTD, under the guidance of DGHS, manages the National TB Control Programme for the entire country at the central level through a National Programme manager, Deputy Director General TB (DDG-TB). The financial and administrative control of the programme is managed by the Joint Secretary from the administrative arm of the MoHFW.

The CTD is supported by *six national institutes*: National Institute for Research in Tuberculosis (NIRT), Chennai, National Tuberculosis Institute (NTI), Bangalore, National Institute of Tuberculosis and Respiratory Diseases (NITRD), Delhi, National JALMA Institute, Agra, Regional Medical Research Centre, Bhubaneshwar and BMHRC, Bhopal, and National Task Force of Medical Colleges.Various committees of experts to guide the programme at different levels on technical & policy matters are there supporting Central TB Division.

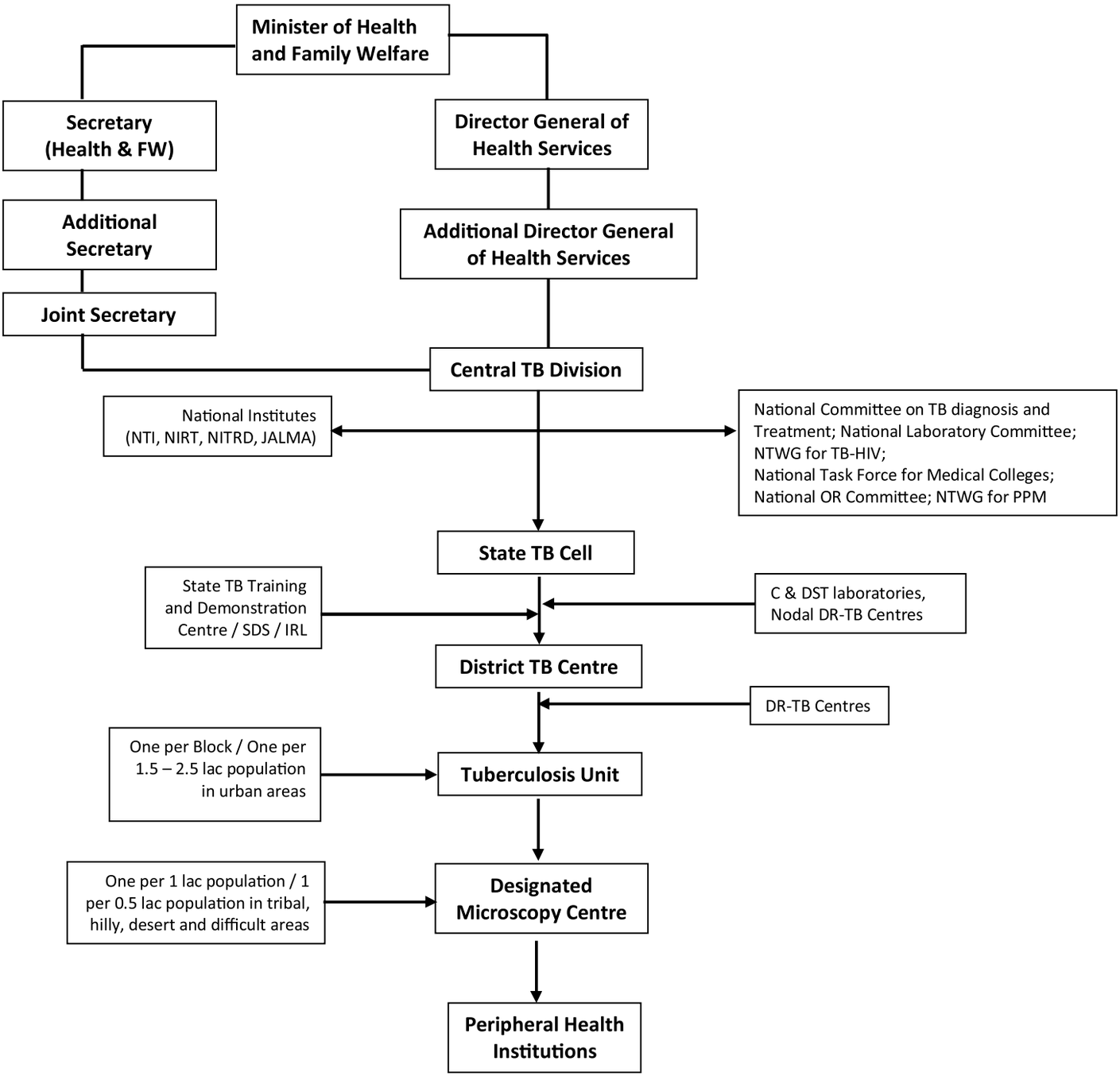
State Level

The States have total ownership and accountability for the TB control in their state. State Health Society or its equivalent under National Health Mission of the state manages the TB Control Programme. A full-time State Tuberculosis Officer (STO), trained at national level and based at the State TB Cell (STC), is responsible for planning, training, supervising and monitoring the programme in all the districts of their respective states. STO is administratively accountable to the State Government, technically follows the instructions of the CTD, and coordinates with CTD and the districts and is assisted by other technical & secretarial staff.

State TB cell is being supported by State TB Training and Demonstration Centre (STDC) in many states through its three units – a training unit, supervision and monitoring unit and an Intermediate Reference Laboratory (IRL) supporting an effective Quality Assurance system of the Sputum smear microscopy network and lab services for PMDT (molecular DR testing and C&DST) in the State.

Each state also has one (1 for each 50 million population at least) fully operational State Drug Store (SDS). It is responsible for effective management of medicines and other logistics and ensuring uninterrupted supply of good quality 1st& 2nd line anti-TBmedicines for adults and paediatric population.

Orgnogram


Minister of Health and Family Welfare
Secretary (Health & FW)
Director General of Health Services
Additional Secretary
Additional Director General of Health Services
Joint Secretary
Central TB Division
National Institutes (NTI, NIRT, NITRD, JALMA)
National Committee on TB diagnosis and Treatment; National Laboratory Committee; NTWG for TB-HIV; National Task Force for Medical Colleges; National OR Committee; NTWG for PPM
State TB Cell
State TB Training and Demonstration Centre / SDS / IRL
C & DST laboratories, Nodal DR-TB Centres
District TB Centre
DR-TB Centres
One per Block / One per 1.5 – 2.5 lac population in urban areas
Tuberculosis Unit
One per 1 lac population / 1 per 0.5 lac population in tribal, hilly, desert and difficult areas
Designated Microscopy Centre
Peripheral Health Institutions

District Level

The key level for the management of primary health care services is the district. The Chief District Health Officer (CDHO) / Chief District Medical Officer (CDMO) / Chief Medical Officer (CMO) / Civil Surgeon or an equivalent functionary in the district is responsible for all medical and public health activities including control of TB. The District Tuberculosis Centre (DTC) is the nodal point for TB control activities in the district. A full-time District Tuberculosis Officer (DTO), trained at national level & based at the DTC, is responsible for planning, training, supervising and monitoring the programme in the district. DTO is assisted by other technical & secretarial staff. The primary role of the DTC is managerial.

Sub-District Level (Tuberculosis Unit Level)

Integrating the TB control programme with the health system increases effectiveness and efficiency of TB care and control. India's TB control programme has been mainstreamed efficiently with National Health Mission (NHM).

A major organizational change in RNTCP is the creation of a sub-district level (Tuberculosis Unit - TU). The TU is the nodal point for TB control activities in the sub-district. TUs are based mainly in NHM health blocks with the overall aim to align with NHM Block Programme Management Unit (BPMU) for optimum resource utilization and appropriate monitoring. In urban areas the TUs have been created based on a population of 1 per 2,00,000 (range 1.5 – 2.5 lakh). The Tuberculosis unit (TU) consists of a designated Medical Officer-Tuberculosis Control (MO-TC), as well as one full-time supervisory staff - Senior Treatment Supervisor (STS). One Senior TB Laboratory Supervisor (STLS) will continue to be in 5 lakh population and 1TBHV per one lakh urban population is there to support the urban TB control activities.

The Block Medical Officer also functions as a MO-TC who is trained in RNTCP at a state level institution. MO-TC has the overall responsibility of management of TB Control Programme at the TU and is expected to undertake supervisory visits for seven days in a month. The team of STS and STLS are under the administrative supervision of the MO-TC and the DTO. The TU will have one Microscopy Centre for every 100,000 population (50,000 in tribal, desert, remote and hilly regions) referred to as the Designated Microscopy Centre (DMC). Microscopy Centres are also located in Medical Colleges, Corporate hospitals, ESI, Railways, NGOs, private hospitals, etc.

Peripheral Health Institutions (PHIs)

For the purpose of RNTCP, a PHI is a health facility which is manned by at least a medical officer. At this level, there are dispensaries, PHCs, CHCs, referral hospitals, major hospitals, specialty clinics or hospitals (including other health facilities), TB hospitals, and Medical colleges within the respective district. All health facilities in the private and NGO sectors participating in RNTCP are also considered as PHIs by the programme. Some of these PHIs also function as DMCs. Peripheral health institutions undertake tuberculosis case-finding and treatment activities as a part of the general health services. In situations where more than one MO is posted in any of the peripheral health centres, one of them may be identified and entrusted with the responsibilities of the RNTCP.

TB Laboratory Services

The services of the laboratory are utilized for diagnosing TB & DR-TB cases and for monitoring of treatment of these patients. The Laboratory network under RNTCP is a **3-tier system** for provision of diagnostic services and maintaining its quality.

A. **The peripheral laboratories** are situated in the public sector like the dispensaries, PHCs, CHCs, referral hospitals, major hospitals, specialty clinics, other sector hospitals, TB hospitals, Medical colleges and in the private/NGO sectors. For establishment of microscopy centre in a lab, it must have adequate physical infrastructure, Binocular microscope and a trained LT. These laboratories are covered under quality assurance mechanisms

   I. Some of the labs not having facility for sputum microscopy, function as a sputum collection centres, and such facilities are also established in areas such as the tribal, hilly, desert and difficult to reach areas of the country for improving the access to diagnostic services.

   ii. In addition, largehospitals and medical colleges havefacilities of digital X-Ray, rapid molecular test (CBNAAT & LPA), FNAC, histo-pathology, and culture & DST for diagnostic services of TB.

B. **At the state level** a nodal laboratory is designated as Intermediate reference laboratory (IRL) which is usually situated in the State TB Training and Demonstration Centre (STDC) / medical college/ public health laboratory. The main functions of IRLs are monitoring of lab services across the state and maintenance of its quality through external quality assurance. There are 27 IRLs with facilities for culture & DST using Phenotypic (Solid – LJ & Liquid Culture – MGIT) and Genotypic technology (LPA & CBNAAT).

C. **At the central level** there are six designated National Reference Laboratories (NRLs) namely National Institute for Research in Tuberculosis (NIRT), Chennai, National Tuberculosis Institute, Bangalore, National Institute of Tuberculosis and Respiratory Diseases (NITRD), Delhi, National JALMA Institute, Agra, Regional Medical Research Centre, Bhubaneshwar and Bhopal Memoral Hospital & Research Centre (BMHRC), Bhopal. NIRT Chennai is also a Supra-Reference Lab (SRL) for World Health Organization (WHO) for the South East Asia Region. NTI is a WHO Collaborating Centre for Training, while NITRD is WHO centre of excellence in TB laboratory services.The NRLs are mainly responsible for External Quality Assurance of Lab network, drug resistance surveillance, training and research.

Delivery of TB care services in the private sector

The private sector referred to in this section is everything outside the ambit of the government run public health initiatives. The private sector in India varies widely in its size, nature of service delivery and the socio-economic groups served. It consists of a wide range of providers from individual medical practitioners of many different systems of medicine, including allopathic as well as Indian Systems of Medicine and Homeopathy, paramedics and even traditional healers who possess no formal training to private hospitals and nursing homes, NGO run hospitals, and corporate sector health care institutions.

The private sector holds a factual predominance of health care service delivery in India. As per National Sample Survey Organization report of 71st round of survey, more than 70% of patients seek care in private clinics or hospitals.

Delays in diagnosis, over-diagnosis of TB due to an over-dependence on X-rays, the use of multiple non-standard regimens for inappropriate durations, the lack of a mechanism to ensure the full course of treatment and to record treatment outcomes are some issues of concern in the private sector. Similar problems in varying degrees are encountered in other health sectors as well.

	Public Sector	**Private Sector**
Advantages	• Free diagnosis • Free treatment • Standardized regimen • Referral and transfer system • Supervision and monitoring • Accountability of treatment outcome	• Wide choices (> 5 lac practitioners) • Better access – Convenient timings – Shorter distances – Personal attention and care – Projected discounts • Faith and perceptions of better care
Disadvantages	• Staff's nonresponse to symptoms • Delays between tests and receiving results • Difficulty in transporting specimens • Financial expenditure on travel, food, daily necessities, extra medicines • Perceived low quality of services	• Cost of clinical examination fees • Cost of diagnostic tests • Cost of drugs • Irrational prescriptions • Infrequent use of quality sputum tests for diagnosis of TB • No adherence tracking mechanisms • Fear of losing patient if involved in RNTCP

The strategic vision of RNTCP is to lay down guidelines and norms for TB care in country. The underlying principle is for RNTCP to extend public services to privately managed patients. Standards for TB care in India, mandatory TB notification, NIKSHAY, ban on serodiagnostics and amendments in H1 schedule are among the tools to improve TB care services in private sector. Regulatory tools, however, are limited and partnership is preferred. Programme staff should understand that RNTCP needs private providers more than private providers need the RNTCP.

Other approaches include an expanded acceptance by RNTCP of internationally approved diagnostic and treatment protocols, reliance on market forces rather than normative exhortation, increased use of accreditation and contracting, further outreach to private laboratories, increased control of TB drugs, and innovative use of information and communication technologies for TB notification and treatment adherence monitoring. It is important to recognize that partnerships come in a wide variety of shapes and sizes, and operate at all levels, from local to global.

Model of care envisioned for delivery of services in continuum of care of TB patients from being a presumptive TB to the diagnosis, treatment and final treatment outcome in public and private sector is depicted below. It also shows what systems are in place for ensuring the various aspects of patient care in the public sector in the upper half and the other sectors in the lowerhalf. All these systems ensure quality of services being provided to the patients irrespective of the place where the patient seeks care.

Patients Centric Model of Care