Ministry of Health and Family Welfare
Government of India

INDIA TB REPORT 2022

Coming Together to End TB Altogether

टीबी मुक्त भारत

Azadi Ka Amrit Mahotsav

NATIONAL TUBERCULOSIS ELIMINATION PROGRAMME
TB MUKT BHARAT
TB Harega Desh Jeetega

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

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DR. MANSUKH MANDAVIYA

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

स्वास्थ्य एवं परिवार कल्याण
व रसायन एवं उर्वरक मंत्री
भारत सरकार
Minister for Health & Family Welfare
and Chemicals & Fertilizers
Government of India

MESSAGE

It gives me immense pleasure to present Annual India Tuberculosis Report 2022 being released on World TB Day 24th of March 2022. The report highlights progress and updates achieved during the year.

I am proud to say that as a country, we have managed to pivot further forward policies that can serve our people in times of crisis. Ayushman Bharat scheme of Government of India illustrates the holistic perspective of the leadership on public health. Approximately, 80,000 health and wellness centers (AB-HWCs) have been operationalized across the country under the Ayushman Bharat scheme. Parallel to the broader objectives of good health for all citizens, the government remains alert to the need to tackle infectious diseases in India.

In this regard, I would like to congratulate the National TB Elimination Program (NTEP) for managing to navigate the pandemic with remarkable resilience.Considering the degree of resource diversion from the NTEP because of COVID-19, there have been few obstacles. However, the NTEP, was quick to deploy a range of mitigation measures. Here, mention must be made of the private sector too; which contributed notification of 5.59 lakh patients which is 31% of the total notifications. From notifications to diagnostics, leveraging the private sector has been an essential component of all strategies to counter the disease.

I feel equally proud of the way in which we have also gone beyond the binary of Public and Private, and empowered the people as well. True *Jan Andolan* as "TB Mukt Bharat Abhiyaan" is driven by the community foregrounded effectively by the NTEP. I would like to congratulate the Hon'ble MPs, MLAs and all esteemed locally elected representatives who have relentlessly worked on the ground to ensure quality care and treatment to all TB patients.

As the NTEP launches the India TB Report 2022, my heartfelt congratulations to them for their constant efforts to realize the vision of Hon'ble Prime Minister Shri Narendra Modi to eliminate the disease by 2025.

TB Harega, Desh Jeetega!

(Dr. Mansukh Mandaviya)

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आज़ादी का अमृत महोत्सव

स्वास्थ्य एवं परिवार कल्याण राज्य मंत्री
भारत सरकार
MINISTER OF STATE FOR
HEALTH & FAMILY WELFARE
GOVERNMENT OF INDIA

MESSAGE

अवृत्तिव्याधिशोकार्ताननुवर्तेत शक्तितः

(Those who have no means of livelihood, who are suffering from diseases and who are afflicted with grief should be helped.)

The capacity of our health system and its limitations in responding to COVID-19 outbreak was an eye-opener when it comes to the public health. COVID-19 pandemic impacted health systems across the board, but this period has also revealed tremendous resilience of the people, health workers, medical practitioners, grassroots organizations and others. This government under the visionary governance of Prime Minister Shri Narendra Modi ji is committed to securing the health of people. In the turbulent times of delay and disruptions caused by the COVID-19 pandemic, approximately 80,000 Health and Wellness Centers (HWCs) have been operationalized, with the target of 1.10 lakh HWCs set to be completed within the first half of 2022.

I am not only proud but very heartened to see how health policies have increased the focus on the grassroots. This ecosystem is most pronounced within the exceptional mitigation measures National TB Elimination Program (NTEP) has put in place. The NTEP has foregrounded the role of community leaders in the fight against TB, and I congratulate them for it. I have mentioned in the past, the need to ensure early detection of TB if we are to meet the 2025 deadline; and galvanizing role of community leaders will certainly help the process.

As the India TB Report 2022 gets launched, I wish the NTEP all the very best in their constant endeavours to broaden impact of the TB program so that it reaches the most vulnerable. Here, I must mention their Gender Response Framework that aims to further sensitize all stakeholders within the TB program. The Ministry of Women and Child Development also deserve congratulations for initiatives to organize a first-of-its-kind Parliamentary conference last year on TB's impact on women. The conference also center staged the voices of those defeated TB which are equally essential in our fight against TB.

We now have less than three years of time to eliminate TB from India. I am sure that armed with spirit of *Jan Andolan*, and a strategy that is gender-sensitive, we will achieve the goal of a TB-*Mukt Bharat* under the dynamic leadership of our Prime Minister Hon'ble Shri Narendra Modi ji.
#TBMuktBharat

Jai Hind!

(Bharati Pravin Pawar)

"दो गज की दूरी, मास्क है जरूरी"

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Azadi Ka Amrit Mahotsav

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Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare

MESSAGE

The release of India TB Report 2022, provides us an opportunity to share reflections on country's progress towards TB elimination, as well as outline the strategy for future.

The programme has, once again, demonstrated its versatile capacity while continuing to ensure sustained availability of TB diagnostic and treatment services. The Programme has also supported the response to COVID-19 pandemic. Through the course of the year, TB program has been adaptive and has introduced newer initiatives including bi-directional screening of TB and COVID-19, and harnessed the power of digital platforms to extend TB services to patients through Nikshay and TB Arogya Saathi application.

The programme also utilized the direct benefit transfer (DBT) mechanism to disburse cash transfers through the *Nikshay Poshan Yojana* for nutritional support to TB patients. This DBT Scheme, reaching over 12.44 lakh beneficiaries, disbursing INR 261.39 Cr in benefits in the last year and over 1000 Cr cumulatively since 2018, is one of the most far-reaching DBT programs in Health Sector. TB programme's focus on constantly upgrading its diagnostic capacities by replacing sputum microscopy services with new precision and indigenously developed molecular diagnostics showcases India's Aatmanirbhar initiative.

TB programme's reliance on new-age innovations, coupled with whole-of-society approach is setting a strong example for other disease control programs. I commend the health staff and frontline workers for their determination and service to the nation's goals serving through the trying times of the COVID-19 pandemic.

I am confident that, our frontline and health workers would display the same commitment and vigour in facilitating the achievement of the goal of Ending TB by 2025.

TB Harega, Desh Jeetega !

Date : 25.02.2022
Place : New Delhi

(RAJESH BHUSHAN)

*The data is as of 03rd January 2022.

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MESSAGE

India's TB program under the aegis of the National Health Mission (NHM) has progressed tremendously over the past few years owing to the Government's undeterred focus on TB elimination by 2025. The National Tuberculosis Elimination Programme's (NTEP) India TB Report of 2022, reflects how the programme has navigated challenges posed by the pandemic, as well documents the achievements through key performance indicators, new diagnostics, treatment regimens, policies, enhanced engagement with the private sector, communities, and target audiences at large.

The programme succeeded to retain its focus on the goal of TB elimination amidst the pandemic of COVID-19. NTEP effectively utilised every opportunity of the integrated health system approach, the key to resilience of India's health system during the pandemic. The programme introduced several innovative initiatives like TB-COVID/ILI/SARI bidirectional screening, TB screening by frontline workers through a Community Based Assessment Checklist (CBAC), doorstep collection of samples and uninterrupted supply of TB treatment drugs, and continued to engage the private sector for TB service delivery. The overall aim – to ensure patients are diagnosed and receive their medicines on time, have access to medical professionals whenever necessary, and are availing the benefits due to them – was emphacized by the program.

One of the key strategies to saturate coverage of TB services is the provision of TB services as part of Comprehensive Primary Healthcare through the Ayushman Bharat Health & Wellness Centres (AB-HWCs). The Community Health Officers (CHOs) have been equipped with skills and tools required for delivering TB services closer to the community and improve the quality of care through outreach services of these centres.

Recognizing that several TB patients avail treatment from private sector, the programme is determined to deliver the highest quality of care, regardless of where they avail healthcare services from. To this effect, apart from incentivizing patients and providers & strengthening H1 drug surveillance and mandatory notification; interface agencies i.e. Patient Provider Support Agencies (PPSA) have been rolled out in over 249 districts which act as a bridge to the public sector services for patients seeking care in private sector. Due to this effort, 6.78 lakh (32% of all TB cases) patients have been notified from the private sector.

Amidst ensuring service delivery, the program also focused on achieving a whole-of-society involvement through a *Jan Andolan*. This was made possible through extensive community-based and led interactions through TB Vijeta, state & district TB forums, and Patient Support Groups. Extensive community campaigns were targeted to raise awareness on TB and ensure access to free drugs, diagnostics and direct benefit transfer to all beneficiaries.

With the support of all States/UTs and implementing a whole-of-society approach, like we did for COVID-19, am sure, we will be successful in achieving our goal of ending TB by 2025.

TB Harega Desh Jeetega !

(Vikas Sheel)

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Message

Annual Report 2022 of the National Tuberculosis Elimination Programme (NTEP) presents a comprehensive snapshot of progress made in the fight against TB. The second wave of COVID-19 posed a challenge for the public health care system at large, but the NTEP was quick to respond to offset the barriers.

The programme is working on quite a few innovations that can not only transform the TB elimination efforts in India but can also contribute to the global efforts as well. NTEP is providing an enabling environment for development of cutting-edge artificial intelligence tools that can improve TB screening, automated laboratory reporting and help prioritize TB patients for follow up.

NTEP is taking forward the Sub-national Certification process to motivate States/ UTs/ districts who are working tirelessly in reducing TB burden. In 2022, claims have been received from 201 districts and 10 States/UTs on progress towards TB elimination.

The programme has also initiated several activities at National / State level to engage the stakeholders for a community-led response to TB and create a *Jan Andolan*. By strengthening community involvement, the programme is working to increase the demand for TB services, deepen understanding of the community's needs, and garner the perspectives of and support from TB survivors who are leading from the front (TB Vijeta).

I commend the support of frontline workers and all stakeholders in TB elimination efforts over the years and appeal to them to continue their participation in this *Jan Andolan* against TB.

Let's unite to End TB by 2025 !

(Dr. P. Ashok Babu)

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Message from DDG (TB), Central TB Division

The India TB report 2022 captures the progress made towards India's goal of eliminating TB by 2025. The year of 2021 continued to bring challenges owing to the second wave of the COVID-19 pandemic. However, our experience in dealing with the pandemic in 2020 allowed the programme to rally forward. Through the implementation of the Rapid Response Plan to mitigate the impact of the COVID-19 pandemic on TB services, the National TB Elimination Programme (NTEP) was able to regain a significant proportion of the progress made prior to the pandemic.

Even in the midst of pandemic, NTEP was able to notify 21 lakh TB patients, including 6.78 lakh TB patients through the private sector. The programme undertook a host of activities to ensure uninterrupted TB services through the pandemic times. This includes the introduction of door-to-door Active Case Finding campaigns, bi-directional TB-COVID-19 screening, to ensure that no case goes undetected. Through these efforts, 8.37 lakh people were tested for TB, leading to the diagnosis of 35,519 TB patients.

The programme has added additional NAAT machines at sub-district levels to reach 3,147 NAAT machines across the country in 2021, ensuring that patients are tested for drug-resistant TB at the very outset and are put on appropriate treatment regimen on a timely basis. Our goal is to ensure the availability of molecular diagnostics closest possible to the community, thereby ensuring access to high quality diagnostics to each patient. To enable better treatment outcomes, the programme is moving towards a shorter oral Bedaquiline-containing regimen in eligible drug resistant TB patients in a phased manner.

Our focus on engaging TB survivors has also seen a major impetus in the last year. We've identified TB survivors to volunteer as peer leaders (TB Champion) in each block of the country, and today, NTEP can boast of 12000 TB Champion. These peer leaders will play a critical role in serving as an interface between the programme and the community, to relay challenges faced and support patients in accessing care and completing their treatment. NTEP has set up district TB forums in each and every district of the country – serving as convergence platforms that provides an avenue for various departments and the community to share their perspectives and offer their support to the programme.

We are determined to increase the access and quality of TB services for all as we stand by our commitment to eliminate TB from India. I commend the efforts of the TB programme's staff which have shown resilience through these testing times of the COVID-19 pandemic in supporting the TB patients.

Together we will defeat TB !

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EXECUTIVE SUMMARY

While the world was still reeling with the unsparing effects of the COVID-19 pandemic in 2020-ravaging lives, uprooting livelihoods, crippling national economies, and debilitating health infrastructure, the pandemic continued wreaking its havoc in 2021. Admittedly, the fight against Tuberculosis (TB) encountered setbacks in decades of gains. However, the pandemic also forged pathways to ingenious solutions, health-system strengthening, and the ever-expanding reach of the public health programme delivery.

◄ TB DISEASE BURDEN IN INDIA

Despite the brief decline in TB notifications observed around the months corresponding to India's two major COVID-19 waves, the National Tuberculosis Elimination Programme (NTEP) reclaimed these numbers. Accordingly, 2021 witnessed a 19% increase from the previous year in TB patients' notification—the total number of incident TB patients (new and relapse) notified during 2021 were 19,33,381 as opposed to that of 16,28,161 in 2020. In 2021, the vision of the National Strategic Plan for Elimination of Tuberculosis (NSP 2017-25) permeated to state and district levels yet again to encompass more objectives. Eighteen States have committed to Ending TB by 2025 by formally implementing State-specific Strategic Plans and have gone a step ahead to devise a District-specific Strategic Plan, which shall serve as a guiding tool for the programme managers and staff at the district and sub-district level towards the elimination of Tuberculosis.

◄ TB DIAGNOSTIC SERVICES AND ACTIVE CASE FINDING

Free of cost laboratory services to patients attending public health facilities and those referred from the private sector has been the programmatic ethos since its inception. Over the years, the programme has evinced one of the most extensive TB diagnostic networks globally, spanning all health system tiers. Staying true to its history of ever-increasing spread in both public and private sector and up-gradation to newer diagnostic technologies, by the end of 2021, 80 laboratories are equipped to support liquid culture system, of which 60 are certified for First-Line Liquid Culture Drug Susceptibility Testing (FL LCDST), and 49 are certified for Second-Line Liquid Culture Drug Susceptibility Testing (SL LCDST). Moreover, Liquid culture-based DST has been expanded to include Linezolid and Pyrazinamide. Concerning Line Probe Assay (LPA), 74 Laboratories are certified for First-Line LPA, and out of these, 61 are additionally certified for Second-Line LPA.

The momentum to improve TB diagnostic services does not end here. The programme division has developed an Annotation tool for LPA result interpretation through Machine Learning (ML). Moreover, besides the 19 laboratories NABL accredited till 2021 under the NTEP, in 2022, 15 additional laboratories have been accredited with the NABL.

Early identification of people with a high probability of having active TB is crucial for breaking the chain of transmission. To achieve that, it is imperative to reach the unreached and targeted groups through Active case finding (ACF) for early detection of TB cases and initiating treatment promptly. ACF has been systematically conducted across all the States/UTs in India since 2017. A special campaign was introduced in January 2021 for active case finding among risk groups: diabetes, chronic kidney and liver disease, patients on immunosuppressants, etc. In addition, to mitigate the impact of COVID-19 on TB services, a special ACF drive was launched to screen influenza-like illness (ILI) and severe acute respiratory infections (SARI) cases for TB. Accordingly, in 2021, 34 States/UTs have conducted ACF activities/ campaigns at the state and district level, leading to the screening of 2.23 crore people, out of which 17,52,903 samples were tested for TB, and 73,772 additional TB patients were identified. The NTEP has made 81 Mobile TB Diagnostic Vans available to the States for conducting ACF in remote and hard-to-reach areas.

◄ TREATMENT SERVICES

The NTEP has been agile in adopting and adapting newer drugs and treatment modalities. In recent years, the country has made far-reaching progress in the management of TB. For example, an injection-free treatment regimen for Drug-sensitive TB (DS-TB) was implemented across the country. Similarly, the programme introduced a comprehensive package for differentiated care of TB patients to identify the patients requiring referral or hospitalisation to reduce TB mortality and rapidly reduce preventable mortality among TB patients. In terms of DS-TB treatment performance, in 2021, among 21,35,830 patients diagnosed, 20,30,509 (95%) patients were put on treatment. While the disaggregated treatment success rate of patients notified from the public and private sectors are 83% and 82%, respectively.

Further, the NTEP has been unwavering in curtailing the impediments in managing drug-resistant TB (DR-TB) patients. To offer the last-mile service delivery for better access and quality care to TB patients, including DRTB patients and their close contacts, the programme has decentralised TB services to the Ayushman Bharat – Health and Wellness Centres (AB-HWC). The "Guidelines for Programmatic Management of Drug-resistant TB (PMDT) in India - 2021" were also released. Moreover, a Shorter oral Bedaquiline (Bdq)-containing MDR/RR-TB regimen was introduced and scaled up across the country. Likewise, access to drugs, including newer drugs, to patients seeking care in the private sector is free. Regarding DR-TB treatment performance, in 2021, 48,232 MDR/RR-TB patients were diagnosed and 43,380 (90%)

were put on treatment. 8455 Pre-XDR-TB, 376 XDR-TB and 13724 H mono/poly patients were diagnosed and 7562 (89%), 333 (89%) and 12008 (87%) were put on treatment respectively. A total of 1939 patients were initiated on a shorter oral Bdq-containing MDR/RR-TB regimen, 23,889 on longer M/XDR-TB regimen, and 25,235 patients were initiated on the shorter injection-containing MDR-TB regimen.

◄ TB PREVENTION

'Prevent' is one of the four critical pillars (Detect – Treat – Prevent – Build) of India's National Strategic Plan for Elimination of Tuberculosis (NSP 2017-25) that focuses on preventing the emergence of TB in a vulnerable population. The program has offered TB Preventive Therapy (TPT) for more than a decade, albeit limitedly to children below the age of six years and People living with HIV/AIDS (PLHIV) for the past few years. However, to reinforce the goal of Ending TB by 2025 by accelerating preventive measures like the TPT, the NTEP has taken a monumental leap in 2021 by expanding the policy to offer TPT to all household contacts (HHC) of index pulmonary TB patients irrespective of their age, and other risk groups. Moreover, to overcome the challenges a long treatment entails, a new shorter TPT regimen with three months of weekly Rifapentine and Isoniazid (3HP) has been recommended as an alternative to six months of daily life Isoniazid regimen (6H). These policy decisions and their implementation are summated with the release of The Guidelines for Programmatic Management of TB Preventive Treatment (PMTPT) in India. In 2021, more than 2 lakh PLHIV on active care and 1.20 lakh HHC of pulmonary bacteriologically confirmed TB patients were initiated on TB Preventive Treatment. Furthermore, the programme has introduced TPT in contacts of DR-TB patients in 12 States (Andhra Pradesh, Telangana, Delhi, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Meghalaya, Odisha, Punjab, and Assam) to gain programmatic evidence and experience for further scale-up.

◄ TB COMORBIDITIES AND SPECIAL SITUATIONS

Comorbidities like malnutrition, diabetes, HIV, tobacco smoking, and alcohol impact a person with TB in predisposition and severity. To combat these, the programme brought in a multitude of initiatives.

Cognizant of the bidirectional relationship of TB and undernutrition, in addition to the Nutrition-TB App (N-TB App) that facilitates the implementation of the technical aspects of the nutritional assessment and appropriate supplementation, the programme collaborated with the Ministry of Women and Child Development (MoWCD). To support the NTEP's objective of successful treatment and improved nutritional status among TB patients, the programme and the MoWCD have ensured the holistic development of women and children by providing additional nutrition support to TB patients. In addition, TB awareness generation also became a part of the annual 'Poshan Mah' to address malnutrition at the population level.

Acknowledging the consequences of alcoholism and tobacco smoking among TB patients, the programme offers services like counselling, linkages to de-addiction centres, and social support systems to people struggling with alcoholism. In 2021, the data was captured for 72% of total notified patients, out of which 7% admitted to alcohol usage. Similarly, out of the 74% of the known tobacco usage among all TB patients, 12% of TB patients were reported to be tobacco users. Among those screened, 30% were linked to tobacco cessation services.

Provider Initiated Testing and Counselling (PITC) initiative continued making headways for early detection of HIV among presumptive TB patients. In 2021, 95% of the notified TB patients knew their HIV status, while more than 2,5 lakhs PLHIV were given access to rapid molecular testing via CBNAAT/TrueNat for TB diagnosis. Likewise, single-window TB and HIV services are being implemented through existing ART centres. More than 96% of PLHIV visiting the ART centres every month are screened for TB symptoms.

Similarly, the programme has been steadfast in adapting its strategy to address the pandemic. The country-wide implementation of bidirectional screening of TB and COVID-19, i.e., COVID-19 screening for all diagnosed TB patients and TB screening for all suspected and confirmed COVID-19 patients, expanded its reach. In addition to repurposing the resources from then ongoing National TB Prevalence survey and Nikshay Sampark (national TB call centre) to serve as COVID-19 helpline, the programme also provides services like symptomatic screening for TB and inclusion during surveillance in the community; home sample collection of sputum samples in COVID containment zones; and establishing linkages for diagnosis and management for TB at all COVID-19 Care Centres, and dedicated COVID-19 Health Centres and Hospitals. Furthermore, in line with the new scientific evidence, the NTEP recognises TB as a comorbidity for COVID-19 and its impacts on the progression and severity of the disease and has foreseen measures to ensure early detection and timely detection effective management of TB and COVID-19. For example, screening for TB will also be conducted among post-COVID patients at six-monthly intervals for two years.

In India, childhood Tuberculosis remains a staggering problem, contributing to approximately 31% of the global burden. Over the last decade, consistently, children constitute 6-7% of all the patients treated under NTEP annually, pointing to a gap of 4-5% in total notification against the estimated incidence. To that end, inter-sectoral coordination is critical for ensuring wide-reach of the programme to remedy this gap. To establish pathways of early detection of children with TB symptoms and track them for early diagnosis and treatment initiation, the programme, in collaboration with the Rashtriya Bal Swasthya Karyakram (RBSK) and Rashtriya Kishor Swasthya Karyakram (RKSK), launched the "Collaborative Framework to Address the Burden of Tuberculosis among Children and Adolescents." This integrated framework endeavours to enhance community awareness on childhood TB, generate demand, and promote disease prevention and early health-seeking.

The programme has child-friendly formulations of drugs to manage paediatric drug-sensitive TB and procures child-friendly formulations

for DR-TB. Similarly, the programme has mandated upfront molecular diagnostics for all paediatric TB samples to address the common diagnostic challenges in paediatric TB, including DR-TB. Lastly, Bedaquiline has been approved for use in children above five years of age, offering a shorter and safer treatment regimen.

In 2020, through its National Framework for A Gender-Responsive Approach to TB, India became one of the first countries to adopt the Communities, Human Rights and Gender Tools. This year, the programme started gearing up the programme managers to acquire skills for gender-responsive analysis and interventions along the Detect-Treat-Prevent-Build continuum by designing a training module. A national-level Training of Trainers of facilitators has been conducted, and regional-level training has been scheduled to enable the stakeholders to implement gender-sensitive approaches across differentiated TB patient care.

◄ ADVOCACY, COMMUNICATION, AND COMMUNITY ENGAGEMENT

Since its inception, Advocacy, Communication, and Community Engagement (ACSM) have been bolstering the programme's foundation by solidifying the measures across all aspects of TB care. 2021 was punctuated by the highest political commitment towards TB Mukt Bharat Abhiyaan by Hon'ble Governors at the 51st Conference of Governors chaired by the President of India—a first of its kind and juxtaposed with the lowest administrative unit—exemplified by the inclusion of the TB module in the Gram Pradhans induction for mobilising TB Free Panchayats. Also, a "Guidance Document on Community Engagement" has been developed to guide the States/ UTs in planning, designing, and monitoring the activities under community engagement. While, national Training of Trainers on Community Engagement for Northern, Western and Eastern States have been completed. Moreover, a certificate course titled "Self-learning course for TB Champions" has been developed and hosted on multiple e-platforms to empower TB survivors with the basic knowledge on TB and the provision of various services offered by the NTEP.

Also, a strategy document to incorporate stigma reduction across all TB interventions, develop a comprehensive communication strategy, and actively engage the TB affected community to foster non-stigmatising and non-discriminatory behaviours in the society—"Strategy on Addressing Stigma Associated with Tuberculosis" was released in 2021. Entwining all the ACSM strategies together, a 360-degree mass media campaign has been ongoing across the country under TB Mukt Bharat Abhiyaan.

◄ SUPERVISION AND MONITORING

Field-level supervision exercises over the past two years have been significantly impacted in the wake of the COVID-19 pandemic. Consequently, to identify the technical and administrative challenges faced by the States/ UTs and provide course-correction, a nation-wide Joint Supportive Supervision Mission (JSSM) was conducted across 34 States/UTs. Two districts (each with high and low TB Index scores) were selected from each State/ UT for the JSSM. The team provided extensive recommendations to the state officials for solidifying TB response. Furthermore, the programme division is strengthening the Nikshay portal by incorporating advanced analytical tools to provide regular feedback to the States on important indicators, which will help them take necessary and timely actions.

In 2021, Ayushman Bharat Health Account was enabled within Nikshay to uniquely identify persons, authenticate them and digitally share one's health records enabling interoperability within the digital health ecosystem. Moreover, the TB Aarogya Sathi application has been released for people with TB with multi-language support, TB screening tool, self-reporting bank account, and treatment adherence feature. In addition, new modules like Diagnostic, Sample Tracking, and Drug Dispensation have been incorporated into Nikshay. Similarly, the Adverse Event Module is available to record adverse events for patients, add causality, and declare outcomes for events.

◄ PATIENT SUPPORT SYSTEMS

The significant burden of TB in India is compounded by the dual existence of food insecurity and undernutrition, signifying the necessity of facilitating nutritional support to TB patients. Direct Benefit Transfer (DBT) into the beneficiary's bank account under the NTEP continued its exemplary reach in 2021. Approximately INR 1488 crores have been paid to 57.33 lakh TB patients under Nikshay Poshan Yojana (NPY) from April 2018 to February 2022.

Effecting new patient-supportive pathways in the aftermath of COVID-19 pandemic-led challenges, the programme brought about flexibility to provide the DBT benefit through the existing bank account of a blood relative of a TB patient to ensure that all patients can avail themselves of the NPY scheme. The programme is in the process of operationalisation of e-RUPI vouchers for DBT schemes.

◄ PARTNERSHIPS FOR THE PRIVATE SECTOR ENGAGEMENT

Despite the disruption and turmoil of the COVID-19 pandemic, private sector commitments and undertaking of the pre-COVID era endured. Several partners and varied stakeholders have been threaded on a single strand of India's fight to eliminate TB, bringing numerous innovative approaches and diverse strategies. The programme has established a National Technical Support Unit at the central level to strengthen the private sector and inter-sectoral engagement. Likewise, Multi-disciplinary Technical Support Units have been formed in nine high priority States, contributing to more than 75% of National TB notifications. Not only the existing partnerships across the States have been systematically mapped, thereby providing a clear need-based road map for the future, engagement of interphase agencies in the form of Patient-Provider Support Agency (PPSA) to promote private sector engagement has also been scaled up to more than 170 districts.

For accelerated action towards TB elimination in the mission mode, a Multisectoral response has been given utmost priority to ensure meaningful engagement of key stakeholders, including Ministries/ Departments both at the central and state-level, industries of public and private sectors, corporate, and business associations. A 'National Inter-Ministerial Task Force on Tuberculosis (NIMTF-TB)' has been proposed by the MoHFW to engage with 23 key line Ministries of the GoI of India for policy and programme convergence. The programme coordinated with ministries like M/o Rural Development, M/o Consumer Affairs, M/o of Statistics and Program Implementation, M/o of Electronics & Information Technology, M/o Road Transport & Highways, M/o Panchyati Raj, M/o of Heavy Industries, M/o Small, Micro & Medium Enterprises, M/o Youth Affairs & Sports, M/o Labour & Employment, North Eastern Council, to name a few, for strengthening inter-ministerial collaboration. Lastly, 138 corporates joined Corporate TB Pledge (CTP), including 10 Business Associations.

◄ TB RESEARCH & INNOVATIONS

Drawing from the third pillar of the NSP 2017-25 on research & innovations, the NTEP is collaborating with various national entities towards augmenting the development of new tools, reinforcing not only the rapid uptake of available tools and products but also to expedite our battle to end TB. To that end, a multi-state validation study of C-Tb skin test to detect TB infection has been completed with the support of Indian Council of Medical Research - Department of Health Research (ICMR-DHR). Likewise, India is participating and contributing to the BRICS multi-country project on "Epidemiological impact and intersection of the COVID-19 and tuberculosis pandemics in Brazil, Russia, India and South Africa" (IMPAC19TB). The project aims to understand the impact of COVID-19 and related response measures on the epidemiology and provision of healthcare services for TB and develop innovative and pragmatic solutions to overcome the adverse consequences. Furthermore, capitalising on Artificial Intelligence (AI) for improving healthcare delivery, increasing diagnostic accuracy, and screening for disease, an AI solution is being developed to screen for TB from cough sounds and voices with the support of WIAI.

◄ BEST PRACTICES & SUCCESS STORIES

The NTEP has consistently boosted its capacity to address TB. The programme has encapsulated best practices and success stories designed and implemented at various levels of healthcare delivery, whether as a response to a particular health outcome or addressing a programmatic dimension required for improved performance.

◄ HEALTH FINANCING

The Programme Implementation Plan (PIP) of NTEP is an integral part of the NHM. It is the most crucial instrument by which States submit their costed plans and propose strategies and activities, to receive resources under the NHM. The NTEP PIP support to States/UTs—aligned with the NHM PIP template, has been developed and disseminated. For 2020-21, about Rs 2516.82 crores had been recommended, while an additional Rs 25.48 crores were recommended in the Supplementary PIP for four States.

The NTEP has constantly been evolving, buttressing innovations, and reinforcing strategies at all levels—mandatory notification of all TB cases, integration of the programme with the general health services, expansion of diagnostics services, amplifying the Nikshay ecosystem, provision of DBT, employing newer treatment modalities, scaling up of DRTB management and last-mile support, and TPT, catering bidirectional screening of TB and COVID-19, providing single-window service for TB-HIV cases, strategizing national TB prevalence survey, synthesising integration across sectors and ministries, bridging the divide of the public and private sector, collaborating with corporates and national institutes, facilitating research of new tools, and anticipating various dimensions of health systems challenges—both unfinished and emerging.

Meaningful health information to inform TB policy

TB DISEASE BURDEN IN INDIA

01

TB Disease Burden in India

Estimation of TB Burden

Scientific evidence is key to improving global public health, because National and International health policies should be based on accurate and meaningful health information and this requires the generation of valid scientific evidence. However, health data from epidemiological studies may have limited scope or only convey information partially, thus requiring complex methodologies to derive estimates. Estimates of the burden of disease caused by TB measured in terms of incidence, prevalence and mortality are produced annually by WHO using information gathered through surveillance systems (patient notifications and death registrations), special studies (including surveys of the prevalence of disease), mortality surveys, inventory studies of under-reporting of detected TB, in-depth analysis of surveillance and other data, expert opinion and consultations with countries[1].

Incidence Estimation Methods	Mortality Estimation Methods
Incidence estimates are derived from one of the following four methods: • Results from TB prevalence surveys, • Notifications in high-income countries adjusted by a standard factor to account for under-reporting and underdiagnosis, • National inventory studies, • Patient notification data combined with expert opinion about case detection gaps.	Mortality estimates are obtained from the either of the following two methods: • National vital registration systems of mortality surveys, • Indirectly derived from incidence and case fatality ratio.

However, for the 2021 estimations, methodology was modified considering the impact of disruptions due to pandemic across various countries worldwide. The updates in the methodology adopted were as follows:

- WHO developed dynamic country-specific models for 16 countries (Angola, Bangladesh, Brazil, China, India, Indonesia, Kenya, Myanmar, Pakistan, Peru, Philippines, Russian Federation, South Africa, Uganda, Ukraine and Vietnam), which contributed to a 93% drop in the notifications between 2019 and 2020.
- The key assumptions based on which the model was built were as follows: Reductions in TB patient notifications in 2020 relative to the expected number-based on extrapolation of pre-2020 trends, were attributable to delays in diagnosis of TB and initiation of TB treatment.
- A 50% reduction (uncertainty interval, 25–75%) in TB transmission during periods of lockdown,country-specific based on the data on duration of lockdown availability.

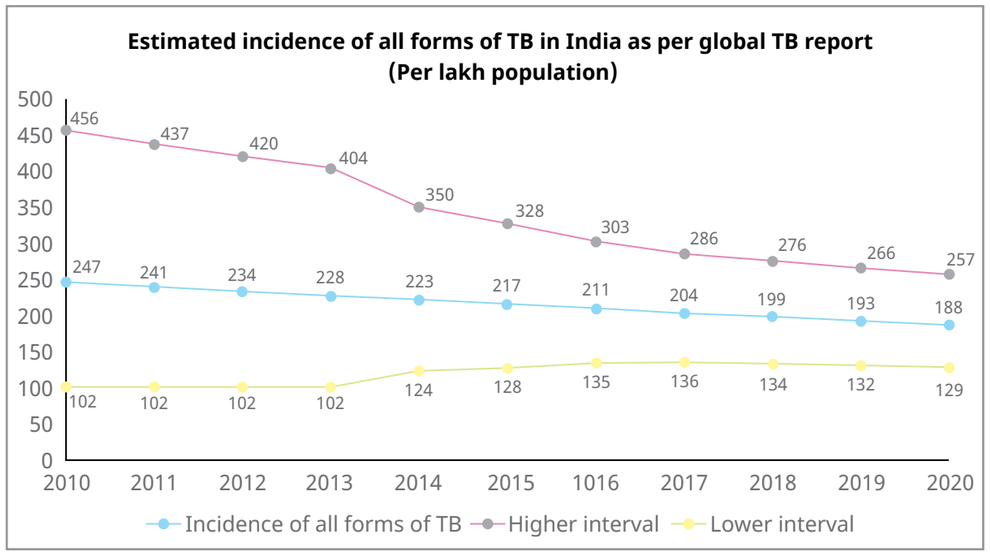
TB Burden in India

TB Incidence

As per the Global TB Report 2021, the estimated incidence of all forms of TB in India for the year 2020 was 188 per 100,000 population (129-257 per 100,000 population).

The total number of incident TB patients (new & relapse) notified during 2021 was 19,33,381 which was 19% higher than that of 2020 (16,28,161). The programme had been able to catch-up with the dip in TB notifications that was observed around the months when the two major covid waves happened in India. Though factors such as changes in the health seeking behaviour of patients with chest symptoms (patient-related) as well as diversion of the human

[1]Glaziou P, Dodd PJ, Dean A, Floyd K. Methods used by WHO to estimate the global burden of TB disease. Geneva: World Health Organization; 2020 (https://www.who.int/tb/publications/global_ report/TB20_Technical_Appendix_20201014.pdf)



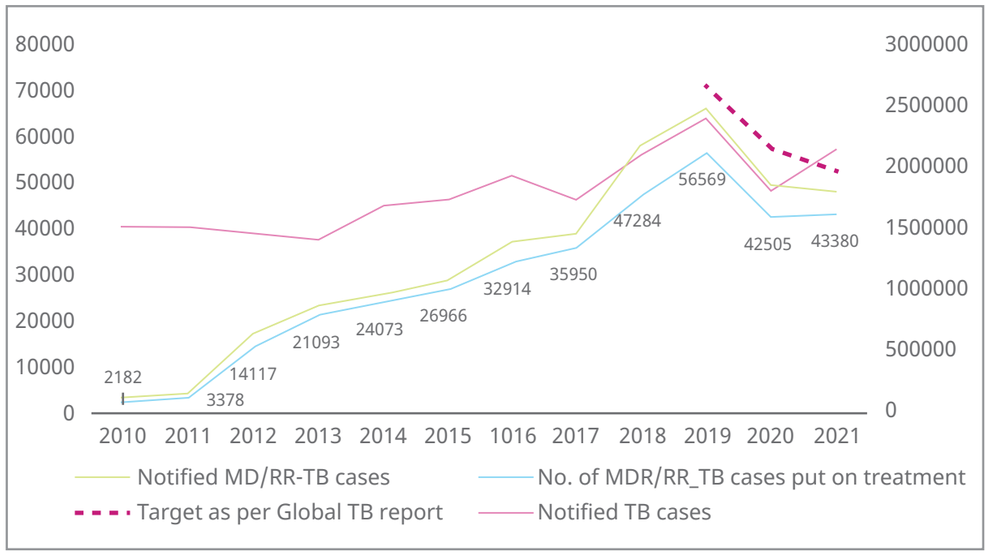
and material resources (provider-related) were seen across the country, NTEP has been resilient in regaining the momentum of finding the missing TB patients by introducing bidirectional screening for TB-Covid, doorstep delivery of services as well as earned gains on the behaviour change of people in terms of respiratory etiquette, which in the long run is expected to have an impact on reducing the transmission of TB as well as other respiratory infections within the community.

Measuring presumptive TB examination rate (number tested per lakh population) is an important measure of effort to find all cases in the community. As the gap between cases found and the estimates reduces, the number needed to get one case TB will increase. Both passive and active case finding efforts will contribute to achieving the target of 2025.

Drug-Resistance TB in India, 2021

There are five categories of drug-resistant TB used by the national health programmes at present: isoniazid (INH)-resistant TB, RR-TB and MDR-TB (RR and INH resistant), plus pre-extensively drug-resistant TB (pre-XDR-TB) and XDR-TB. Pre-XDR-TB is TB that is resistant to rifampicin (MDR/RR-TB) and any fluoroquinolone (a class of second-line anti-TB drug). XDR-TB is TB that is resistant to rifampicin (MDR/RR-TB), plus any fluoroquinolone, plus at least one of the drugs, bedaquiline and linezolid.

The estimated number of MDR and XDR-TB cases to have been put on treatment as per the global TB report 2021 was 4 per 100,000 and 1 per 100,000 population, respectively. During the pandemic, a significant reduction was observed in the total number of DR-TB patients started on treatment as compared to

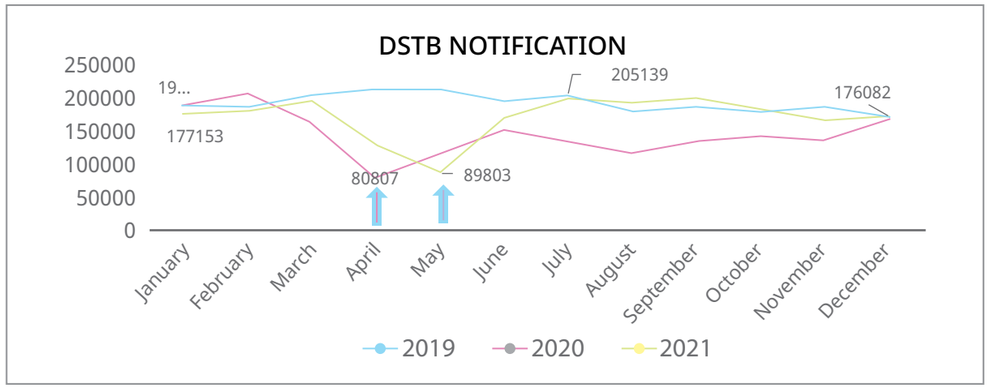


2019. In 2020 and 2021, there was a reduction of 14% and 9% in the number MDR patients put on treatment as compared to the estimated numbers.

Similarly, higher reductions were also seen in the number of XDR-TB patients being started on treatment in 2020 and 2021 as compared to the previous years, and also against the estimated numbers. Reversals in progress in the number of people enrolled on MDR/XDR-TB treatment means that the gaps have widened to reach the targets set at the UN high-level meeting and National Strategic Plan for Elimination of Tuberculosis (NSP 2017-25). Innovative strategies such as, provision of rapid molecular diagnostics of TB to everyone or to high-risk patients upfront (accessibility) and an integrated health-system approach for service delivery with the other components including counselling in the general health system (availability) need to be explored and implemented for early diagnosis and decentralized delivery of DR-TB services.

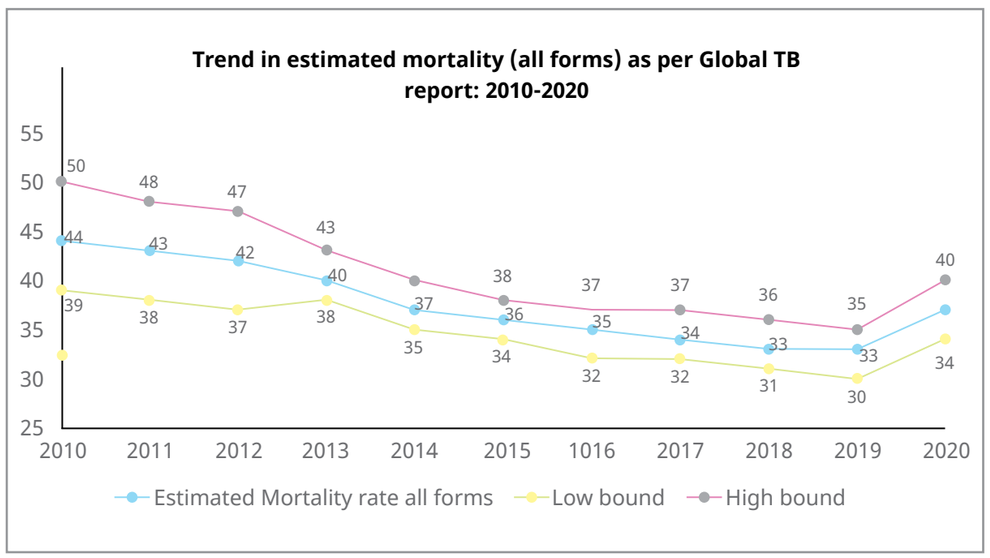
Resilience of NTEP During the COVID-19 Pandemic

The programme has been able to catch-up with the dip in TB notifications that was observed around the months when the two major covid waves happened in India. Though factors such as major change in the health seeking behaviour of patients with chest symptoms as well as diversion of the human as well as material resources were seen across the country, NTEP has been resilient in regaining the momentum of finding the missing TB patients by introducing bidirectional screening for TB-Covid as well as earn gains on the behaviour change of people in terms of respiratory hygiene which on a long run is expected to reduce the transmission of TB infection in the community.



Mortality due To TB

Estimated death vs reported Death (age and sex): The estimated mortality rate among all forms of TB was 37 per 100,000 population (34-40 per 100,000 population) in 2020, as per the Global TB Report 2021. There has been a slight increase in the mortality rate due to all forms of TB between 2019 and 2020 by 11% in the country. In absolute numbers, the total number of estimated deaths from all forms of TB excluding HIV, for 2020 was 4.93 lakhs (4.53-5.36 lakhs) in the country, which was 13% higher that of the year 2019 estimate. As per Nikshay, the total number of reported deaths among DS-TB patients notified in 2020 was 76002 (4.3% of the total notifications of 2020) which is 15.4% of the estimate for the country, thus emphasising the importance of establishing a "TB Death Surveillance and Response" system in line with the maternal mortality surveillance to improve the coverage and real time resolution of lacunae including the system related factors.



The reported mortality among the different sub-groups of DR-TB patients is as given below:

TYPE OF DRUG-RESISTANCE	REPORTED DEATH RATE
H-MONO/POLY DR-TB (2020 COHORT)	5%
MDR/RR ON SHORTER INJECTABLE REGIMEN (2020 COHORT)	11%
MDR/RR ON ALL ORAL LONGER REGIMEN (2019 COHORT)	14%
XDR (2019 COHORT)	21%

Estimates of Catastrophic Costs due to TB

Poverty is both a risk factor and a consequence of TB, and it disproportionately affects the households with low socio-economic status causing a financial burden on them, thereby resulting in detrimental outcomes like delayed care seeking, increased default rates and poor treatment outcomes. One of the reasons for poor compliance to the treatment thereby leading to low success rate to treatment is the cost that the disease imposes on individuals and families affected. Such costs could lead to financial catastrophe, and in India, around 18% of the general population experience such catastrophic healthcare expenditure[2]. To address this, the End TB Strategy of WHO and the National Strategic Plan (NSP) for TB in India have set a target to eliminate the catastrophic cost due to tuberculosis care by the year 2020.

End TB Strategy as well as the NSP measures the out-of-pocket expenditure through the concept of "catastrophic costs," which is different from "catastrophic expenditures," an indicator that is used to measure progress towards universal health coverage (UHC). While guaranteeing UHC is essential, it will not be sufficient to end the epidemic. Hence instead of "catastrophic expenditure" which focuses on direct medical costs only, TB-related "catastrophic costs" that includes indirect costs because of accessing TB-related services has been incorporated. As per the definition if the total costs incurred by a TB-affected household exceeds 20% of household annual income, the costs are classified as catastrophic. To date, there has been no nationally representative study of catastrophic costs for TB in India. A recent systematic review (2020) estimating the direct and indirect patient costs of drug-sensitive and drug-resistant TB care in India reports that 7 to 32 percent of among DS-TB patients and 68% of DR-TB were experiencing catastrophic costs for TB care in India[3].

The pandemic had affected the measures of TB control programmes globally and more so in the high burden countries impacting care-seeking, treatment services, household income and cost incurred to the affected household. The global civil society survey had reported the impact of pandemic and its response affecting the services for TB in India such as fear of contracting COVID by accessing facilities, closure of public facilities for accessing TB care etc[4]. Hence, to plan, advocate and implement strategic interventions, which are evidence-based there is a need for a cost survey either separately

[2]National Health Systems Resource Centre, Ministry of Health and Family Welfare, Government of India. Healthcare Utilization & Expenditure in India: State Fact Sheets, 62. (Available from: http://nhsrcindia.org/sites/default/files/ State%20Fact%20Sheets_Health%20care%20Utilization% 20and%20Expenditure%20in%20India.pdf)

[3]Chandra, Ankit & Kumar, Rakesh & Kant, Shashi & Parthasarathy, Raghavan & Krishnan, Anand. (2020). Direct and indirect patient costs of tuberculosis care in India. Tropical Medicine & International Health. 25. 10.1111/tmi.13402.

[4]Global Civil Society, TB Affected Community Led Survey, 2020. The Impact of COVID-19 on the TB Epidemic: A Community Perspective 2020. Geneva, Switzerland: Stop TB Partnership.

or combined with health surveys at national and state level to understand the new baseline burden in the affected households, thereby aiding in tracking the progress towards the goal of achieving zero catastrophic cost due to TB.

TB Burden Estimation at Sub-National Levels

To propel the country towards the goal of TB Elimination, it is essential that states and districts estimate the TB burden and customise their strategic plans to address the determinants and reduce the burden.

There is a need to measure TB burden more accurately, frequently (annually) and at least up to the district-level if not sub-district. For this a robust system is required to monitor the control at the district level in terms of the performance of the program. District level annual survey (DLAS) uses an innovative survey technique and is proposed as an important component for strengthening the monitoring of TB elimination under NTEP. Subnational Certification is an extension of the DLAS which helps to assess the TB incidence as well as incentivise the efforts of districts and states for reduction of incidence each year in comparison to the baseline of 2015. The Central TB Division supported by the World Health Organisation, ICMR - National Institute of Epidemiology (NIE) and Indian Association of Social & Preventive Medicine (IAPSM) conducted the Sub-National Certification exercise for 2020 in January & February of 2021. There were 67 district-level claims and two UT-level claims for reduction in incidence. Similarly for the year of 2021, the sub-national certification exercise is being conducted in February 2022 with 201 district-level claims and 10 State/UT-level claims for reduction in incidence.

The National TB Prevalence Survey is another important exercise to assess the prevalence of TB using standardised methodologies. Additionally, it will also enable the calculation of the TB incidence at the national and state levels. The survey has been completed and the results are expected to help the country assess the impact of COVID-19 on the TB prevalence in the country as well as help in making the required changes in the strategies towards TB Free India. Similarly, State TB prevalence surveys have been conducted by few states to estimate the prevalence of TB at district levels.

Devising Strategic Plan for Elimination of Tuberculosis

The National Strategic Plan for Elimination of Tuberculosis 2017-25 was approved on the 8th of May 2017 and has been operational since then in the entire country with the goal of Ending TB by 2025. This NSP addresses requirements for achieving the SDG and End TB targets for India and is driven by the DETECT - TREAT - PREVENT - BUILD approach. The focus is on early diagnosis of all the TB patients, prompt treatment with the right drugs and regimens along with suitable patient support systems including financial and nutritional support. This is supplemented by prevention strategies including TB vaccines and TB Preventive Treatment.

On the lines of the National Strategic Plan, states were motivated to prepare a State Strategic Plan. Multiple platforms have been utilised for guiding the states in preparation of the state plan and in October 2021, a two-day National workshop was conducted for the same at New Delhi under the Chairpersonship of Honourable Health and Family Welfare Minister, Government of India. As of December 31, 2021, 18 states have committed to elimination of TB by formally implementing their State-specific Strategic Plans and have gone a step ahead to devise District-specific Strategic Plan which shall serve as a guiding tool for the program managers and staff at the district and sub-district level towards elimination of Tuberculosis.

LIST OF STATE WITH STATE STRATEGIC PLANS (As on December 31, 2021)

Andaman & Nicobar Islands	Dadra and Nagar Haveli and Daman and Diu	Kerala	Madhya Pradesh	Puducherry	Tamil Nadu
Chhattisgarh	Himachal Pradesh	Ladakh	Manipur	Punjab	Uttar Pradesh
Gujarat	Karnataka	Lakshadweep	Meghalaya	Sikkim	West Bengal

Strategies in Pipeline for Burden Estimation

- Development of customised mathematical models to adjust for various assumptions and supporting data from recently concluded national prevalence surveys could be done to prepare the roadmap for elimination and its milestones.
- Also, similar to models for country specific estimates, similar assumptions and state/district-specific information (studies, district prevalence surveys and district-level annual surveys) could be fitted for deriving burden estimates for districts and states. This could help them strategically plan and prepare for developing their TB end game strategies.
- The burden estimation exercise could be made as an annual event for re-calibrating the strategies of the states and districts.
- Newer burden estimates such as annual episodes per lakh population could be developed and the techniques to derive at the same could be developed to better understand the transmission patterns across the country.

TB DIAGNOSTIC SERVICES AND ACTIVE CASE FINDING

02

TB Diagnostic Services and Active Case Finding

Introduction

National TB Elimination Programme (NTEP) has the largest network of TB diagnostic laboratories globally spanning all levels in the health system. Laboratory network has been scaled up over the years in phased manner with introduction of newer diagnostic technologies. Laboratory services are provided free of costs to patients attending public health facilities as well as for those referred from the private sector.

National Policy for Diagnosis

◄ Drug-Sensitive TB (DS TB)

- ▼ Patients with Pulmonary TB are diagnosed using sputum smear microscopy/ Chest- X ray and NAAT (Nucleic Acid Amplification Tests). Smear replacement by NAAT and offer of upfront NAAT for diagnosis of TB has been prioritized by the Programme.
- ▼ Response to DS TB treatment is monitored using sputum smear microscopy.

◄ Drug-Resistant TB (DR TB)

- ▼ Microbiologically confirmed TB patients are offered NAAT for determining resistance to Rifampicin.
- ▼ Line Probe Assay (LPA – First Line) is offered to patients with Rifampicin Sensitive (RS) TB.
- ▼ First and Second Line LPA is offered to Rifampicin-resistant (RR) and Isoniazid (H) resistant TB patients. Liquid Culture (LC) & DST is performed for determining amplification of resistance to drugs used for managing DR TB.
- ▼ LC is used for monitoring response to DR TB treatment.

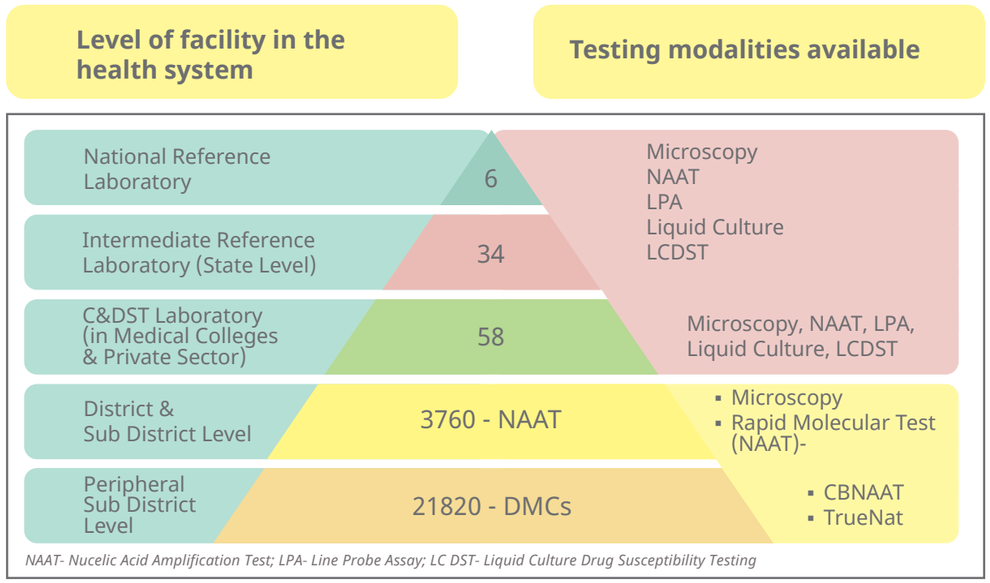
◄ Case finding strategies

Passive Case Finding	Intensified Case Finding	Active Case Finding
Patients with symptoms of TB voluntarily seek health care.	This is a provider-initiated screening of outpatient clinic/hospital attendees for symptoms of TB.	Actively searching for TB patients among poulation at higher risk of TB in the community.
The Medical Officer follows diagnostic algorithm for for evaluating TB patients.	TB screening for patients attending health facilities with comorbidities.	

Implementation Arrangement

NTEP laboratory network is organised in a three-tier system with National level Reference Laboratories (NRLs), State level Intermediate Reference Laboratories (IRLs), Culture and Drug Susceptibility Testing (C-DST) laboratories in public & private sector and peripheral level laboratories as Nucleic Acid Amplification Testing (NAAT), Designated Microscopy Centres (DMCs) [Figure 1].

TB Laboratory Network in NTEP in 2021



NAAT- Nucelic Acid Amplification Test; LPA- Line Probe Assay; LC DST- Liquid Culture Drug Susceptibility Testing

NRLs, IRLs and C-DST laboratories are equipped to perform DST by various technologies such as Liquid Culture and molecular tests such as LPA and NAAT.

- 80 Laboratories are equipped to support liquid culture system, among them, 60 are certified for FL LC DST and 49 are certified for SL LCDST. Solid culture & DST is discontinued (PMDT guidelines 2021).
- 74 Laboratories are certified for FL LPA and among which 61 are additionally certified for SL LPA
- In 2021, Liquid culture-based DST is expanded to include Linezolid and Pyrazinamide. NRL- NIRT, Chennai and NITRD, New Delhi are certified for DST to Bedaquiline Delamanid and Clofazimine. List of certified laboratories is provided in Annexure.
- NRLs and IRLs conducts training, handholding, monitoring and evaluation for their respective State /district/ block level facilities/ laboratories.

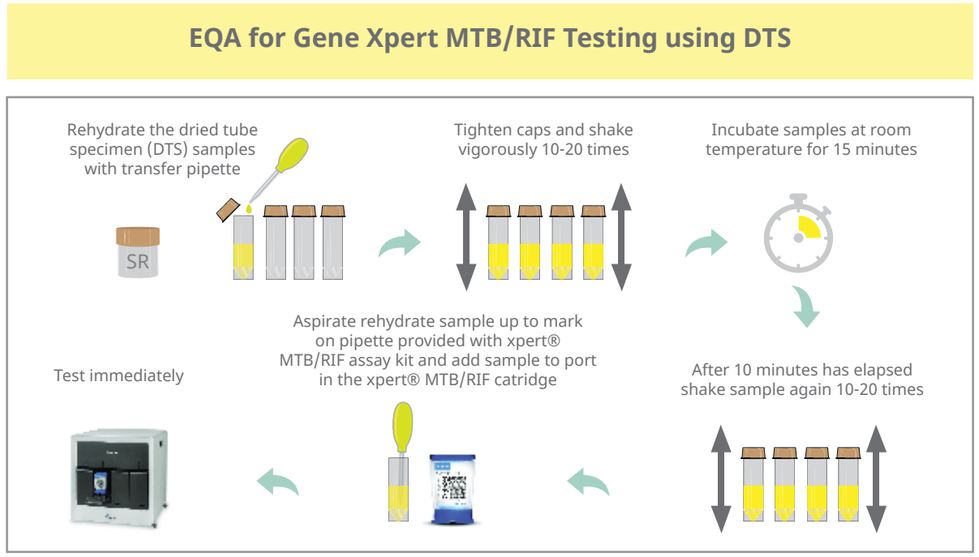
Quality Assurance

An in-built routine system has been designed for conducting External Quality Assessment (EQA) including all elements of internal quality control, on-site evaluation and external quality control. EQA for the NRLs is conducted in through WHO Supra National Reference Laboratories (SNRL), NIRT, Chennai and the coordinating SNRL Antwerp, Belgium.

◄ External Quality Assessment (EQA) for:

- Sputum smear microscopy includes On-site Evaluation, Panel Testing and Random Blinded Re-Checking (RBRC).
- NAAT is conducted using Dried Tube Specimen (DTS) for public as well as private sector laboratories.
  - EQA for GeneXpert is conducted annually by NTI, Bangalore by providing a panel of DTS to the participating laboratory. Complete coverage of EQA to all GeneXpert machines under the Programme was achieved in 2020. Instrument and technical performance of the staff are assessed. Appropriate corrective measures are undertaken by respective IRL and NRL (Figure 2).
  - Pilot testing the expanded use of DTS panel for EQA in Truenat is ongoing.
- o Phenotypic DST (Liquid Culture) and LPA is through structured panel testing and retesting exercises. Proficiency Testing (PT) exercise is conducted annually for laboratories in all technologies used for determination of drug resistance.

Schematic representation of Quality Assurance mechanism for GeneXpert MTB/RIF testing using DTS



DeGruy et al. 2012. ASLM 1st International Conference

Human Resource Development

In the current year, the following hands-on trainings were conducted to build capacity of staff in C&DST laboratory:

National level training programs for laboratory personnel organized for:

- ◄ LPA (first and second line), liquid culture and DST, Truenat as well as EQA for CBNAAT.
- ◄ Hands-on training on SOP to staff at the five Whole Genome Sequencing facilities
- ◄ Induction training for Biomedical Engineers at National Reference Laboratories
- ◄ Training programme on DST to newer drugs used in the management of Drug Resistant TB
- ◄ Logistics management in LIMS was developed, installed in 57 Laboratories and hands-on training provided.
- ◄ Induction and refresher training module designed and developed to promote self/ assisted E- learning platforms.

Performance by the Laboratory Network (2021)

In 2021, of the 82,79,066 patients were offered Smear Microscopy through 21820 DMCs, and 5,64,097 (6.8%) patients were diagnosed as TB.

NAAT facilities in the country were increased from 3147 in 2020 to 3760 in 2021. The details of the tests conducted in 2021 are given below:

NAAT (2021)

NAAT	No. of tests conducted	MTB detected	R Resistant
CBNAAT	14,34,124	4,23,421 (29.5%)	43,493 (10.3%)
Truenat	21,97,757	4,50,304 (20.5%)	21,927 (4.8%)

First Line LPA (2021)

No. of tests conducted	MTB Detected	H&R Sensitive	H mono Resistance	R mono Resistance	MDR TB (H&R Resistance)
3,28,715	3,11,399 (94.7%)	2,57,996 (82.8%)	19,710 (6.3%)	4,818 (1.5%)	22,205 (7.1%)

Second Line LPA (2021)

No. of tests conducted	MTB Detected	FQ & SLI Sensitive	FQ Resistant	SLI Resistant	Low level Kanamycin resistant	XDR TB (FQ + SLI Resistance)
58,255	53,788 (92.3%)	32,988 (61.3%)	15,285 (28.4%)	649 (1.2%)	538 (1.0%)	2,550 (4.7%)

Liquid culture – 3,07,550 culture tests were performed during the year 2021.

Second line LC-DST (2021)

SL DST conducted	No. of valid test	No. of FQ & SLI Sensitive	No. of MDR + FQ resistance detected	No. of MDR + SLI resistance detected	No. of XDR detected (FQ + SLI Resistance)
14,886	12,242 (84.2%)	4,876 (39.8%)	2,178 (17.8%)	490 (4.0%)	567 (4.6%)

State wise details of NAAT, LPA and LC DST conducted in 2021 are provided in Annexure.

Newer Initiatives

- ▼ Module for real time tracking of patient sample from time of collection till reporting has been developed under STRIDES partnership and pilot study initiated. Diagnostic module in NIKSHAY is enhanced by creating simpler workflows.
- ▼ Programme Division with technical support from Wadhwani Institute for Artificial Intelligence, has developed an Annotation tool for LPA result interpretation through Machine Learning (ML). Results obtained Annotation tool is being compared with the results from panel of expert microbiologists.
- ▼ Nineteen laboratories under NTEP had obtained NABL accreditation till 2021 and in 2022, fifteen additional laboratories have been taken up for NABL accreditation:
- ▼ IRLs- AIIMS New Delhi; Trivandrum, Madurai, Jamnagar, Patiala, Dharampur, Agra, Indore and Bhopal.
- ▼ C&DST laboratories -NIRTH, Jabalpur, GRMC Gwalior, GMC Kozhikode and GMC Surat.
- ▼ Supervisory visit (EQA-OSE) formats used by NRLs and IRLs were revised and are piloted in coordination with NRLs- National Tuberculosis Institute (NTI) Bangalore and National Institute for Research in Tuberculosis (NIRT) Chennai.

Way Forward

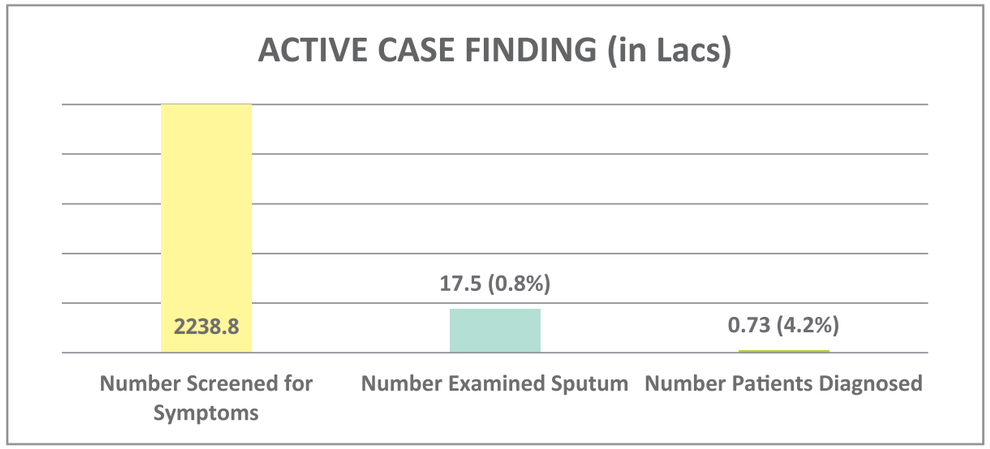
Undertaking sentinel surveillance for drug resistant TB using Whole Genome Sequencing (WGS). Protocol for the surveillance has been developed by SNRL- NIRT, Chennai, in coordination with CTD, UNION, FMR and WHO. Approvals from SAC and Institutional Ethics Committee has been obtained. To be initiated in 2022.

Active Case Finding

Active Case Finding (ACF) has been systematically conducted across all states in India since 2017 based on the National Strategic Plan 2017-25.

Active case finding among risk groups as defined in the National ACF guidelines which includes diabetes, chronic kidney and liver disease, patients on immunosuppressants, etc., was conducted in January 2021. TB services were largely affected due to COVID -19 and to detect the missing cases, a special ACF drive (from 2nd September 2021 to 1st November 2021) was launched by the Hon'ble Minister for Health & Family Welfare, GoI.

In 2021, a total of 2.23 crore persons were screened, 17,52,903 samples tested for TB and 73,772 additional TB patients identified through Active Case Finding. A total of 81 Mobile TB Diagnostic Vans has been provided to the states for conducting ACF in remote, hard-to-reach areas. From January to December 2021, 34 states/UTs have conducted ACF activities/campaigns at state and district levels, at different time-periods. State wise details of ACF conducted in 2021 are provided in Annexure.



One of the key challenges identified in ACF has been the access to X-rays and NAAT. The program envisions making available hand-held X-ray devices equipped with Artificial Intelligence to aid automated reading which would improve access in hard-to reach areas. Additionally, ensuring availability of molecular testing platform at the block levels will improve the yield during ACF.

Managing TB with world class treatment solutions

TREATMENT SERVICES

03

Treatment Services

Introduction

Treatment services are provided free of cost under the programme. Treatment for drug-sensitive and drug-resistant TB are aligned with global guidelines by national experts. The NTEP has been agile in adopting and adapting newer drugs and treatment modalities. In recent years, the country has made considerable progress in the management of TB. Key highlights on treatment are given below:

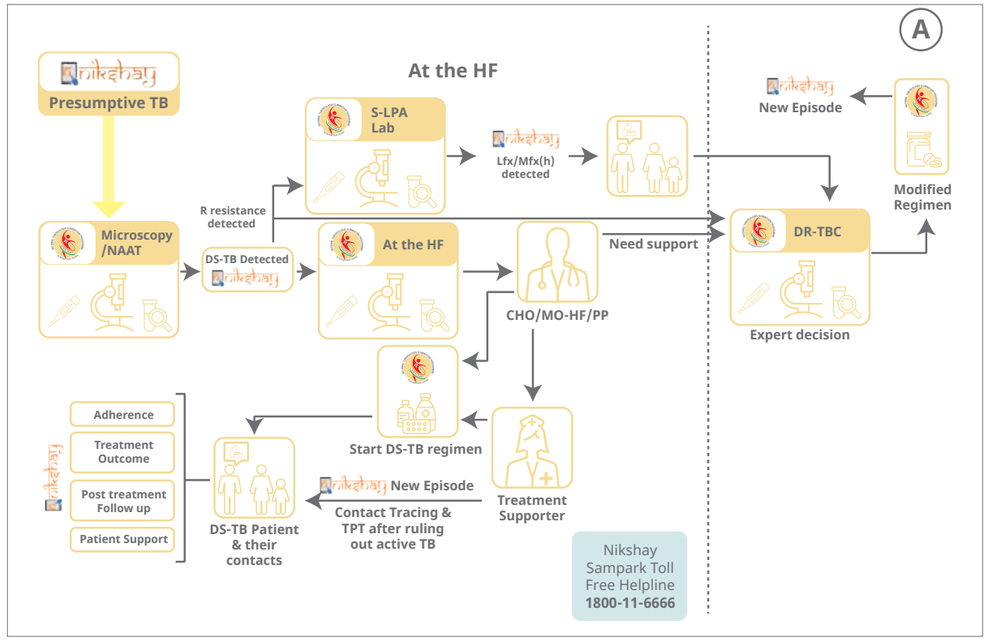
- Injection-free treatment regimen for DS-TB was implemented across the country.
- Introduction of differentiated TB care package of services to reduce mortality.
- Engagement of Ayushman Bharat – Health and Wellness Centres (AB-HWC) in last mile service delivery for better access and quality care to TB, DR-TB patients, and their close contacts.
- Guidelines for Programmatic Management of Drug-resistant TB (PMDT) in India - 2021 released by Hon'ble Union Health Minister.
- Shorter oral Bedaquiline (Bdq)-containing MDR/RR-TB regimen introduced and expanded across the country.
- Use of Bdq expanded to children from five years of age onwards and weighing 15 kg and above, pregnant women, in select patients beyond six months and its combined use with Delamanid introduced.
- Access to free drugs including newer drugs to patients seeking care in the private sector.
- Difficult-to-treat TB clinic establishment at national and state levels.
- As part of corporate sector involvement, DR-TB Centre established in Medanta Hospital, Gurugram, Haryana.
- Guidance on mandatory establishment of DR-TB centres in all the medical colleges.

Policy Statement and Implementation Arrangements

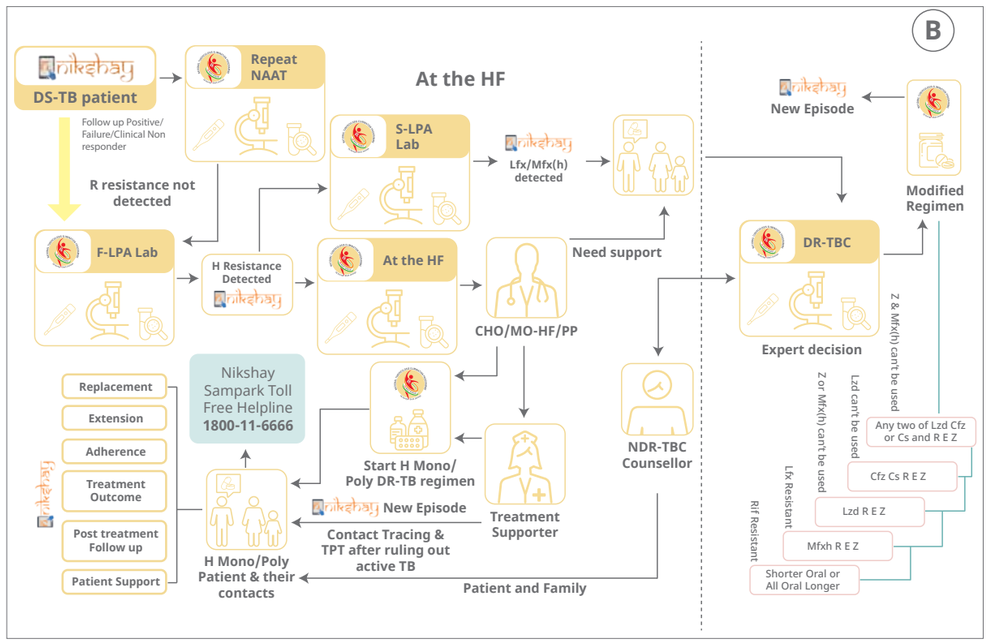
Treatment of drug-sensitive TB and drug-resistant TB

All diagnosed TB patients are to be put on standard first-line anti-TB regimen in the form of Fixed Dosage Combination (FDC) after ruling out at least rifampicin resistant status (when biological sample available) and to be initiated on treatment within three days of diagnosis. The flow of patients from diagnosis to treatment initiation and follow-up till final treatment outcome is depicted in the flowcharts below:

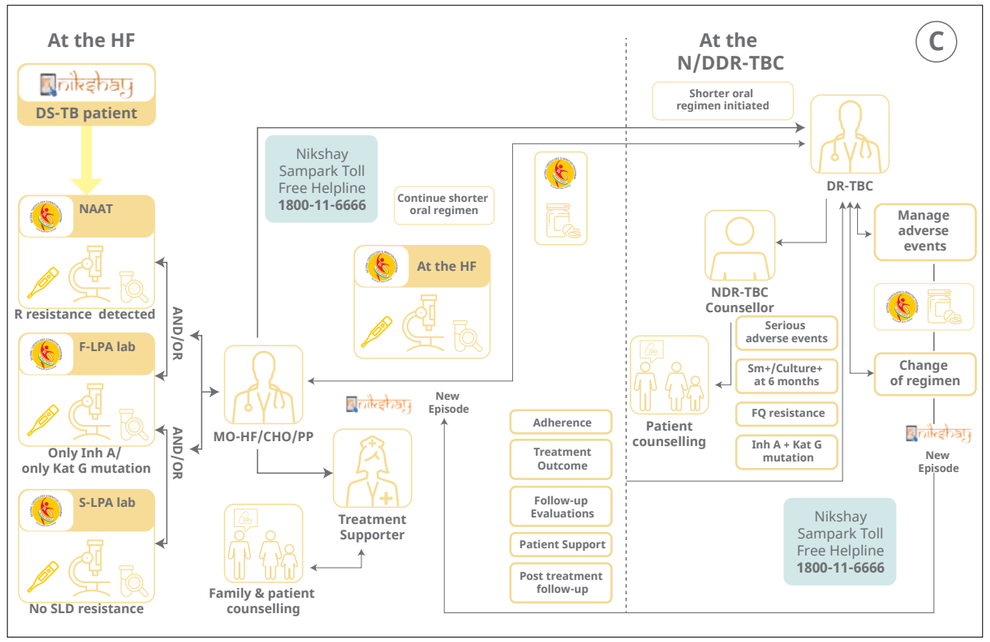
A – Flow of DS-TB patients



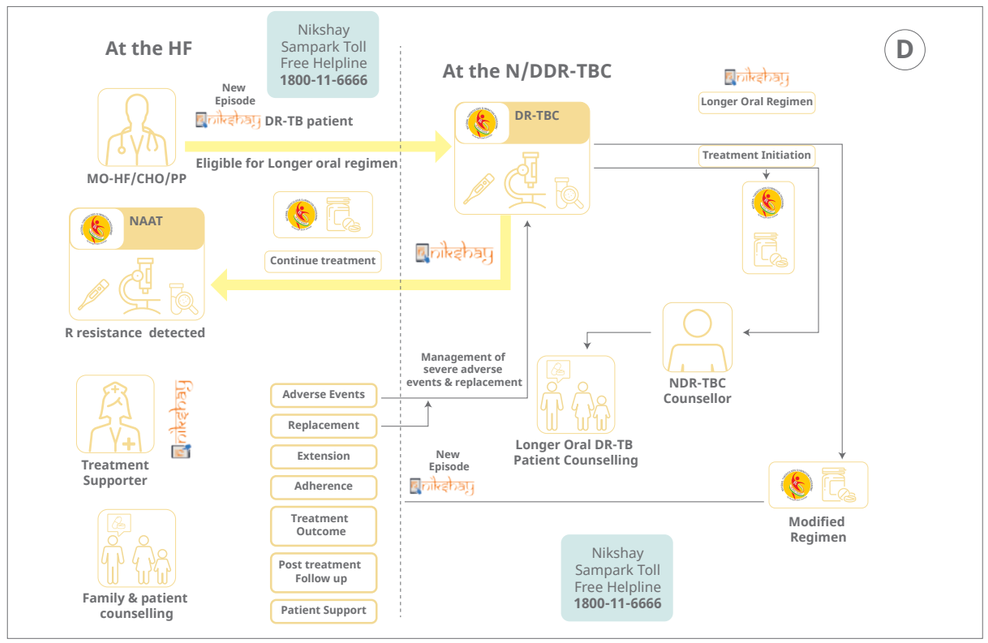
B – Flow of H mono/poly DR-TB patients



C – Flow of patients on shorter oral Bedaquiline-containing MDR/RR-TB regimen



D - Flow of patients on longer oral M/XDR-TB regimen



Those patients advised to take medicine from treatment supporters identified and trained by the health centers located close to the residence as per convenience of the patient.

Comprehensive Package for Differentiated Care of TB patients

Most of the deaths occurring during TB treatment can occur either due to extensive TB with complications or due to serious co-morbidities. The programme introduced a comprehensive package for differentiated care of TB patients with the intention to identify the patients requiring referral or hospitalization to reduce TB mortality and with the objective of rapid reduction of preventable mortality among TB patients. This document covers (a) assessment criteria of patients with active pulmonary TB, (b) risk stratification of patients for referrals, (c) criteria to refer TB patients for in-patient care, (d) in-patient care package, (e) parameters for follow-up examinations of TB patients, (f) mechanism to ensure follow up. The package also outlines the essential and desirable diagnostics and therapeutics for a health facility design, budget, and building capacity to implement the package.

Decentralized DR-TB treatment

With the aim to bring drug-resistant TB treatment closer to patients' residence, DR-TB treatment services were decentralized to district DR-TB centers. By the end of 2021, 776 DR-TB centres were functional, which include 162 Nodal DR-TB centres. This empowers districts to implement the "test and treat approach" to minimize the gap between

diagnosis and treatment initiation, reduce cost of travel, and expedite early care of MDR/RR-TB patients within their respective district.

To strengthen the involvement of medical colleges in DR-TB care, National Medical Commission (NMC erstwhile Medical Council of India) made it mandatory to have a facility for the management of MDR-TB in every medical college by the time of 3rd renewal (admission of 4th batch of MBBS students). By the end of 2021, 290/565 (51%) of medical colleges are providing services to DR-TB patients.

National Training of Trainers (ToT) in Guidelines for PMDT in India – 2021

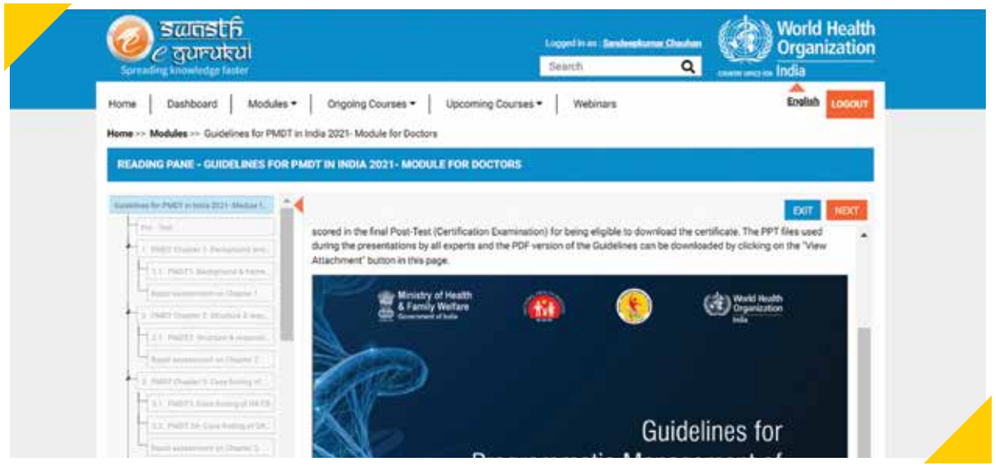
Owing to the current pandemic restrictions, a virtual training course was planned and conducted on WHO India's Swasth e-Gurukul platform on a webinar mode with in-build assessments. Total of 442 participants from all states/UTs across the country were enrolled (average participation 369 per day for all five days). Out of them, 361 (82%) had successfully completed the training (scored >60% in post-test) and auto-generated their training certificate.

Following this, states have started cascade trainings of district and sub-district levels staff using standard training materials developed by CTD. The Swasth e-Gurukul provided assessment platform for the trainings planned physically/ virtually on webinar mode. Total 18 states/ UTs used the Swasth e-Gurukul platform to conduct and assess the state-level cascade trainings.

Launch of self-learning module on Guidelines for PMDT in India – 2021

Using the video recordings of National ToT, self- learning module for the medical officers, private practitioners, and others with the aim to allow participants to learn at their own convenience and pace was developed on Swasth e-Gurukul platform and launched by the Hon'ble Union Health Minister in October 2021. More than 1100 participants enrolled for the self-learning module on the Swasth e-Gurukul.

Launch of self-learning module on "Guidelines for PMDT in India – 2021" on WHO's Swasth e-Gurukul platform



Facilitators of the National ToT

National ToT photo with participants

Injection-free, oral regimen for all types of DR-TB patients

In 2021, shorter oral Bdq-containing MDR/RR-TB regimen was introduced to replace shorter injection-containing MDR-TB regimen (the only injection-containing regimen in the entire TB care cascade) in a phased manner with the aim to complete the transition by April 2022. Initially, it was started in eight states (namely Andhra Pradesh, Delhi, Gujarat, Himachal Pradesh, Karnataka, Maharashtra, Punjab, Telangana) in 3rd quarter of 2021 and gradually it was expanded to other states. By the end of 2021, 1939 (7%) patients were put on shorter oral Bdq-containing MDR/RR-TB regimen. A series of review meetings for assessment of preparedness of rest of the states and UTs have been completed in January 2022.

Release of "Comprehensive Clinical Management Protocol of Tuberculosis"

As per the programme guidelines, there are management protocols in the form of algorithm available for DS-TB, DR-TB, and TB infection. With the aim to simplify and integrate these algorithms, a "Comprehensive Clinical Management Protocol of Tuberculosis" was developed by the programme and released by the Hon'ble Union Health Minister in October 2021. This will serve as a ready reckoner for the clinical management of TB by the health care providers, both in the public and the private sector, respectively.

Release of "Comprehensive Clinical Management Protocol of Tuberculosis" by Hon'ble Union Health Minister, Dr Mansukh Mandaviya in Oct 2021

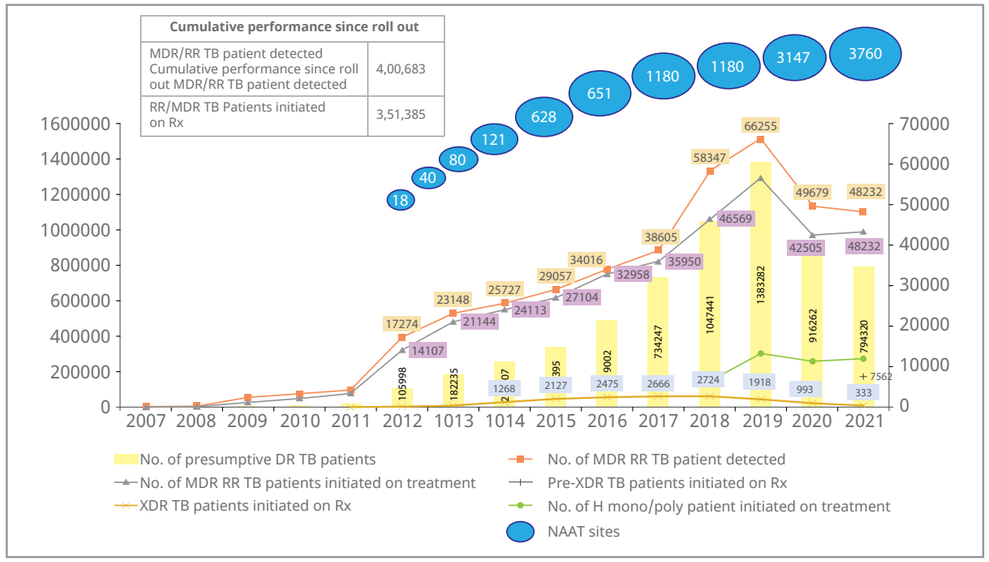
National Performance

DS-TB performance analysis of 2021

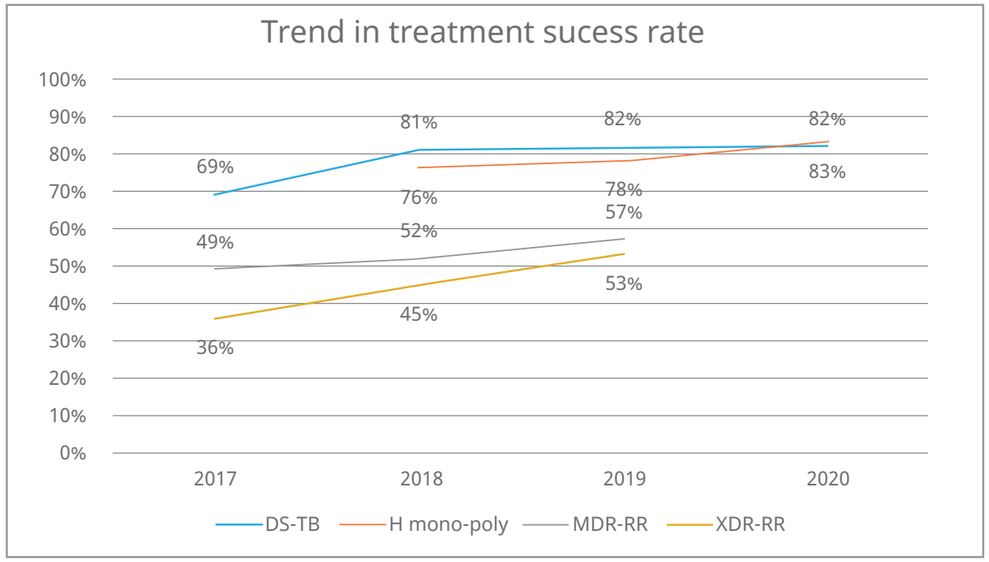
In 2021, among 21,35,830 patients diagnosed, 20,30,509 (95%) patients were put on treatment. 61% were male and 39% were female among the patients put on treatment. Among the total notification, 6% patients were in paediatric age group. Among 17,51,437 TB patients notified in 2020, 83% were successfully treated while 4% died during treatment. Disaggregated treatment success rate of patients notified from public and private sector are 83% and 82% respectively (Refer Annexure)

DR-TB performance analysis of 2021

In 2021, 48,232 MDR/RR-TB patients were diagnosed and 43,380 (90%) were put on treatment. 8455 Pre-XDR-TB, 376 XDR-TB and 13724 H mono/poly patients were diagnosed and 7562 (89%), 333 (89%) and 12008 (87%) were put on treatment respectively. A total of 1939 patients were initiated on shorter oral Bdq-containing MDR/RR-TB regimen, 23,889 on longer M/XDR-TB regimen and 25,235 patients were initiated on shorter injection-containing MDR-TB regimen.



The cohort of DR-TB patients initiated on treatment in 2019 reported 57% treatment success rate (34,535/60,873). This includes 39,358 of patients on shorter MDR-TB regimen (inj-containing) with 59% treatment success rate and 1280 of patient on longer oral regimen with 70% treatment success rate. This cohort also includes 11,791 patients put on old conventional MDR-TB regimen that has reported 49% treatment success rate.



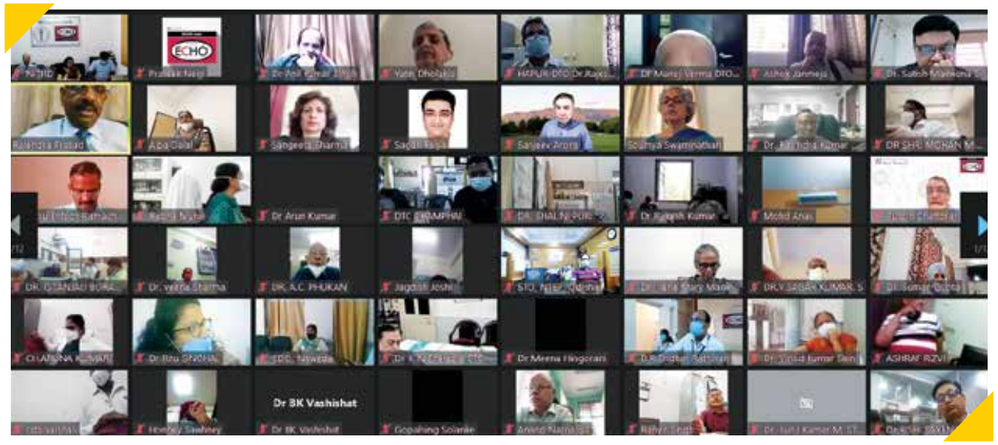
In the cohort of 2020, 30,985 patients initiated on shorter MDR-TB regimen (inj. containing) reported treatment success rate of 55% and 11,525 H mono/poly resistant TB patients reported treatment success rate of 83%.

Newer Interventions/ Additional Activities

Difficult-To-Treat TB Clinic

National Institute of Tuberculosis and Respiratory Diseases (NITRD), New Delhi in collaboration with Central TB Division and National Task Force (NTF) for Medical Colleges have initiated "Difficult to Treat TB Clinic (DT3C)" at National level. By the end of 2021, 47 difficult-to-treat TB patients were managed through this mechanism. This was further decentralized in 2021 to 26 states/UTs that have established State level – Difficult-to-Treat TB Clinic (S-DT3C) in accordance with the Guidelines for PMDT in India - 2021. Some case studies were discussed during periodic webinars conducted by these clinics.

National DT3C webinar



Proposed establishment of 7 Centres of Excellence (CoE) in DR-TB care

To enhance quality of PMDT services, NTEP intends to upgrade some of the existing Nodal DR-TB centres established in premier institutes as CoE. A framework for assessment of institutions was developed and a team of national subject expert, CTD, The UNION and WHO conducted initial site assessment visits to four institutions i.e, NITRD New Delhi, RBI PMT New Delhi, J J Hospital Mumbai and GHTM Tambaram.

Initial site assessment visit to one of the CoE sites

DR-TB Consortium under Corporate TB Pledge

DR-TB Consortium is providing a platform for corporate sector to deliberate the programme need and support to be extended under corporate social responsibility. Three meetings of DR-TB consortium members had been organized by The Union in 2021. Through DR-TB consortium, the following partnerships have been facilitated in DR-TB:

- Initiation of DR-TB clinic facilitated in Medanta Hospital, Gurugram and a formal MoU was established with support of WHO
- Pilot project in three districts of Maharashtra to improve access to newer drugs for patients in the private sector
- Initiation of certification process of culture and DST of Pathkind lab, Gurugram
- Active case finding through mobile X-Ray along with NAAT services in Rewari

Way Forward

- Improve coverage of universal drug susceptibility testing, including second line DST
- Introduction of shorter oral effective and safer DS-TB and pan DR-TB regimen
- Transition to Nikshay based paperless recording and reporting system with automated case finding report for drug-resistant TB
- Expansion of digital adherence technology like MERM and 99DOTS lite
- Establishment of DR-TB clinics in private hospitals in major cities and towns with hub and spoke model through technical support unit and PPSA across the country
- Monitor the establishment of DR-TB centres in all the medical colleges across the country through national task force mechanism

DR-TB consortium meeting

Prevention at the core of TB management

TB PREVENTION

04

TB Prevention

‘Prevent’ is one of the four critical pillars (Detect – Treat – Prevent – Build) in India’s national strategic plan (2015-25) for ending TB by 2025 which aim towards preventing the emergence of TB in vulnerable population of India. It entails scale-up of air-borne infection control measures at health care facilities, treatment for TB infection and addressing the social determinant through an intersectoral approach. To accelerate prevention and as a result, the anticipated decline of TB incidence in next few years, NTEP has taken a huge leap in 2021 by expanding the policy to offer TPT to all household contacts of index pulmonary TB (prioritize in pulmonary bacteriologically confirmed TB [PBCT]) patients and other risk groups beyond the existing policy for PLHIV and HHC children <5 years. Also, it has strengthened the air-borne infection control measures in N/DDR-TBC and C&DST laboratories.

TB Preventive Treatment (TPT) Policy

For more than a decade, NTEP has the policy of providing TPT (erstwhile isoniazid chemoprophylaxis) to the eligible children <6 years who are household contacts (HHC) of TB patients. The policy of providing TPT (erstwhile isoniazid preventive therapy (IPT)) in People living with HIV/AIDS (PLHIV) since 2017.

In 2021, the eligibility for TPT has been expanded to all HHC of pulmonary TB (prioritizing in PBCT) patients irrespective of age and other risk groups such as patient with silicosis or undergoing dialysis, on immunosuppressant or anti-TNF treatment and patients proposed for organ transplant. High TB transmission settings (such as health care workers, prisons, mines, slums, tribal, migrant labourers etc.) are being prioritized for TPT interventions guided by differential TB epidemiology by the State TPT Committee.

◄ TPT in PLHIV

TPT scale up has been taken up on mission mode since 2020 as a collaborative effort by NACP and NTEP. As a result, India has been able to counsel the majority of PLHIV on active care and offer them six months of isoniazid based TPT.

▼ 2,10,171 PLHIV on active care were offered TPT after ruling out active TB in the year 2021.

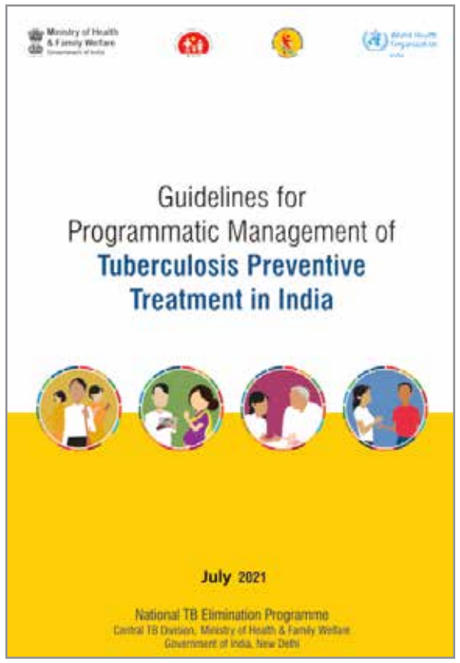
◄ TPT in children less than five years who are household contacts of pulmonary TB patients

The health workers are conducting every patient’s home visit within a week of TB notification. As per Nikshay reporting:

- A home visit for contact investigation was conducted in 84% of PBCT patients.
- 48% of eligible children <5 years in contacts of PBCT patients were provided TPT.

◄ TPT expansion in household contact of children less than five years, adolescent, adult and other risk groups

The Central TB Division had issued a policy guidance in June 2021 based on the recommendations of NTEG for initiating the preparations for expansion of TPT coverage to the additional population.



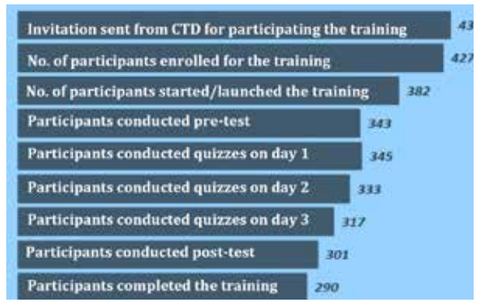
Release of the Guidelines for programmatic management of TB preventive treatment (PMTPT) in India

National Task Force for guideline development prepared the guidelines of TPT as per the recommendation of National Technical Working Group (NTEG) after a series of deliberations and review of global recommendations and in country evidence. The Guidelines of PMTPT in India (2021) were released by the Hon'ble Union Health Minister on 6th August 2021.

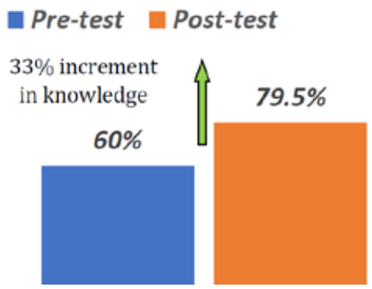
Capacity building on Guidelines for PMTPT in India on WHO's Swasth e-gurukul knowledge platform

Owing to the restrictions imposed due to the prevailing COVID-19 pandemic,

the training of national master trainers was conducted virtually. The challenge of organising physical trainings was overcome by cascading the virtual training. The training course was developed over WHO India's Swasth e-gurukul knowledge platform. Of the 434 participants invited by



CTD for the virtual webinar, 427 (98%) have enrolled for the course in Swasth e-gurukul and 382 (89%) launched the course. While the pre-test quiz of day 1 and 2, and post-test of on day 3 were attempted by 90%, 87%, 82%, 79% participants,



respectively; 290 (76%) participants who had launched the course completed the course successfully. An impressive 33% increment in score between pre-test and post-test was recorded. The same methodology of virtual training through WHO's Swasth e-gurukul was extended for state-level master trainers on request by states. All 36 states/UTs have completed the training of state-level master trainers while cascade training at district levels and sub-district levels are ongoing.

Additionally, the entire national training was video recorded and converted into self-learning modules for Guidelines for PMTPT for cascade trainings in support of WHO country office for India.

PMTPT scale up plans

The Central TB division with support of WHO India introduced an excel based PMTPT tool to prepare district wise plans for PMTPT expansion to achieve national coverage up by mid-2022. The critical preparatory activities were listed (setting up of state level TPT committee; trainings of state, appraisal on PMTPT to the state and district administrators; district and subdistrict health officers and workers; linkages for TBI testing and linkages for presumptive TB testing) with flexibility for timeline. District-wise projections of beneficiaries for TB screening, TBI testing and TPT were also made based on TB notification and a few assumptions. The district-level plans from 770 districts were consolidated at the national level. This plan would not only be guiding the districts and the states for taking up the critical preparatory activity for PMTPT expansion but also be serving as a reference for monitoring. The entire exercise was carried out in latter half of 2021.

Review of the progress of states and districts against the PMTPT scale up plans

The Central TB division conducted virtual review with all the States/UTs between 6th to 20th of January 2022 and assessed the progressed in the implementation of their PMTPT scale-up plans.

The implementation of TPT in HHC >/=5years is in very nascent phase.

- 6% of eligible household contacts >5 years of PBCT patients were provided TPT in July to December 2021.

Status of TPT initiation in the States are placed in annexures.

◄ TPT for DR-TB contacts:

TPT for DR-TB contacts was introduced in 12 states (Andhra Pradesh, Telangana, Delhi, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Meghalaya, Odisha, Punjab and Assam) to gain programmatic experience for further scale up.

◄ e) Innovation and newer initiatives

- **Self-learning training module for PMTPT:** Restrictions imposed by COVID-19 pandemic was causing delay in cascading training at the same time health care workers were involved in COVID-19 duty. To overcome the challenge, the self-learning training module for PMTPT has been developed on WHO's Swasth e-Gurukul platform and launched by Hon'ble Union Health Minister in October 2021. More than 2000 participants have enrolled in the self-learning PMTPT module and already completed by >800 individuals.
- **Shorter TPT Regimen:** To overcome the challenge, new shorter TPT regimen with 3 months of weekly rifapentine and isoniazid (3HP) is recommended as an alternative to 6H. While ~29500 3HP courses have been supplied through WHO India to various states and research organization, the programme division has initiated the procurement of 3HP.
- **C-TB skin test for TB infection:** There is a need of an affordable, acceptable and available TBI testing alternative to IGRA. ICMR has completed the C-TB feasibility study and results are encouraging and the same would be dedicated to the country on World TB Day 2022.
- **Community Engagement:** As per initial roll out experiences, hesitancy was reported among the healthy contacts in taking TPT course. Advocacy campaigns and community engagement to address the hesitancy in accepting PMTPT interventions in the community is being developed.
- **IMPAACT4TB Study:** A multi-centric feasibility study is being undertaken through 6 ART centres by NIRT, Chennai. The evidence will be available by the end of 2022.

Support from Bilateral and Multilateral Partner Organization

◄ Donation of 3HP TPT courses by WHO-Country Office for India

WHO India office donated ~29,500 3HP courses for programmatic implementation, operational research and TPT in IGRA positives during national TB prevalence survey. This is the first ever introduction of 3HP in India.

◄ Global fund supported project Akshaya Plus and JEET 2.0:

Non-government principal recipients (NGPR) WJCF, FIND and The UNION are awarded with the projects titled JEET 2.0 and Akshaya Plus under Global fund grant for 2021-24 with TPT interventions. The project is implemented in 184 districts. TBI testing through IGRA is supported by the project in test & treat model districts. The TPT drugs will be facilitated by the programme. ~8,000 3HP courses and ~15,000 6H courses are being supported under the project. Both the projects under Global fund grant are expected to gain experience and generate local evidence to facilitate expansion.

◄ Workshop organized by Global Coalition for TB Activist titled 'Advocacy Roadmap for TB preventive treatment through community engagement'

Dr. Rajendra Joshi (DDG-TB) delivered keynote address in inaugural session. The Brochure developed by GCTA and partners, *"How to protect ourselves from TB? – about preventive TB therapy"* was launched at the workshop. The brochure is available in eight language including English, Hindi and Bangla.

Air-Borne Infection (Aic) Control Measures at Health Care Facilities

'National Guidelines on Air-borne Infection Control in Healthcare and Other settings' is being implemented at high-risk centres such as DR-TB centres, ART centres and C&DST laboratories. The implementation policy includes availability of AIC committee and plan; baseline assessment; resource planning and budgetary provisions; training of health care workers; implementation of administrative, environmental and personal protection measures. Assessment of nodal and district DR-TB centres for AIC compliance was conducted in 2021 through the district teams. Number of N/DDR-TBC compliant with AIC varied in different states. As per the district reports, 432 N/DDR-TBC are AIC compliant out of total 785 N/DDR-TBC.

Comorbidities are important contributors to the TB burden

TB COMORBIDITIES AND SPECIAL SITUATIONS

05

TB Comorbidities and Special Situations

Introduction

Comorbidities like malnutrition, diabetes, HIV, usage of tobacco-smoking and alcohol cause weakening of the immune system and increase the chances of an individual to progress from TB infection to TB disease within a shorter time and can also lead to an increase in severity of TB illness. These conditions are risk factors and important contributors to the TB burden and poor TB treatment outcomes. Therefore, it is essential to identify these comorbidities in people diagnosed with TB to improve co-management because TB and its treatment can complicate the management of some of these conditions and vice versa.

As per the Global TB Report 2021, the TB case attributable risk factors are in order of alcohol, diabetes, HIV infection, smoking, and under-nourishment at the global level while in India, the TB attributable risk factors are as highlighted in the table below.

TB Attributable Risk Factors		
1	Under-nourishment	609K (418K-836K)
2	Alcohol use disorder	254K (73K-547K)
3	Smoking	156K (28K-394K)
4	Diabetes	104K (29K-226K)
5	HIV	51K (21K-94K)

Therefore, integrating the NTEP with the other national programmes is of utmost importance for addressing these comorbidities.

TB-Nutrition

Undernutrition and TB form a vicious cycle, where undernutrition predisposes an individual to acquire TB, while TB could exacerbate undernutrition. Nutritional support to TB patients improves weight gain, adherence to therapy, muscle strength, quality of life, and reduced mortality. It also leads to a shorter time to sputum conversion and a greater sustained microbiological cure, thereby decreasing relapse of TB disease.

Through Nikshay Poshan Yojna, the Government of India is committed to supporting the nutritional requirement of all TB patients through direct benefit transfer of INR 500/month into the bank account of the beneficiary (TB patient) for the entire duration of TB treatment. “Guidance document on nutritional care and support for patients with TB in India” has been developed and disseminated.

◄ Collaboration of NTEP and Ministry of Women and Child Development (MoWCD)

To support the NTEP’s objective of successful treatment and improved & better health/ nutritional status among TB patients, the programme and the Ministry of Women and Child Development (MoWCD) have ensured the holistic development of women and children. In addition, the annual *‘Poshan Mah’* is observed in the month of September to address malnutrition at population level.

◄ Nutrition-TB App (N-TB App)

In order to facilitate the implementation of the technical aspects of the nutritional assessment and appropriate supplementation, the Nutrition-TB App (N-TB app) has been developed by the CTD with the support of partners. The App is a mobile-based application that simplifies assessment, counselling, and support for undernourished adult patients with tuberculosis. It is available for free from Google and the iOS app stores. This tool for healthcare workers helps in:

- Assessment and classification of nutritional status based on BMI

- Actions based on the nutritional status
- Indicates desirable weight and required weight gain depending on the current weight
- Indicates recommended daily calorie and protein intake
- Provides tailored tips for dietary counselling for TB patients
- Simplified information on all food groups, their caloric and protein content, focusing on locally available and cost-effective foods.

TB and Alcohol Use Disorder

An important risk factor for tuberculosis is alcohol consumption. The prevalence of alcoholism among TB patients is between 20.3% to 31.5%. Studies have shown that alcohol use significantly impairs the immune response and increases susceptibility to respiratory diseases such as tuberculosis and reactivation of tuberculosis infection to disease.

Under the NTEP, information on alcohol use by TB patients is being captured in Nikshay. In 2021, the data of alcohol consumption was captured for 72% of total notified patients, out of which 7% admitted to alcohol usage. Services for alcohol users include counselling, linkages to de-addiction centres, and social support systems.

TB and Tobacco

Smokers have two times higher chances of getting infected with TB, progressing into active disease, having recurrent TB, and death from TB compared to a non-smoker. Further, it increases the risk of latent TB infection, culture conversion, cavitary disease, treatment delay, treatment loss to follow up, poor treatment outcomes, and disease transmission. Similarly, passive smoking or exposure to second-hand smoke is a risk factor for infection by mycobacterium tuberculosis and developing TB disease. Smoking cessations is an effective way to decrease treatment failure and drug resistance.

Under the NTEP, in 2021, out of the 74% of the known tobacco usage among all TB patients, 12% of TB patients were reported to be tobacco users. Among those screened, 30% were linked to tobacco cessation services.

The TB Tobacco cessation service programme is being implemented in all States/UTs of the country. The collaboration between the two programmes is being strengthened through regular review in the TB Comorbidity Committee meeting at various levels.

TB and Diabetes Mellitus (DM)

The association between TB and DM has been known for many years. Available evidence and modelling studies indicate that nearly 20% of all TB cases in India may suffer from DM. Diabetes increases the risk of tuberculosis by 2–3 times. TB may present atypically with more frequent and severe symptoms and signs in those with diabetes. DM also adversely affects TB treatment outcomes by causing delays in microbiological conversion and being associated with increased rates of death, failure, and relapse after completion of treatment. Long-term, poor, or inadequate glycaemic control appears to play a critical role in the increased risk of TB and poor response to treatment.

On the other hand, TB is not a risk factor for the development of DM, but it can cause "stress-induced hyperglycemia," unmasking those at risk of DM in the future. TB is associated with glucose intolerance and hyperglycaemia, which resolve automatically with TB treatment. In some studies, up to 50% of TB patients who have high blood glucose levels at the time of diagnosis have normal levels by the end of TB treatment. TB also impairs glycaemic control among patients with previously known DM.

To address TB and diabetes, intensified TB case finding is conducted in the NCD clinics to screen TB cases using four-symptom complex. The TB symptoms identified at the NCD clinics are referred to the NTEP facilities for TB diagnosis and further management. Similarly, all TB patients are tested for blood sugar and, if found to be diabetic, are linked to the NCD clinic for management of diabetes.

As a result of TB-Diabetes collaborative framework implementation, nearly 93% of the TB Detection Centres have blood sugar testing facilities. In 2021 of all the notified TB patients, 89% were screened for blood sugar, and out of screened, 8% were found to have diabetes. Out of this, 62% of patients were referred to the NCD clinics and linked to anti-diabetic treatment. Among the NCD clinic attendees with diabetes, about 7% have been screened for tuberculosis and referred for TB testing.

TB and HIV

People living with PLHIV are 29 times (26–31) more likely to develop tuberculosis disease than people without PLHIV and living in the same country. TB is a leading cause of hospitalization and death among adults and children living with HIV, accounting for one in five HIV-related deaths globally.

Estimates of TB HIV Burden in India (Global TB Report 2021)	
HIV positive TB Incidence	53K (36K-72K) 3.8 (2.6-5.2) %
HIV positive TB mortality	11K (9.8-12K) 0.78 (0.71-0.84)/lac

Following are the updates in the management of TB HIV co-infected patients as per the meetings conducted by NACO in 2021.

- The 13th Technical Resource Group for Antiretroviral Therapy (TRG) of Paediatrics has given updated recommendations to NTEP for management of CLHIV.
- The 16th Meeting of Technical Resource Group updated the Antiretroviral Therapy for Adults & Adolescents.

Achievements

- For early detection of HIV among presumptive TB patients, Provider Initiated Testing and Counselling (PITC) is being implemented across the country.
- Of all the notified TB patients, 95% know their HIV status. (Public: 96%, Private: 92%)
- Nearly 95% of TB Detection Centres (TDCs) have co-located HIV testing facilities.
- 2,51,675 PLHIV given access to rapid molecular testing via CBNAAT for TB diagnosis.
- Single window TB and HIV services are being implemented through existing ART centers
- TB screening among ART center attendees using '4 symptoms screening tool'. Based on the evaluation, PLHIV is being offered TB treatment or TB preventive therapy by ART medical officers.
- More than 96% of PLHIV visiting the ART centres every month are screened for existing TB symptoms.
- As per Nikshay data, the linkage of HIV-TB co-infected patients to Cotrimoxazole Preventive Therapy (CPT) and Antiretroviral Therapy in 2021 were 93% & 95%, respectively.

The following are the key interventions being undertaken to strengthen HIV-TB Collaborative activities

- Intensified TB Case Finding (ICF) at ICTC: 7% of ICTC clients were screened for TB, out of which 5% were diagnosed with TB
- Use of molecular diagnostic (CBNAAT or Truenat) for early diagnosis of TB and Rifampicin drug resistance among People living with HIV Out of the PLHIV tested for TB, 7% were diagnosed with TB
- TB Preventive Therapy- TPT

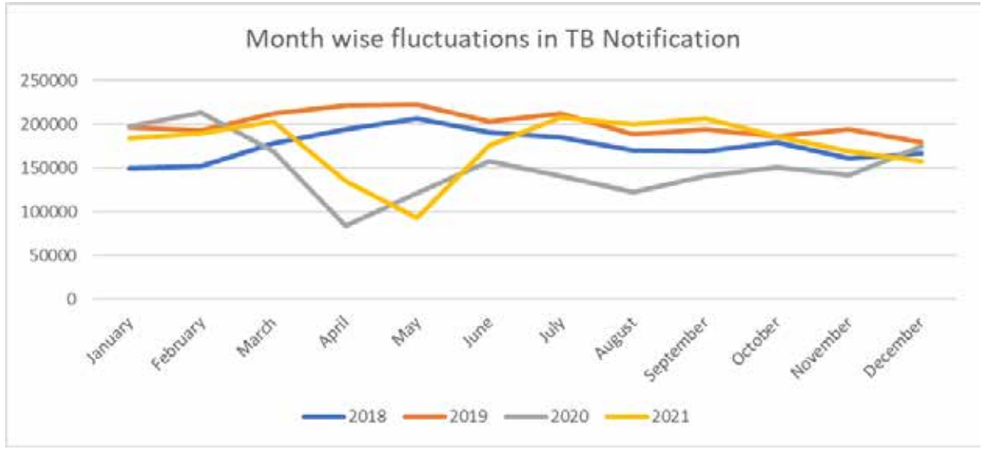
Priority Areas for 2022

- Improve linkages of NAAT testing facility for PLHIV presumptive TB patients.
- Notification of all TB cases diagnosed in ART centres including those diagnosed by NAAT, in private, clinically diagnosed by scan, histopathology, cytology.
- Implementation of 3HP for TPT.
- Sensitisation of ART MOs in PMDT guidelines 2021 for management of drug resistance TB and PMTPT guidelines for TB preventive therapy.
- Implementation of updated ART guidelines for the management of PLHIV.
- Introduction of newer diagnostics like TB-LAM for TB diagnosis among PLHIV with advanced disease.

TB and COVID-19

Tuberculosis and COVID-19 are infectious diseases that primarily attack the lungs presenting with similar symptoms of cough, fever, and difficulty in breathing.

The COVID-19 pandemic has brought along stigma and discriminatory behaviour, leading people to hide the symptoms and refrain from seeking health care. Such social behaviour might contribute to TB and other respiratory diseases in the household and the community. The graph below shows the month-wise trend of TB notification in 2019, 2020, 2021. The dip in 2020 and 2021 coincides with the 1st and 2nd waves of the COVID-19 pandemic.



Policy Statement

As an effort to mitigate the impact of Covid -19 Pandemic on the TB programme, the Joint Monitoring Group of the MoHFW, in its meeting held on 15th June 2020, recommended the following strategies:

- Bi-directional screening for TB and COVID–19, i.e., COVID-19 screening for all diagnosed TB patients and TB screening for all suspected and confirmed COVID-19 patients.
- Symptomatic screening for TB and inclusion during surveillance for ILI/ SARI/COVID in the community.
- Home sample collection services of sputum samples in COVID-19 containment zones.
- Referral linkages for diagnosis and management for TB at all COVID-19 Care Centres, Dedicated Covid Health Centres, Dedicated Covid Hospitals.

Implementation Arrangement

Since the issuance of guidance on bidirectional screening of TB and COVID-19 in 2020, its implementation was started at varied points of time by the different States/UTs.

The status of screening for COVID-19 among TB notified patients as of 31st December 2021 is as follows: (Source: Nikshay)

Indicators	2021
Total TB cases notified	2136418
Out of above, Tested for COVID-19	1272728
Percentage tested for COVID-19	60%
Out of those tested, TB COVID-19 comorbid	4996
Percentage positive for TB COVID-19	0.4%

As far as the treatment outcomes in terms of success rates and percentage deaths are concerned, the national scenario shows the fatality rate in TB COVID comorbid patients in 2021 was more than twice that of TB patients without COVID.

TB Patients	2021 (Jan-Oct)*	
	Success (%)	Death (%)
COVID-19 Positive	2490/3045 (82)	284/3045 (9.33)
COVID-19 Negative	273088/309802 (88)	10994/309802 (3.55)

*For the year 2021 (January-October), the cohort considered is of patients notified in 2020 (January to October) with known Covid status

Way Forward

The newer scientific evidence available on TB and COVID-19 suggests that TB is a comorbidity for COVID-19 and impacts its progression and severity and vice versa. Hence as an effort to ensure early detection and timely and effective management of TB and COVID-19, the following recommendations have been approved and are under process of being shared with the states in the form of a guidance document on "TB & COVID-19 screening and follow up."

- Screening patients with a history of TB in the past two years for COVID-19 at a six-monthly interval as post-treatment follow-up for two years. For COVID testing, modalities like home-based kits/ Rapid Antigen test/ RTPCR may be utilized.
- Screening for TB among post COVID-19 patients at six-monthly intervals for two years.
- Implementation of the protocol "Clinical guidance for management of adult COVID-19 patients", released by MoHFW on 14th January 2022, across the States/UTs to ensure the successful outcome of COVID-19 treatment and early identification & management of TB. While doing so, the following has been recommended:
  - COVID-19 patients with active TB to be managed as per protocols
  - If cough persists after 2-3 weeks, to be tested for TB
  - Follow up COVID-19 patients' post-treatment and periodically screen for TB

While the COVID-19 pandemic has had an adverse impact on the overall case finding of TB, it also presented us with many opportunities. Utilizing this opportunity in areas like lab strengthening – platform technology, surveillance, strengthening of currently existing treatment centres, further expansion of the network, and airborne infection control measures will play a pivotal role in ending TB by 2025.

During this period, the NAAT machines procured for COVID-19 diagnosis can be utilized for strengthening diagnostics under the National TB programme hereafter. Additionally, hygienic practices like using a mask, practicing social distancing, not spitting in public have brought a window of opportunity for the TB programme, as this will prevent the spread of TB.

Prevention of the development of TB disease and COVID-19 complications is an area yet to be ventured into. Hence policy changes around the following may help create solid scientific evidence:

- Rollout of TB preventive treatment among COVID-19 positive patients with TB infection using test and treat policy.
- Prioritization of TB patients during COVID-19 vaccination.

Childhood Tuberculosis

Tuberculosis remains a major cause of morbidity and death from infectious diseases for children of all ages globally, particularly in young children. As per the Global TB Report 2021, about 3.06 lakh children (0-14 years of age) are estimated to get TB every year, accounting for about 11 % of total estimated TB cases reported to the NTEP. In India, childhood Tuberculosis is a staggering problem, contributing to approximately 31% of the global burden.

However, over the last decade, consistently, children constitute 6-7% of all the patients treated under NTEP annually, pointing to a gap of 4-5% of total notification against the estimated incidence. Inarguably, the case reporting across the states varies and is attributed to differences in the burden of disease, health-seeking behaviour, and accessibility to services.

◄ Paediatric Drug-Resistant Tuberculosis

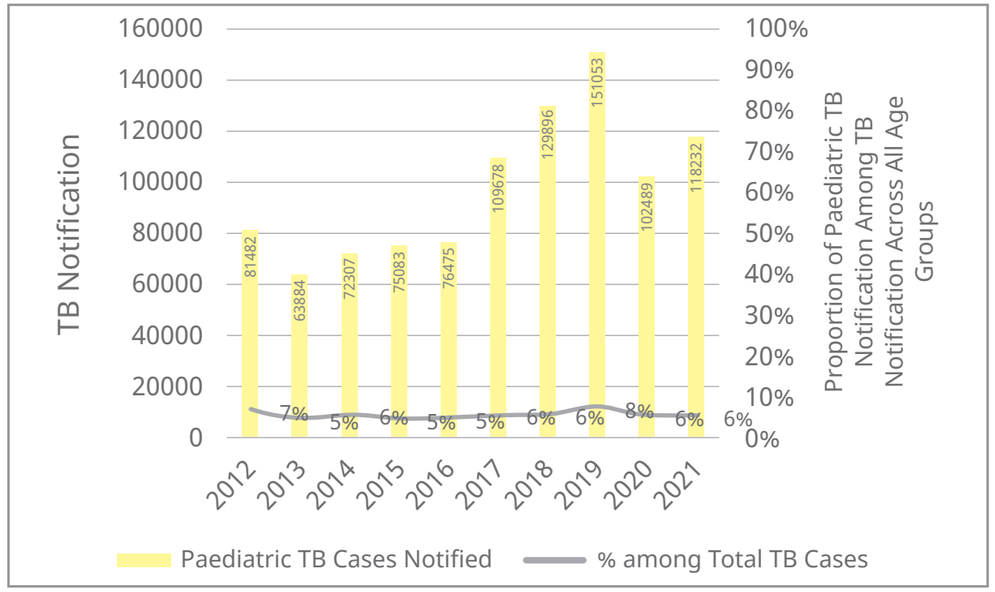
The dearth of paediatric DR-TB data remains a challenge both globally and nationally. Only 12,200 (11%) of the target of 1,15000 was achieved globally for the pediatric age group.

MDR-TB in children reflects MDR-TB in adults and, therefore, is common in settings where the MDR-TB pool exists in adults.

Transmission of DR-TB in children is mainly from the close contact of a confirmed

MDR-TB patient (usually an adult or adolescent) and less commonly through previously inadequate TB treatment.

▼ Trend of Paediatric TB Notification:



▼ Indian Academy of Paediatrics (IAP):

To build pediatricians' capacity in the public and private sectors, Continued Medical Education (CME) and training workshops are being conducted by IAP. To date, more than 4500 doctors have been trained virtually/physically.

▼ Diagnostics, Regimen, Newer Drugs and Child-friendly Fixed Drug Combinations (FDCs):

To address the common diagnostic challenges in paediatric TB, including DR-TB, NTEP has mandated upfront molecular diagnostics for all paediatric TB samples. The programme has child-friendly formulations of drugs for the management of paediatric drug-sensitive TB and is procuring child-friendly formulations for DR TB. Bedaquiline is approved for use in children above five years of age. NTEP has acquired the 20mg dispersible tab of Bedaquiline through the Japanese Grant of STOP TB Partnership.

▼ Operationalization of Inter-Sectoral Coordination:

- **Collaborative Framework to Address the Burden of Tuberculosis among Children and Adolescents:**

  The NTEP is collaborating with Child Health and Adolescent Health programmes of the Ministry of Health and Family Welfare (MoHFW), Rashtriya Bal Swasthya Karyakram (RBSK), and Rashtriya Kishor Swasthya Karyakram (RKSK). This integrated framework endeavours to enhance community awareness on childhood TB, generate demand, and promote disease prevention and early health-seeking. Active Screening for TB by Mobile Health Team (MHT) and verbal screening by the Counsellor at the Adolescent Friendly Health Clinic (AFHC) is one of the pillars of this inter-sectoral collaboration. This will help early detection of children with TB symptoms and track them for early diagnosis and treatment initiation.

- **Upcoming Collaborative Framework between NTEP and NRC (Nutrition Rehabilitation Centres) Collaborative Framework for Management:**

  To improve timely detection of TB through a provider-initiated pathway, integrating TB screening algorithms in the clinical protocol of facility-based management of children who are sick and have Severe Acute Malnutrition (SAM) is critical for diagnosing and treating TB. The suggested collaboration points at an initial assessment at admission at an NRC facility and during the facility-based follow-up have been shared with the pertinent ministry.

▼ Paediatric Centre of Excellence:
The NTEP has established a network of Centre of Excellence (pCoE-TB). These centres are organised at National, Regional, State, and District levels. The regional pCoE-TB has initiated coo

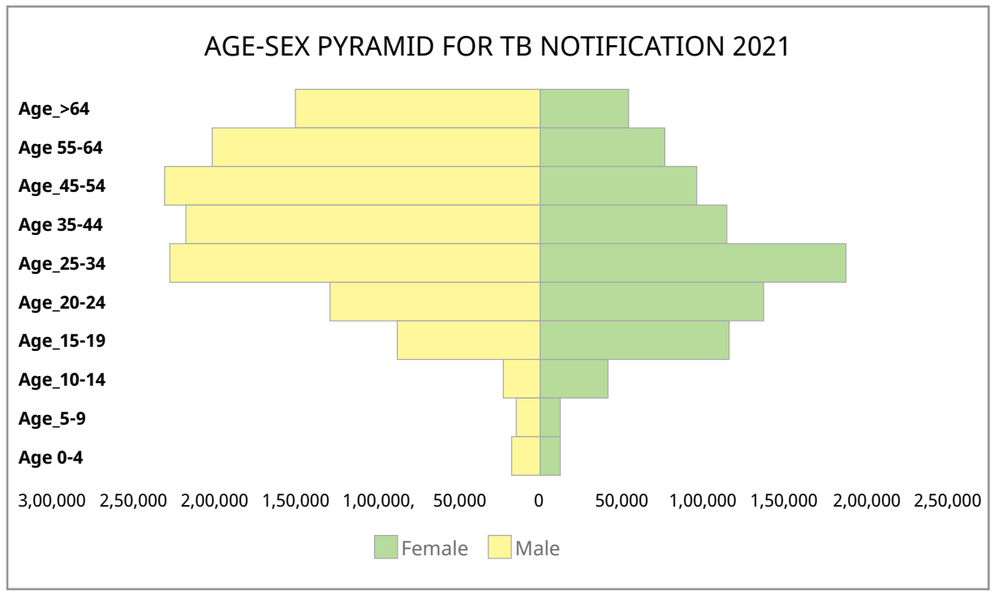
▼ **Partners Supporting Paediatric TB Management:**
SAATHII implemented Catalyzing Pediatric TB Innovations (CaP TB) during Oct 2017-Sep 2021, aiming to reduce morbidity and mortality due to paediatric TB by enabling rapid scale-up of paediatric TB services across the private health sector in 15 districts of Andhra Pradesh, Telangana, and Maharashtra. The project demonstrated that integrating systematic screening for paediatric TB at private facilities is feasible. Further, it showed that engaging paediatricians is essential to fill the gap in paediatric TB case finding in the 0-5 age group. At the same time, multiple types of providers must be engaged to identify cases among older children. The project has been transitioned to the NTEP and recommended allocating a dedicated budget for paediatric TB activities in the private sector, establishing paediatric TB sample collection hubs, and assigning paediatric TB targets for any private-sector partnerships.

TB and Gender

Gender differences in exposure, risks, vulnerability, and health-seeking behaviour are among the most significant determinants of health. Although the incidence of TB is higher in men in India due to various epidemiological factors and an innate biological susceptibility in men, multiple studies indicate that women report fewer cases of TB when compared to men. This could be attributed to causes such as poor access to healthcare services, competing for caretaking responsibilities, decision-making power, and different clinical pictures. Moreover, interacting with other factors that determine a person's social identity, such as age, caste, socioeconomic status, religion, ethnicity, and sexual orientation, gender interacts and adds another layer to these health determinants.

Age-Sex Pyramid

In 2021, out of the total TB cases notified, 60.7% were men, 39.1% were women, and 0.04% were transgender.



The NTEP had launched a National Framework for Gender-Responsive approach to TB in India. The programme has conducted several consultative sessions with the relevant stakeholders and facilitated an orientation session for the CTD officials and consultants on the framework. These sessions have yielded a training module that will be cascaded across districts. Subject-matter experts across the country have been identified, national-level Training of Trainers of facilitators has been conducted, and regional-level training is planned. This comprehensive training would enable the stakeholders to translate gender-sensitive approaches across differentiated TB patient care.

TB and Pregnancy

While the burden of TB is higher in men in India, the impact of TB in women is far-reaching, especially for women in the reproductive age group (15-49 years). Due to common non-specific symptoms in both TB and pregnancy, diagnosing TB disease in pregnant women is complex. TB in pregnancy has a wide spectrum of short and long-term implications and could have sequential effects: repeated reproductive failure, fetal ill-health, preterm delivery, and TB of the new-borns and infants, leading to high maternal and perinatal morbidity and mortality. For example, there is a six-fold increase in perinatal deaths and a two-fold risk of premature birth and low birth weight in mothers with active TB disease.

The NTEP and the Maternal Health (MH) division has developed a Collaborative Framework for Management of TB in Pregnant Women to reduce morbidity and mortality due to TB in pregnant women and new-borns through prevention, screening for early detection, and prompt management of TB in pregnant women and achieve optimum maternal and perinatal outcomes. This screening for TB will be made an essential component of ANC services. The National-level sensitisation workshop for all the state nodal officers of both the programmes has been conducted, and the training will be cascaded.

In 2021, the number of female patients screened for pregnancy was 47185, out of which 4048 were pregnant (Public - 3237, Private - 811).

Enhancing skills to create a healthier tomorrow

SUPERVISION AND MONITORING

06

Supervision and Monitoring

Supervision is a systematic process for increasing efficiency of the health personnel by enhancing their knowledge, skills, including soft skills for efficiently managing their tasks. Supervision is carried out in direct contact with the health personnel. It is a two-way communication between supervisors and those being supervised. The NTEP emphasises its roles of supportive supervision and effective monitoring and evaluation of activities as a learning exercise.

Monitoring is a continuous process of collecting and analysing information to compare on how well a project or a programme is performing against an expected result. Monitoring is a daily follow-up of activities to identify deviations and provide solutions and corrective actions to bring back to correct course.

Supervision

Supervision of the programme activities is conducted at all levels by the Central TB Division (Central Internal Evaluations), State TB Office (State Internal Evaluations), Central Review Mission of the National Health Mission as well as third-party supervision such as the Joint Monitoring Mission. In 2021, the Central TB Division along with the partner organization decided to conduct the Joint Supportive Supervision with the objective assessing the quantitative and qualitative performance of the programme at district level.

Joint Supportive Supervision Mission, 2021

The Covid-19 pandemic has affected most of the field level supervision exercises over the past two years. To identify the technical as well as administrative challenges faced by the States/UTs as well as handhold them, a nation-wide Joint Supportive Supervision Mission (JSSM) was conducted across 34 state/UTs within a span of 45 days. In total 17 teams were constituted whose members included Joint Secretary (NTEP), DDG-TB, Senior officers from Central TB Division, heads as well as consultants from various partner organizations.Two districts (one each with high and low TB Index scores) were selected from each State/UT. A standard supervision checklist was provided to the teams and the teams visited various health facilities, discussed on persisting challenges with different stakeholders associated with TB in the given district as well as interacted with a selected sample of TB patients. The team provided extensive feedback and recommendations to the state officials for necessary corrective actions.

A national debriefing meeting was held on 30th November at the Central TB Division to discuss the findings of the JSSM and deliberate on the feasible solutions on the challenges identified in each geography and drive the country towards ending TB by 2025. The salient findings of the JSS Mission were:

- States were advised to prepare District -specific Strategic Plans in lines with State/National Strategic Plan for Ending TB.
- Customised training materials on latest updates in TB programme for all the stakeholders involved in various thematic areas of TB elimination.
- Emphasis of periodic sensitization as well as ensuring active participation of PRIs and other elected members in all program related activities.
- Strengthening and capacity building of the State Training and Demonstration Centres (STDCs) and creating a network of STDCs to synergise training and other activities.
- Advocate for integration of the program activities with the routine surveillance and patient care activities of the general health system.
- Ensuring regular review of the program under the chairpersonship of District Magistrates/Collectors.

National Consultative Workshop on State Strategic Plans

A two-day national workshop under the chairpersonship of Hon'ble Minister for Health & Family Welfare to guide the states to formulate their state strategic plans as well fine tune the existing strategic plans was conducted on the 29th and 30th of October 2021. The participants included Mission Directors of NHM from the states, State TB Officers, STDC Directors and WHO Consultants. The states were also motivated to conduct similar consultative workshop at the State Level to handhold the districts in preparing the District Strategic Plans for TB Elimination. The State Strategic Plans have been received from 18 state/UTs and many of the states have already initiated the process of developing the District Strategic Plans.

Monitoring

The program is continuously monitored at the block, district, state, and national levels by the respective program managers, with the aid of the reports generated from Nikshay database The NTEP is also part of all the important health review meetings held under the chairpersonship of Elected representatives, Principal Secretary (Health), Mission Directors and District Magistrates/Collectors.

The Central TB Division also releases quarterly, and bi-annual rankings of the states and districts based on the TB Score. This aids the states to identify the areas of lacunae, identify challenges and expedite their resolution on a real-time basis. Nikshay Dashboard plays an important role in real-time monitoring of the program performance.

TB Score

For continuous monitoring of the programme performance at the national, state as well as district level, a composite score calculated from a selected list of key performance indicators from various thematic areas in the National Tuberculosis Elimination Programme. Appropriate weightage has been given to each of these indicators and each state is scored for the performance in each indicator. The individual indicators sum up to a total of 100.

The TB index helps in objectively measuring the performance of the state, identify areas where guidance/resolution of challenges are necessary as well as promote a healthy competition towards ending TB.

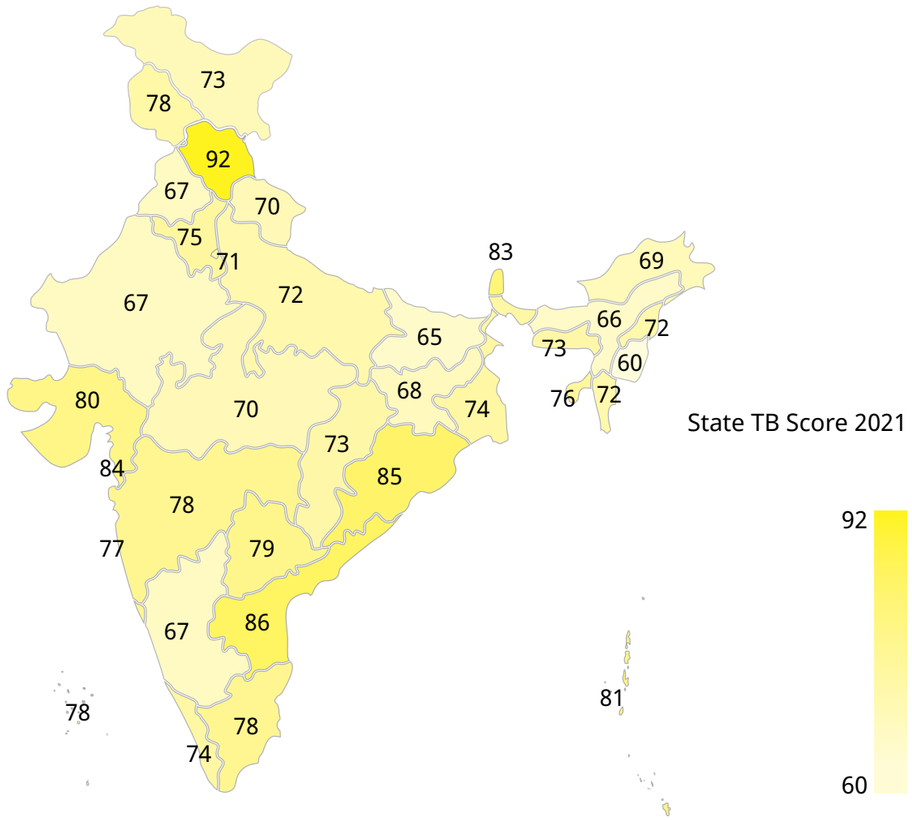
The TB Index currently in usage consists of 9 indicators:

S. No	Parameter	Indicator	Score Allotted
1	Achievement of TB notification among the target identified	% of Target TB notification achieved (Source: Nikshay)	20
2	HIV testing/ screening of TB notified patients	% of net TB notified patients with known HIV status (Source: Nikshay)	10
3	UDST coverage among the TB notified patients	% of net TB notified patients with UDST done (Source: Nikshay)	10
4	Treatment Success Rate of TB notified patients	Treatment Success Rate for net TB patients (Source: Nikshay)	15
5	Nikshay Poshan Yojana implementation	% of Eligible beneficiaries paid at least once under Nikshay Poshan Yojana (Source: Nikshay)	10
6	DRTB treatment initiation among the diagnosed patients	% of MDR/ RR patients initiated on treatment out of net diagnosed (Source: PMDT Quarterly Reports)	15
7	Utilisation of the allotted budget	% of expenditure amongst ROP (Source: PFMS)	10
8	Latent TB infection management	• % of children <5/<6 years given chemoprophylaxis against the total eligible children identified (Source: Nikshay)	5
		• % of PLHIV given IPT against total eligible PLHIV (Source: NACP)	5

Feedback Mechanism & Engagement with the field for Action

- The TB scores for the States as well as the districts are calculated by Central TB Division once monthly as well as quarterly. The quarterly scores are updated on the Nikshay portal as well as utilized for the review with the states. The TB Score also promotes a healthy competition among the states and districts.
- TB score helps the Central TB Division to identify indicators of concern for a particular state or districts and accordingly guidance is provided in terms of technical assistance as well as advocacy. DO letters from Central TB Division at regular intervals are sent to the key officials of the state for the same.
- In many parts of the country, the TB score is customized and utilized for the review of the program performance at the TB Unit level.
- States as well as districts are encouraged to perform Internal Evaluation activities selecting districts as well as blocks with low TB scores.

State TB Score 2021



RANK (As per TB score)	STATES WITH POPULATION <50 LAKHS	STATES WITH POPULATION >50 LAKHS	UNION TERRITORIES
1	Sikkim	Himachal Pradesh	Dadra & Nagar Haveli Daman & Diu
2	Goa	Andhra Pradesh	Andaman & Nicobar Islands
3	Tripura	Odisha	Lakshadweep
4	Meghalaya	Gujarat	Puducherry
5	Mizoram	Telangana	Ladakh

RANK (As per TB score)	TOP 5 DISTRICTS		TOP 5 ASPIRATIONAL DISTRICTS		TOP 5 TRIBAL DISTRICTS	
	DISTRICT	STATE	DISTRICT	STATE	DISTRICT	STATE
1	Kinnaur	Himachal Pradesh	Chamba	Himachal Pradesh	Kinnaur	Himachal Pradesh
2	Chamba	Himachal Pradesh	Koraput	Odisha	Nicobars	Andaman & Nicobar Islands
3	Hamirpur-HP	Himachal Pradesh	Dhenkanal	Odisha	Chamba	Himachal Pradesh
4	Alipurduar	West Bengal	Gajapati	Odisha	Alipurduar	West Bengal
5	Koraput	Odisha	Kalahandi	Odisha	Koraput	Odisha

Way Forward

- Bi-Annual Joint Supportive Supervision Mission shall be planned to supervise the states and districts, along with hand-holding towards the TB elimination.
- Formation of Regional Review Committees by roping the Zonal Task Force mechanism to conduct monthly reviews at state/zonal levels is planned.
- Strengthening the Nikshay portal and incorporating advances analytical tools to provide regular feedback to the states on important indicators which shall help the states/districts to do necessary course correction as and when required. This shall also help the Central TB Division is rationalization of resource allocation.

Creating holistic patient support systems

PATIENT SUPPORT SYSTEMS

07

Patient Support Systems

Introduction

Direct Benefit Transfer (DBT) to beneficiaries is a novel initiative by the Government of India, enabling targeted delivery of benefits to citizens directly to the bank account(s), thus enhancing efficiency, effectiveness, transparency, and accountability for each transaction.

Under the National TB Elimination Programme following schemes are currently ongoing:

- Nikshay Poshan Yojana (NPY)
- Transport support for TB patients in notified tribal areas
- Honorarium for Treatment Supporters
- Notification & Treatment Outcome Incentive for Private Sector Providers

The Government of India launched the Nikshay Poshan Yojna (NPY) scheme in April 2018, providing financial incentives via DBT to all TB patients to support their nutritional requirements for the duration of their treatment. Furthermore, under the Tribal Support Scheme, a one-time financial incentive of Rs 750 is provided to the notified TB patients residing in tribal areas. In addition, Treatment Supporters are provided an honorarium for supporting notified TB patients successfully complete their treatment. Similarly, private providers are also provided financial incentives for both notifying a TB patient as well as reporting their treatment outcome. The following are some details about these schemes are as under:

Implementation Arrangements

To enable direct transfer of payments to the eligible beneficiaries, Nikshay has been integrated with Public Financial Management System (PFMS). DBT payments can be processed to the eligible beneficiaries via Nikshay.

Schemes	Beneficiary	Benefit Amount
Nikshay Poshan Yojana (NPY)	• Confirmed TB Patients • DSTB & DRTB • Public + Private Sector Patients	Rs 500 per month
Tribal Support Scheme	Confirmed TB Patients residing in Tribal TU	Rs 750 (one time)
Treatment Supporter Honorarium	Treatment Supporter	• Rs 1,000 for DS TB patients • Rs 5,000 for DR TB patients
Incentive for Notification and Outcomes	Private Health Facilities: • Practitioner / Clinic etc. (Single) • Hospital/ Clinic/ Nursing Home etc. (Multi) • Laboratories Chemists	• Rs 500 as Informant or Notification Incentive • Rs. 500 for Outcome declaration

National Figures

The following table provided the status of DBT Schemes

Scheme	Beneficiaries Paid in No's	Amount Paid (in lacs)
Nikshay Poshan Yojana	13,26,306	28,544
Transport support for TB patients in notified tribal areas	1,00,581	752
Treatment Supporters' honorarium	32,290	538
Incentives for Private Sector Providers and Informants	12,060	1,216

Novel Initiatives of Payment

◄ e-RUPI Payment Mechanism

It is one of the digital initiatives of the Government of India. Hon'ble Prime Minister launched the e-RUPI, on 2nd August 2021. It is a person and purpose-specific digital payment solution with limited touch points between the government and the beneficiary. The e-RUPI concept of electronic voucher to the beneficiaries for need-based use takes forward this vision of good Governance. NTEP, is in process of operationalization of e-RUPI voucher for DBT schemes.

◄ Other Initiatives

The year 2021 witnessed unprecedented challenges of the COVID-19 pandemic. This resulted in the need to deploy diversified strategies to combat issues in private sector notification as well as payment of incentives. Exceptional measures including providing doorstep services were implemented post- lock down period to recover the ground. To overcome issues and to ensure that TB patients are not denied of NPY benefit, flexibility has been given to provide the benefit through existing bank account of a blood relative. Pilot project for opening bank accounts through Indian Payments Postal Bank (IPPB) has also been successfully completed. States have also been advised to facilitate opening of zero balance accounts for TB patients, if necessary, under the Pradhan Mantri Jan Dhan Yojana (PMJDY).

Boosting private sector engagements through active partnerships

PARTNERSHIPS FOR THE PRIVATE SECTOR ENGAGEMENT

08

Partnerships for the Private Sector Engagement

Despite the nationwide accessibility of free diagnostic and treatment care under the national TB Elimination Programme (NTEP), more than **50%** of patients regardless of their financial capability, seek TB care from the private sector and the private provider is their first point of contact. However, there are challenges in the private sector in the context of notification, early diagnosis and treatment, adherence, and patient support systems.

NTEP recognized this huge opportunity to engage with the private sector leading to **decrease** in the transmission of TB, mortality, comorbidity, drug resistance, and reduction in out-of-pocket expenditures for the TB care in the private sector. More than twenty years ago, in 2001 CTD developed the first guidelines on partnerships especially on engagement of non-governmental organizations (NGO) and private providers which subsequently underwent revisions in 2008, 2014 and 2019. Since then, NTEP has been engaging with various stakeholders in private sector to ensure that quality services are provided to the TB patients.

IQVIA Consulting and Information Services India Private Limited

In India, IQVIA has one of the largest public health practices with over two decades of service devoted to the public sector and actively engaging with all aspects of the healthcare ecosystem including TB.

In 2021, IQVIA was part of the following key initiatives and projects:

◄ National Technical Support Unit (NTSU)

IQVIA was appointed as the National Technical Support Unit (NTSU) to the Central Tuberculosis Division for ensuring successful implementation of innovative interventions by supporting nine high priority states (viz. Uttar Pradesh, Maharashtra, Bihar, Rajasthan, Madhya Pradesh, Karnataka, West Bengal, Assam, and Tamil Nadu) and building their capacity in areas such as strategic purchasing, private sector engagements, Direct Benefit Transfers, and multi-sectoral collaboration. For this, State Technical Support Units (STSUs) have been proposed in nine high priority States under NTEP, through the technical partner IQVIA.

In the year 2021, five STSUs (Assam, Bihar, Rajasthan, Madhya Pradesh, and Karnataka) have been set up. The remaining four STSUs (Maharashtra, Tamil Nadu, Uttar Pradesh, and West Bengal) are in the process of finalizing manpower and they will be start focusing on respective deliverables from January 2022 onwards.

Key activities undertaken under NTSU:

▼ Orientation and capacity building of onboarded STSUs

An orientation workshop was organized by the NTSU in collaboration with all the partners, for the five onboarded STSU staff from Hindustan Latex Family Planning Promotion Trust (HLFPPT), Solidarity and Action Against the HIV Infection in India (SAATHII), Society for Promotion of Youth and Masses (SPYM) and representatives from other identified development partners. The objective was to build their capacity on direct benefit transfer, private sector engagements, multi-sector engagements, Nikshay, and other key areas which are linked with identified performance linked indicators and essential for generating relevant insights for next steps.

Orientation of five State Technical Support Units by experts from CTD, WHO, USAID

▼ Mapping of partners and partnerships options across India

An extensive district-wise mapping of over 100 partners working on eight partnerships options (as per the Partnerships guidance document 2019) across India was completed. In addition, a line listing of more than 350

non-governmental organizations working in the TB domain in north, south, east, and west zones along with the contact information was developed.

▼ PPSA Payment Tracker and Partnerships Landscape

In most States, the private sector engagement is done by implementation of Patient Provider Support Agency (PPSA) and engaging with private labs/NGOs/ agencies under various partnership options. To track the status of the above, two trackers, i) Partnership landscape and ii) PPSA Payment Tracker were developed. Both these trackers will enable CTD and states to understand:

- Initiation and progress of the various contracts on partnerships options
- Status of payment to the implementing agencies.

This information will be linked to the dashboard to give updates to program managers and policy makers on contract and payment related processes.

▼ The NTSU provided support to various States for streamlining and expediting their procurement services

▼ Going Forward

Following actions will be undertaken with high priority:

- Designing dynamic contract management dashboard for states to provide real-time updates on contract and payment to CTD, states and STSUs.
- National level workshops with potential non-profit and for-profit organizations to orient, educate and train potential organizations for increased private sector engagement.
- Onboarding and capacity building of additional STSUs on direct benefit transfer, private sector engagements, multi-sector engagements, procurement, and financial processes.
- Support states on General Financial Rules (GFR) and contracting mechanisms to ensure timely payments to the implementation agencies.
- Streamlining DBT related challenges and clearance of back-log. This will ensure resolution of queries and reduce the pendency in the DBT processes.
- Support the MOUs for multi-sectoral engagement to ensure participation of ministries across India towards TB elimination.

◄ iDEFEAT TB Project:

IQVIA is one of the seven consortium partners of iDEFEAT TB Project - USAID India's flagship TB project for drug Resistant TB and institutional strengthening for TB and DR-TB care led by The Union. In this project, IQVIA is providing support to the National Tuberculosis Elimination Program (NTEP) through technical assistance, capacity building, e-learning, bridging gaps with human resources, and other critical needs. Major activities supported by IQVIA are strengthening

IQVIA hosted the Strengthening of STDCs Consultation Workshop on STDC Baseline Assessment under iDEFEAT TB Project with all the stakeholders involved in the project

of STDCs, engagement of private sector laboratories for TB diagnostic care and transforming conventional training approaches by building strategy and institutional systems for e-learning.

▼ TB Disease burden estimation

IQVIA supports estimation of TB patient load in the private sector by leveraging its proprietary data sets on TB drug sales. IQVIA has develop a unique and validated disease burden methodology to provide empirical estimates of TB disease burden and conducted market analysis in the private sector. This methodology was developed by integrating inputs of experts from Imperial College London, Central TB Division (Government of India), World Health Organization (WHO), and Bill & Melinda Gates Foundation (BMGF).

Foundation for Innovative New Diagnostics (FIND)

FIND in partnership with the National TB Elimination Program (NTEP) continues to complement Government of India's efforts towards TB elimination. In 2021, FIND undertook the following activities:

Sustained Service Delivery; Enhanced capacity for DR –TB diagnosis

Under Global Fund, FIND is establishing 20 LC&DST laboratories across India. Seven TB LC&DST laboratories were upgraded, validated and handed over to the NTEP. Upgradation work is underway for the remaining 13 laboratories. FIND supported 70 TB LC DST labs, by providing required consumables and reagents and maintenance services for 18 different types of nearly 4,100 essential lab equipment.

Scaling up CBNAAT EQA to all public and private sites in India

NTI Bangalore and FIND are supporting NTEP in scaling up CBNAAT External Quality Assessment (EQA). FIND supported NTI to develop in-country capacity to manufacture large volumes of proficiency testing (PT) panels to enable CBNAAT EQA.

NABL accreditation using customized NABL TB SLMTA approach.

FIND is strengthening Quality Management System (QMS) at six TB laboratories using a customized NABL-TB SLMTA mentoring approach for NABL (ISO 15189) accreditation. Despite the challenges posed by COVID-19, all six sites (NTI Bangalore, C&DST TB lab Raichur, IRL Bangalore, IRL Visakhapatnam, IRL Ahmedabad and KIMS Hubli), achieved NABL accreditation in 2021.

Truenat EQA Pilot

NTEP has incorporated Truenat into its diagnostic algorithm to detect TB and sequentially detect rifampicin resistance, in DMCs at peripheral level. EQA, NTI, Bangalore and FIND under the overall guidance of NTEP conducted a pilot at 50 Truenat sites in 10 states, using DTS panels. In 2021-22, FIND and NTEP plan to continue Truenat EQA for approximately 750 sites.

In addition, FIND will also support in the scaling up of Truenat in India along with NTEP.

Laboratory Information Management System (LIMS)

LIMS is designed to provide TB results, track samples, and test workflows inside the lab. Besides providing data analytics, it also monitors HR availability, training, equipment maintenance, sample storage and bio medical waste management, including a call centre service to resolve issues. As of November 2021, 53 C&DST labs were actively using LIMS. A logistic module was developed and successfully tested. Through virtual trainings, 241 microbiologists and laboratory staff from 64 C&DST laboratories were successfully trained. Further and based on feedback received on LIMS Version 1.8, a customised version - LIMS 2.0 - was created and successfully tested at two NRLs, (NITRD, Delhi and NIRT, Chennai). Subsequently, LIMS 2.0 was integrated into NIKSHAY and will now be deployed across all C&DST laboratories in India.

Technical assistance to upgrade C-DST Labs

FIND is providing technical assistance in upgrading TB C&DST laboratories including procuring equipment in Maharashtra (GMC Miraj-Sangli, GTB Sewri- Mumbai and Kasturba Hospital-Mumbai), Tamil Nadu (GHTM Tambaram-Chennai and KAPV GMC-Trichy), Himachal Pradesh (IGMC-Shimla and IRL-Dharampur) and Madhya Pradesh (GRMC Gwalior).

Networks for Optimized Diagnosis to End TB (NODE-TB)

FIND is facilitating NODE-TB in India, establishing a dataset to guide NTEP in network planning, optimization – including optimal placement of existing and new diagnostic technologies - and designing efficient sample referral mechanisms. In 2021, FIND began implementing the project across ten states including- Assam, Bihar, Karnataka, Uttar Pradesh (UP), Maharashtra, Madhya Pradesh, Odisha, Chhattisgarh, Andhra Pradesh and Uttarakhand. The key outputs from the project include recommendations to optimize use of existing instruments, placement of new diagnostic devices and design of integrated sample referral systems.

JEET (Joint Effort for Elimination of TB)

FIND is one of the three partners, implementing project JEET across six states - Andhra Pradesh, Telangana, Karnataka, Punjab & Chandigarh, West Bengal & Himachal Pradesh - in 21 PPSA & 80 PPSA lite districts. The project has catalyzed private sector engagement by deploying a Hub & Spoke model to engage private health care providers, conduct CME trainings, support sample transport & linkages with DST facilities, and conduct active patient follow-ups, ensuring continuum of TB care. More than 37,000 patient notifications have been facilitated in FIND project geographies (Jan – Sep 2021), and successful outcomes were reported for 84% of patients diagnosed.

JEET 2.0: Addressing latent TB infection burden in India

FIND in partnership with William J Clinton Foundation and The Union is demonstrating and scaling-up models to improve access to TPT to all contacts (children and adults) of TB cases across 21 states in India. The project, which was launched as JEET 2.0, is following a two-pronged approach. While, in a proportion of districts, 'test and treat' modality will be piloted, most districts will follow a 'treat only' model. Contacts of all pulmonary TB patients from public and private patients are being targeted. The key activities include contact tracing, screening for active TB, counselling, TPT initiation and follow up. In September 2021, over 7000 household contacts were screened and more than 2000 initiated on treatment.

Women Empowerment to End TB (WE END TB)

"WE END TB" is a collaborative project being implemented by FIND India and Myrada (NGO in Karnataka). It engages women-led, Self-help Affinity Groups (SAGs) to increase access to TB services, treatment, linkages to micro-finance/skilling programs, and socio-economic schemes in rural Karnataka (Kalaburagi, Yadgir and Bellary).

Nearly, 25,415 presumptive TB cases have been identified and tested (22,872), resulting in diagnosis of 1,645 TB patients, all of whom were linked with treatment. Till date, 1,275 people have been linked to Nikshay Poshan Yojana (NPY), 492 with Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and three people with Income Generation Programs (IGP).

Global Coalition Against Tuberculosis (GCAT)

The GCAT is a multi-partisan political forum that has worked to raise the political discourse on TB since 2012. Under the leadership of Dr Dalbir Singh, the forum has brought together over 35 Members of Parliament (MPs) and 20 renowned public health experts to regularly discuss the challenges to TB elimination in the country and support the ministry in gathering independent expert guidance and galvanizing political support at all levels of governance, to support the Government of India's efforts of eliminating TB.

GCAT Expert Group Meetings

Given the precarious situation of public health due to the COVID-19 pandemic, the Global Coalition Against TB organized a series of meetings with its Expert Group which consists of eminent public health experts to discuss the progress made by the TB program and provide suggestions to improve access to TB care. The Expert Group's recommendations were especially instrumental in providing independent and expert guidance on the necessary mitigation strategies, in the wake of the second wave of the COVID-19 pandemic in India. The Expert Group also convened later in the year to discuss the uptake of the strategies put forth by the National Tuberculosis Elimination Programme.

Members of the GCAT Expert Group discuss update of mitigation strategies during the second wave of COVID-19 pandemic and provided suggestions to improve access to TB care

Advisory Board Meetings

GCAT organized a series of meetings with its Advisory Board members which consists of current and former Members of Parliament in February and August to apprise them of the existing TB scenario, challenges faced by the NTEP in the second wave of COVID-19 pandemic, and the recommendations presented by the GCAT Expert Group in that regard. Several GCAT Advisory Board members also provided supportive supervision to the TB program at the district levels, raised persisting challenges with State and district program and ministry officials, and offered their support to raise awareness about available services.

Members of the GCAT Advisory Board discuss the recommendations put forward by the GCAT Expert Group virtual meeting in August 2021

Presenting the findings to the Union Minister of Health and Family Welfare

The President of GCAT, Dr Dalbir Singh along with the Member of Parliament, Mr Bhubaneshwar Kalita, met and briefed the Union Minister of Health and Family Welfare on the recommendations for the TB programme as put forward by the GCAT Expert Group and deliberated over by the GCAT Advisory Board, in November.

President of GCAT, Dr Dalbir Singh and Member of Parliament, Mr Bhubaneshwar Kalita met the Union Minister of Health and Family Welfare, Mr Mansukh Mandaviya to share the recommendations put forward by the GCAT Expert Group

Organizing a panel discussion at the 52nd Union Conference

GCAT along with Karnataka Health Promotion Trust (KHPT) led a session on "addressing gender and stigma barriers to TB Care" to discuss the role of gender and stigma in affecting access to TB services and care. The co-chairs for the session were Dr Dalbir Singh, President, Global Coalition Against TB, and Dr Sudarshan Mandal, Deputy Director-General, Central TB Division, India. The speakers included Mr H.L. Mohan, CEO, KHPT; Ms Sangita Patel, Director- Health Office, USAID, India; Professor Rajeev Gowda, Ex-Parliamentarian and Former Chair, Centre for Public Policy, Indian Institute of Management, Bangalore; Dr Kirit Premjibhai Solanki, Member of Lok Sabha; and Mr Bhubhneswar Kalita, Member of Rajya Sabha. The panel discussed the social consequences of the disease on women, the need for building community structures, political commitment at all levels and a patient-centric approach in policies.

Karnataka Health Promotion Trust

KHPT's Community Engagement Approaches

The involvement and ownership of communities and in particular vulnerable communities is crucial to sustain a TB elimination response, according to the National Strategic Plan (NSP). KHPT's patient-centric community engagement approaches are implemented in Assam, Bihar, Karnataka and Telangana, under the USAID-funded Breaking the Barriers (BTB) project. The community structure engagement and patient support group (PSG) models developed by KHPT involve a systematic process to create an enabling environment and improve TB notification and treatment outcomes.

Community structure members support ACF activities at tea estate, Dibrugarh, Assam

KHPT's engagement with community structures leverages the strengths of decentralized community networks such as Self-Help Groups, Labour Unions and Youth Associations to increase awareness about TB, facilitate access to health services and create a supportive stigma-free environment for TB patients. The engagement process includes mapping, training and periodical handholding of community structures. In all four BTB states, KHPT identified and engaged with 3980 community structures and 7524 key leaders. This year, the engaged community structures in four states have screened 5,61,925 persons for TB, referred 13,497 presumptive, of whom 11,716 have been tested and 1,142 have been diagnosed with TB. Community structures have supported state-level NTEP Jan Andolan activities, Active Case Finding campaigns, and taken initiative during the COVID19 pandemic to distribute food packets to needy TB patients.

The PSGs, also known as care and support groups, are informal platform for patients and caregivers to share their experiences and interact with their healthcare providers in a safe and non-judgemental space. The monthly PSG

meetings also facilitate linkages for patients to welfare schemes and other support mobilized by community structures. 170 Patient Support Groups have been established in four states, and 7,679 TB patients have been benefited.

A Patient Support Group meeting in Bengaluru

Endorsement of models and the way forward

The KHPT's community structures engagement and PSG models were comprehensively documented and endorsed in May 2021 by the Central TB Division (CTD). The CTD released and disseminated a guidance document on community engagement in November to national partners and states for implementation. KHPT facilitated sessions on community structure engagement and PSGs at zonal level Training of Trainer (ToTs) programmes conducted from September onwards, in collaboration with CTD and REACH. In December, KHPT, in collaboration with STC Assam, organized a state-level workshop on TB Elimination and Behaviour Change in Assam. All the state DTOs, PPM coordinators and implementing partners were oriented on community structures engagement and PSGs. Going forward, KHPT, in collaboration with the State and district NTEP, will support state-level ToTs to operationalize the guidance document in all districts.

Dr N J Das, State TB Officer, Assam at the BTB state-level workshop

Policymakers' Roundtable organized at Union Conference 2021

To highlight the importance of addressing gender and stigma barriers to TB care, KHPT and USAID hosted a policy maker's roundtable with the Global Coalition Against TB (GCAT) and CTD, at the Union World Lung Health Conference on October 21. The co-chairs for the session were Dr. Sudarshan Mandal, Deputy Director General, NTEP, and Dr. Dalbir Singh, President, GCAT. The speakers included Ms. Sangita Patel, Director - Health Office, USAID India, Mr. Mohan HL, CEO, KHPT, Dr. Rajeev Gowda, Ex-Parliamentarian (Karnataka), Dr. Kirit P Solanki, MP from Gujarat and Mr. Bhubaneswar Kalita, MP from Assam.

Joint Effort for Elimination of Tuberculosis (JEET)- PPSA Project

Since 2018, KHPT has been implementing GFATM – FIND funded JEET-PPSA project in 3 districts of Bengaluru. JEET had established 45 hubs and worked with 2,121 spokes to generate 7,128 TB patient notifications in 2021 through periodic in-person visits, CMEs and webinars. As a unique effort, during COVID19 lockdown, 5 patient webinars were conducted, benefiting 196 private sector patients. Over the project period, the increasing trend of private facilities notifying TB, is a milestone achievement.

KHPT-JEET executed a planned transition of PPSA activities in the last two months of the project in collaboration with the State and District TB Offices. A transition workshop was organised for all TU staff of the 3 districts on December 14-15. In the workshop, the JEET team shared experiences and strategies for continuing private sector engagement through different approaches for health facilities, laboratories and pharmacies. A Standard Operating Procedures document was developed and distributed. All the NTEP participants were felicitated with certificate of appreciation and TB warrior badge.

Mr Mohan HL, CEO, KHPT presenting a certificate of appreciation to Dr Nagesh, DTO, Bengaluru Rural at the transition workshop

World Health Partners (WHP)

WHP, a non-profit Indian organization has been providing operational, technical and analytical support to address the TB burden through various projects in select districts of Gujarat, Jharkhand, Bihar, Punjab and Odisha.

Closing the Gaps in TB Care Cascade (CGC)

CGC is a four-year (2020-2024) project funded by the United States Agency for International Development (USAID)

In 2021, the CGC project focused on

- Increasing case finding by engaging with private health care providers (iSMART X-ray)

  The project engaged 1,098 (70% of total mapped) providers from 1,615 mapped in the intervention geographies. Out of 189 X-ray facilities engaged with 56 (30%) to provide free CXR.

- Improving adherence management with Digital Adherence Technology (DAT)

  The team followed up with 9,610 TB patients, of which 7,263 (75.7%) used 99 DOTS, 394 (4%) were enrolled on Medication Event Reminder Monitoring (MERM) device and 1,953 (20.3%) patients used 99 DOTS Lite.

99 DOTS Lite

99 DOTS Lite

MERM

- Improving treatment outcomes with effective mental health and wellness interventions

  6,453 patients were followed up for mental health assessment. Out of these 11.4% patients were screened with mild mental health disorders, 1.3% with moderate and 0.65% were screened with severe mental health disorders who were referred for institutional care. Among these patients, 7% were diagnosed with depression, and 7.3% were diagnosed with anxiety. The project counselled mild MH disorder patient with four counselling sessions.

- Implementation of post-treatment follow-up

  44,139 TB patients were followed up during Oct 2020 to Oct 2021 and the rate of recurrence found was 4% and fatality rate 5%.

- Contributions to the improvement of NTEP processes

  With successful demonstration and learning the project transferred the knowledge process to the State NTEP Cell to scale-up MERM devices in Jharkhand, trained NTEP staffs on post-treatment treatment follow-up in 7 additional states. Conceptualized and developed the Nikshay Setu App that offers one-stop solutions to the public and private health staff to learn, manage and assess anti-TB processes. The project supported CTD in developing the Adverse Event Module, TB Preventive Therapy Module, post-treatment follow-up form and adherence, and DAT-related workflows. The Project conducts a comprehensive assessment of TB patients' quality of life (physical, mental, social, and financial status) experiences and plans to develop a model to improve the patient care experience by establishing the feedback mechanism.

- Centralised Control Center (CCC)

  One of the key features of the WHP's people-centric care is to make key health information and assistance available to all. An easy to remember number enables general population and other individuals or family members suffering from TB/COVID/Mental health to call for tele-consultation, counselling and referral services. This model is particularly useful for populations that require aggressive follow-up over long periods as in tuberculosis, mental health, antenatal care etc. During the Year 2021, the CCC has provided its services to over 100,000 callers for tele-counselling and tele-consultations.

- Patient Provider Support Agency (PPSA)

  Patient Provider Support Agency (PPSA) project is being implemented to support this initiative across allotted high priority districts under the guidance of National TB Elimination Programme (NTEP). WHP is implementing PPSA project with the extensive government support in 11 districts of three states – Bihar, Punjab and Odisha.

  Despite COVID-19 pandemic, travel restrictions and lockdown during the year, all three PPSAs have achieved considerable notifications and engaged many new private sector doctors.

  As part of its interventions, "Closing the Gap in TB Care Cascade (CGC)" led by World Health Partners (WHP) and supported by USAID, provides counselling support to under treatment TB patients including mental health support and referral services.

  To address the challenge, the CGC project administers a Patient Health Questionnaire – 4 (PHQ-4) questionnaire to assess the mental health status of TB patients. As part the strategy, CGC Care Coordinator meets the patient and completes the process in four different phases through home visits and provides them counselling on a weekly. During the first phase, enable the patient to identify triggers and coping skills. During the second phase, pathways (social skills) are discussed. Phase 3 of the counselling includes behaviour-focused strategies (adapting skills) and finally, during the fourth phase, Constructive thought pattern strategies [Relapse prevention Skills].

Deliverable	Achievement		
	Bihar (8 dist.) Bhojpur, Gaya, Nalanda, Patna, Bhagalpur, Katihar, Munger and Saharsa	Punjab (2 dist.) Amritsar and Patiala	Odisha (1 dist.) Sambalpur
Private Providers Engaged	1,290	1,083	46
TB Notifications	31,431	3,561	176
HIV Test done	29,308	3,469	175
Diabetic Test done	29,100	3,440	148
UDST done	14,647	564	53
Bank Details added (DBT)	27,139	2,879	169

So far, the CGC project has assessed over 4,500 TB patients across four districts of Gujarat and Jharkhand as of September 2021 and 10% of these patients were found to be with mental health issues. Seeing the relevance of mental health issues among TB patients, the project plans to support NTEP to integrate the mental health domain in TB Care Cascade.

Wadhwani Institute for Artificial Intelligence (Wadhwani AI)

TRACE-TB Project: Transformative Research and Artificial Intelligence (AI) Capacity for Elimination of TB and Responding to Infectious Diseases

TRACE-TB project supported by USAID and implemented by Wadhwani AI, aims to introduce AI solutions for TB, thereby contributing to strengthening the delivery of TB cascade of care and facilitate build of a enabling system for sustainable use of AI under the National TB Elimination Programme (NTEP), to accelerate the efforts to eliminate TB in India. The project achieved following key accomplishments in 2021, in collaboration with Central TB Division (CTD).

AI-TSU at CTD

A technical support unit (TSU) has been established at CTD, with an objective to create an institutional mechanism to facilitate the process of proactively seeking proposals for AI solutions and take it to the level of deployment. The AI-TSU consisting of data scientists, system analysts, solution architects and program experts, is closely working with CTD to prioritize problem areas that can be addressed through AI-ML solutions and facilitate the development of AI solutions to strengthen the delivery of TB cascade of care.

Steering committee for decision making on AI

A steering committee has been formed under the chairmanship of CTD, consisting of DG-NIC, USAID, WIAI and WHO with an objective of assessment of proposals and to support decision making along with panel of experts.

A solution to read, interpret and transmit results of **Line Probe Assay (LPA)** using AI/ML methods was prioritized and Minimum Viable Product (MVP) has been developed. The AI solution aids in early diagnosis and appropriate treatment of DR-TB patients, by reducing time and improving accuracy of LPA test results. Field testing of the minimum viable product has been completed across 6 laboratories. Passive evaluation of the MVP shows promising results and are shared with CTD. Simultaneously, the Ground Truth Study by the expert panel nominated by CTD is underway and the solution is ready for early deployment.

A solution to predict lost to follow up (LTFU) using machine learning methods is another solution which was prioritized and developed. Purpose of this solution is to stratify TB patients at risk of LFU and that would help front line staff to make proactive decisions for differentiated care for TB patients who at highest risk of LFU. Passive evaluation of ML solution algorithms completed on data sets of 400k patients initiated on treatment in 2019. The passive validation showed promising results. Further the model was validated using the data sets of 600k patients initiated on treatment in 2020, which showed the consistency in performance. The results has been shared with CTD and intervention states.

The early deployment of the solution is planned in 52 districts four intervention states Maharashtra, Uttar Pradesh, West Bengal and Karnataka by Mar'22.

The project is developing AI solution for triaging of patients using cough, voice sounds. The solution will address the problem area of lack of objective, easy to use, highly sensitive, point of care triaging tool for TB and support the front-line staff in objectively triage patients for further diagnosis. The protocol for data collection and development of proof of concept has been approved by CTD and the data collection is expected to be initiated across the country by Jan'2022.

In collaboration with WHO and ICMR, the project is developing an AI solution for improving the accuracy in interpretation of **C-TB skin test** for Early diagnosis of LTBI thus reducing the risk of conversion of active TB patients. The data collection has been initiated across 6 sites in partnership with WHO and ICMR.

The project in consultation with CTD, USAID, WHO and NIC has developed **blueprint of AI solutions** that can be potentially used under NTEP. The blueprint will be useful to call out the need of AI solutions under NTEP. Innovators can pick up the potential problem and solve it with AI solution with intent of use under NTEP.

USAID – Mukti Pay For Performance

Mukti is the World's First Pay-for-Performance program designed to improve the nutritional status and treatment outcomes of TB patients. USAID drives this initiative as the outcome funder through its PAHAL project implemented by IPE Global. This is done in technical collaboration with the Central TB Division and Government of Madhya Pradesh. Child Fund India is the risk investor and implementation partner of this initiative.

Objective and Geographic Focus

To use pay-for-performance mechanism to drive improvements in nutritional status and treatment outcomes of 10,000 TB patients across 16 districts in the state of Madhya Pradesh, starting with 1000 patients in Dhar district.

Approach and Framework

Mukti is a pay-for-performance mechanism to drive TB-nutrition outcomes. It was designed in consultation with the MP State Government to address the issue of undernutrition which is attributable to 55% of the annual TB incidence. USAID as the outcome funder through the PAHAL project, pays Rs.12,500 per patient, only if a TB patient completes treatment and demonstrates body weight gain as per clinically accepted standards ('treatment success' under the program). Child Fund, as the risk investors and implementer, invests resources and efforts to achieve the mentioned outcomes, using a combination of **four** strategies.

- Counsel TB Patients on the importance of treatment compliance and nutrition intake
- Ensure supplementary nutrition of TB patients by providing locally procured protein-rich food baskets monthly
- Conduct positive deviance sessions – a community-based model to promote peer to peer learning
- Connect enrolled TB patients to nutrition support schemes offered by the government including Direct Benefit Transfer

Learnings from Mukti Phase 1 (March 2020-June 2021)

Phase 1 of the Mukti project 1,000 TB patients enrolled from all 31 Designated Microscopic Centers (DMC) of the district.

By June 2021, 758 patients (of the 1000 enrolled) including 40% females and 10% children, were both cured and reported weight gain of 6 kgs or more. The outcomes were verified by the NTEP staff in comparison to the NIKSHAY portal.

USAID, as the outcome funder paid around Rs.95 lakhs ($128,000) to ChildFund to achieve the complete outcomes for 758 patients. Based on the learnings from Phase 1, the program is being expanded to Jhabua, in addition to Dhar, as Phase 2 (July 2021 to June 2022)

Technical Advisory

Mukti Program is guided by a Technical Advisory Group (TAG) composed of senior leaders and experts from World Health Organization (WHO), Population Council, New Delhi, Yenepoya Medical College, Mangalore, National Institute of Nutrition, Hyderabad. The TAG members provide technical assistance to the project, with the vision to enable the national TB program and to demonstrate the value of evidence-based interventions in eliminating the infectious disease. In addition, they are also guiding impact and economic evaluation of the project currently being undertaken by the PGIMER, Chandigarh.

Government Engagements

The project is being implemented in close collaboration with the state and district TB society. The NTEP staff supports program implementation and verification of the program outcomes. State and district leadership is also actively helping in incorporating the program in the state's Program Implementation Plan (PIP) under NHM, to ensure resources for scaling-up across the state.

Program for Appropriate Technologies in Health (PATH)

Complementary Grant

Under the BMGF funded Complementary Grant, PATH has been spearheading the work in building partnerships under NTEP and transitioning donor supported partnerships to government funded as per the partnership guidance document. In 2021, PATH engaged closely with CTD to support setting up of NTSU, orientation of NTSU and STSUs and closely working with various partners to achieve the program goals. PATH extended technical and administrative support for development of multiple guidelines like Technical Guidance for Comprehensive Package for Differentiated Care of TB patients, AYUSH and NTEP Collaboration and TB PPM learning India chapter on PPM related topics etc.

- Uttar Pradesh

  PATH has provided technical assistance and support to the State TB Cell, to strengthen the private sector engagement efforts of NTEP. Technical assistance includes- deploying dedicated HR at regional level, improving the NPY-DBT deployment, monitoring and supportive supervision; liaising & coordination support, capacity building of NTEP staff on partnerships; and organizing and facilitating CMEs etc. PATH is implementing "99 DOTS lite" pilot project in selected districts to improve the treatment adherence among DSTB and DRTB patients in both public & private.

PATH is supporting popularization of TB Arogya Saathi App to improve presumptive TB cases from informal and AYUSH Providers and linkages to nearest public health testing facility.

Launch of 99 DOTS lite pilot project- Shahjahanpur, by DTO in the presence of DyDTO, consultants of RTPMU Lucknow and PATH PO. Dated: 7th December 2021

▼ Maharashtra

PATH provided technical know-how to the State TB Cell, Maharashtra, and various districts to devise a procurement plan, procedural documents for procurement and contracting services as per partnership guidance document 2019. With the T.A and handholding support from PATH on procurement and contracting, State has onboarded PPSA agency in 11 districts and 395 LTs have been outsourced for the TrueNat and CBNAAT labs across Maharashtra. M&E support to state included creating a monitoring tool kit for PPSA payment tracking, validation checklist and monthly monitoring report for the newly onboarded PPSAs.

▼ MCGM

PATH provided technical assistance to Mumbai District TB control society (MDTCS) in its efforts to engage with the private sector. Innovative effort by establishing an expert panel of private clinicians and practitioners was introduced to support the selection committee of MCGM in outsourcing diagnosis services at ceiling price for EPTB. This technical support by PATH was able to help streamline and standardize the selection process of private providers and curtail administrative red tape which normally dissuades private providers from engaging with the government. PATH has successfully transitioned its support to MDTCS on private sector engagement to the technical support units.

Tuberculosis Implementation Framework Agreement (TIFA)

PATH under USAID funded, JSI managed TIFA mechanism, carried out a needs assessment exercise to establish State TSUs for strengthening the NTEP in 5 States. The exercise was completed in a short span of 2 months and the report handed over to CTD and USAID for establishing the TSUs.

Next Generation Sequencing (NGS)

With funding from Rockefeller foundation, PATH is partnering with NIRT- Chennai to carry out gene sequencing using Oxford Nanopore for genotyping of tuberculosis. The objective is to utilize Next Generation Sequencing using Minion for drug resistance prediction of 1st line, 2nd line and newer drugs. This support will enable the first Indian report on genotyping of M. tuberculosis drug resistance using direct sputum samples for targeted NGS.

TRACE-TB

PATH has partnered with Wadhwani AI under USAID's TRACE-TB grant for the evaluation of public health impact & scalability of AI solutions and its integration with Nikshay 2.0. PATH will support Wadhwani in piloting & testing various AI tools to plug the gaps in the TB care cascade while improving quality.

Creating An Ecosystem for Faster Diagnosis and Early Treatment Initiation

Funded by India Health Fund, the project supported early diagnosis of TB and RIF resistance for patients seeking care from private sector by deploying Truenaat machines at 5 sub-district laboratories and thereby reducing TAT for diagnosis and improving testing. At the end of the project in March 2021, these truenaat machines were successfully handed over to the state.

Joint Efforts for TB Elimination (JEET)

The Global Fund (TGF) funded project JEET remained operational in existing PPSA geography till December 2021 while support of PPSA lite was ended in March 2021. During this period, JEET project managed to achieve – 67% notification against the target set up by TGF (JEET 1.0, 2018 to Mar 21). Due to pandemic, a drop in notification was observed but gradually the team achieved 92% of notification against TGF target set for April 2021 to September 2021. Across the country, approx. 14,000 private providers were reached. Public health actions in private sector were scaled up with UDST uptake from close to 4% in 2018 to more than 30% by Mar 21. HIV testing increased from 20% in 2018 to 94% by the end of the year.

Significant support to the district team was provided by sharing necessary analysis & data files on sample transport structure, status of FDC/HIV, compounder incentive structure and conducting CMEs with Private Providers (PPs) for awareness generation in PPSA districts.

JEET 2.0 – Programmatic Management of TB preventive Treatment

CHRI will be implementing this project funded by The Global Fund as Sub Recipient of CHAI and will be working in total of 4 states & 1 UT, covering a total of 33 districts.

Piramal Swasthya Management Research Institute

Tribal TB Initiative

Ministry of Health and Family Welfare (MoHFW) and Ministry of Tribal Affairs (MoTA) have signed a Joint Action Plan for Elimination of TB, following which the Tribal TB Initiative was launched in March 2021 to achieve India's vision for 'Ending TB with priority focus on TB hotspots of tribal areas'. The Tribal TB Initiative brings together multiple stakeholders with diverse capabilities required to tackle multi-dimensional issues prevalent in Tribal areas. Piramal Swasthya with support of USAID India is the implementing partner for the initiative and working with 161 high priority tribal districts across 18 states in India.

With the goal to reduce morbidity and mortality from TB among the tribal populations in India, project aims to:

- Foster Community Engagement: Building partnerships with various community-based organisations and representative groups to design, curate, and plan the scale-up of behaviour change models to reduce the burden of TB.
- Health Systems Strengthening: By facilitating interventions and deployment of technology driven tools/interventions that increase notification, diagnosis, early initiation of treatment and ensure treatment adherence and completion.
- Research and policy advocacy: Generating evidence on TB burden among Tribal population and creating platforms for disseminating best practices; and advocating for policy changes

Achievements

- Joint launch of the Tribal TB Initiative by the Ministry of Health and Family Welfare Services and the Ministry of Tribal Affairs on 26th March 2021, reiterating commitment for addressing Tribal TB at the highest level.
- On 7th April, 2021, Union Minister of Health and Family Welfare along with the Union Minister of Tribal Affairs launched 'Anamaya', the Tribal Health Collaborative through video conference. Anamaya is a unique multi-stakeholder initiative wherein non-governmental organisations working in the tribal health space have allied themselves with the mission of ending all preventable deaths among the tribal communities of India.

A National Technical Support Unit (NTSU) for Tribal TB

NTSU for Tribal TB has been set up by Piramal Swasthya Management Research Institute with support from USAID India and will work closely with the Central TB Division and the Ministry of Tribal Affairs. A joint review of the NTSU was conducted by the Central TB Division and the Ministry of Tribal Affairs in October 2021.

Joint Campaign called "Aashwasan" targeting COVID 19 awareness and Tuberculosis Active Case Finding

A joint campaign called "Aashwasan" targeting COVID 19 awareness and Tuberculosis Active Case Finding has been initiated in January 2022. The Campaign will reach over 600 hard to reach tribal blocks in 100 Tribal Districts over 100 days. Aashwasan will work closely with all partners in the tribal district and leverage COVID 19 activities towards achieving TB Elimination goals in the Tribal Districts. This campaign works closely with front line health workers, community influencers including PRI members, Tribal Healers, will help identify best practices for TB Active Case finding in hard-to-reach areas and influence positive behavior change.

REACH (Resource Group for Education and Advocacy for Community Health)

Strengthening a community-led response to TB in India

The Accountability Leadership by Local communities for Inclusive, Enabling Services (ALLIES) Project

Through the ALLIES project supported by USAID and implemented in 15 districts of Chhattisgarh, Jharkhand, Odisha and Tamil Nadu, trained TB Champions work in close coordination with the NTEP to implement a Community Accountability Framework (CAF), to understand and improve the Quality of Care (QoC) and Quality of Services (QoS) offered to people with TB.

Key achievements in 2021:

- CAF model refined through a national-level consultative meeting in March 2021; 225 TB Champions trained on CAF met with 7766 people with TB from 120 TB Units to assess aspects of QoC and QoS
- Over 240 Block Action Plans developed by TB Champions to resolve gaps identified through CAF
- 258 healthcare workers trained on the Achieving Excellence in TB Care and Services curriculum, designed to support NTEP staff to adopt person-centred approaches
- Stigma assessment tool administered by trained TB Champions to measure stigma among people with TB, families, healthcare workers and the general community
- Unique Art Skilling workshop held for TB Champions, with a focus on using art to address TB-related stigma
- Two new state-level survivor-led networks established in Tamil Nadu and Sikkim; existing networks strengthened through livelihood training and Learn to Lead knowledge series
- 16 journalists from across India selected for Fellowship programme to report on TB
- 281 elected representatives, including MLAs, Ward Counsellors, Mayors and PRI members, sensitised on TB
- Technical support provided to CTD in development of curriculum and modules for roll out of rapid scale-up of TB Champions training and to operationalise the Framework for a gender-responsive approach to TB

Unite to ACT - Scaling up the TB Survivor - TB Champion Model

In 2021, building on results from previous engagement of TB Champions, REACH began implementing the Unite to ACT project with support from the Global Fund through The Foundation for Innovative New Diagnostics (FIND) India as the PR. The goal of the Unite to ACT (**A**mplifying **C**ommunity action for **T**B) project is to accelerate efforts towards TB elimination in India by unifying and scaling up community action for TB. The project is being implemented in ten states by REACH, with MAMTA and World Vision India as sub-sub-recipients. In addition, REACH provides technical support in 15 other states and union territories.

Key achievements in 2021:

- Revision and updating of the TB survivors to TB Champion training curriculum, through a consultative process with NTEP and TB Champions
- ToT of 77 Master trainers - including NTEP staff and TB Champions - on community engagement through
- 464 new TB survivors trained as TB Champions through 16 state and district-level workshops in Delhi, Bihar, Uttarakhand, Rajasthan and Madhya Pradesh
- Announcement of Uttarakhand TB Mukt Network by newly trained TB Champions in the state
- Technical assistance to Himachal Pradesh for commencement of structured process of training and engaging TB Champions and sensitising NTEP staff

Strengthening TB survivor-led networks

In November 2021, REACH concluded an 18-month intervention to support and strengthen TB Mukt Vahini (TMV), Bihar's survivor-led network, with support from the Stop TB Partnership through the Challenge Facility for Civil Society mechanism. To mitigate the impact on TB during the COVID-19 pandemic, REACH and TMV worked in collaboration with the state NTEP to establish a peer support mechanism for people with TB through structured telecounseling and real-time coordination to identify and resolve any issues that emerged.

Key achievements in 2021:

- 10 district chapters of TB Mukt Vahini formed
- A first-of-its-kind Leadership training for TB Champions developed
- 75 TB Champions led anti-stigma campaigns for World TB Day, reaching 2800 people in the community. Campaign formally launched by Bihar Deputy Chief Minister, Smt Renu Devi and concluded with Bihar's Health Minister Shri Mangal Pandey taking the anti-stigma pledge with TMV members
- 44 TB Champions from 22 districts provided peer support through telecounseling to over 9500 people with TB; over 8500 people counselled on COVID-19 appropriate behaviours and encouraged to get vaccinated.

Empowering women for enhanced TB case-finding

In December 2021, REACH concluded the Mentors for Community Health project, supported by the Stop TB Partnership through a TB REACH Wave 7 grant. A strategic effort to integrate the empowerment of women in the community with TB care and prevention efforts, the project was implemented in four districts of Tamilnadu. The project had two key arms - one led by a cadre of trained Women TB Leaders who fast-tracked screening at health facilities for enhanced case finding and the second led by Community Health Mentors (CHMs) who were involved in organising community meetings to create awareness on TB and reduce stigma. REACH partnered with GramVaani to offer a comprehensive audio-based training package on health for women through an IVRS-based channel called *'Saadhikka Vaa Penne'* ('come on women, let's achieve').

Key achievements in 2021:

- Over 9.2 lakh people screened for TB; over 65,000 identified with symptoms of TB and over 2300 diagnosed with TB
- Over 82% of those identified with symptoms underwent any one test for TB
- Health facilities without TB-specific staff benefited more from the facility-based screening; WTLs supported bi-directional screening for TB-COVID-19
- Over 1000 women completed at least 6 of 14 audio modules
- WTLs and CHMs empowered to use knowledge for action for themselves, their families and their communities

Engaging the private sector through an integrated TB-NCD approach

Building on the successful private sector engagement model in Chennai, REACH provides integrated screening for Non-Communicable Diseases (NCDs) for people seeking care for TB in the private sector.

Through linking to Care initiative supported by the Lilly Global Health Partnership, people with TB symptoms, people with TB and their contacts are screened for TB, Diabetes and Hypertension followed by counseling on lifestyle modification and are linked to appropriate services for management of NCDs, in addition to TB services. This holistic support package is provided through 40 Nakshatra Centres that are housed at community and private hospitals in Chennai.

Key achievements (January - November 2021):

- 731 private practitioners referred people with symptoms of TB and facilitated screening of NCDs for eligible people
- Of 7897 people referred with symptoms of TB, 3238 diagnosed with TB
- Free NAAT testing facilitated for over 4000 people
- Of 9051 eligible people, 73% screened for Diabetes and 71% for Hypertension
- Of 6581 people screened, 2338 (25%) found with Diabetes; of 6401 people screened, 755 (11.9%) found with Hypertension

Everwell Health Solutions

Everwell Health Solutions (enterprise based out of Delhi and Bangalore) has been partnering with the NTEP under the guidance of CTD to support India's Digital TB strategy. Our work is supported by the Bill & Melinda Gates Foundation along with catalytic support from USAID & Global Fund.

Our work areas across 2021 span across –

- Development and Maintenance of Nikshay ecosystem. This includes design, development, maintenance of the following applications –
  - Nikshay staff web application
  - Nikshay staff mobile application
  - TB Aarogya Sathi mobile application for patients
  - Nikshay reports & data collection forms
  - Nikshay dashboards
  - TBC India website
- Strategic support (technology, deployment, rollout) for Digital Adherence Technologies including 99DOTS, MERM, 99DOTS lite, and adherence marking via TB Aarogya Sathi application.
- Programmatic Support in implementation of Nikshay ecosystem and Digital Adherence technologies. This includes training of trainers, documentation, and field support (including an L2 helpdesk for Nikshay)

Details on the work done in these tracks are included in other sections of this report.

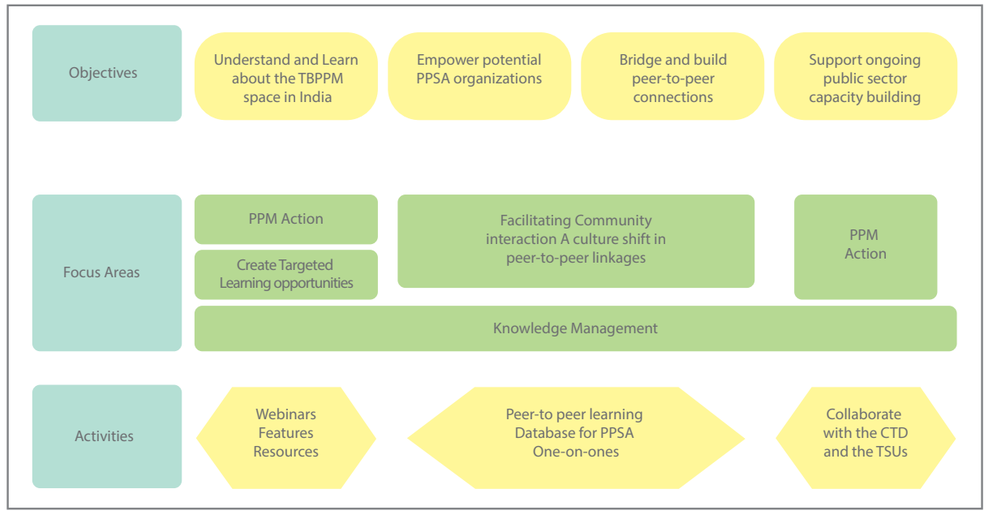
TBPPM-Learning Network India

The Tuberculosis (TB) Public Private Mix Learning Network (TBPPM-LN) India is an offshoot of the Global TBPPM-LN that was initiated in 2019 by the PPM Working Group. The TBPPM-LN collaborates with a wide range of stakeholders and is supported by partner-organizations, including high TB burden countries, PPM implementing agencies around the world and international organizations such as WHO, Global Fund, USAID. The network's goal is to create, nurture and maintain a dynamic global exchange of expertise and best practices in the area of private provider engagement in TB. The TBPPM-LN is funded by the Bill and Melinda Gates Foundation and led by McGill University International TB Center. The India chapter was spearheaded in early 2021 when the Advisory Board for the India chapter was put together.

The TBPPM-LN India has partaken in the following initiatives in 2021:

The Advisory Board for the TBPPM-LN India chapter

Crux of the India chapter roadmap- objectives, focus areas and activities



Landscaping and Community Building of practitioners

A series of one-on-one interactions were held with stakeholders using snowball method (n=39). This helped identify learning needs, design the network's activities for peer-to-peer learning and identify feature stories from the field which were showcased on the TB-PPM website.

Profiling of potential organizations to apply for PPSA

The PPSA scheme has had few applicants in most states due to various reasons including low awareness among NGOs and organizations. To improve the uptake of the scheme, the network developed a directory of organizations and updated their eligibility to apply for upcoming PPSA calls. An eligibility checklist was developed based on the Guidance document for Partnerships and applied to relevant organizations. A total of 366 NGOs, 37 for profit organizations are mapped and a dynamic directory is created. This directory has been shared with the CTD and the National Technical Support Unit (NTSU).

Peer-to-peer interactions

Peer-to-peer interactions were facilitated by various methods: (i) Webinars (ii) Friday forums (iii) Chat group on WhatsApp application of PPSA implementers. The latter grew to be a 30-member strong and active group in 2021, where rapport was created to get peers engaged in discussions.

Mentor-mentee facilitation

Potential PPSA organizations have been matched with experienced PPSA implementers to facilitate learning and collaboration.

Targeted Learning

To understand the workings of the flagship PPSA scheme, closed peer-to-peer exchange meetings were hosted. The first was with the PPSA implementing agencies in August 2021 and the second with State TB Officers in September 2021 respectively. Rich insights from these meetings have been collated as reports and disseminated to the CTD and NTSU.

Webinars

The chapter organized its first webinar on 'Contracting Mechanisms in TB space in India' in November 2021. Keeping in view that currently the majority of the applicants for PPSA are NGOs, it was imperative to explore the potential role of for-profit organizations in TBPPM. With this understanding a webinar was organized to explore the role of for-profit organizations in December 2021. This has been viewed as a beginning to an important dialogue in engaging for profit organization in PPM space in TB in India.

Looking forward in 2022, the plan is to consolidate the network further and set an example for other high burden countries on the utility of country-specific Learning Networks.

John Snow India (JSIPL)

Tuberculosis Implementation Framework Agreement (TIFA)

TIFA in India kick started its activities in the third quarter of 2021. The first TB commitment grant was awarded to PATH to undertake the needs assessment of contracting under the National Tuberculosis Elimination Program (NTEP) in five states (Andhra Pradesh, Telangana, Odisha, Delhi, and Gujarat) for establishing STSUs to accelerate progress toward TB elimination in India. The assessment provided information on opportunities and constraints to setting up State TSUs in the selected states. It also brought out information on achievements in the TB domain; the need for thorough assessments of capacity and program domains at state level; technical areas for capacity development; and additions/ modifications in existing procurement/social contracting policies.

TIFA designed and launched a targeted request for application (RFA) in December 2021 to solicit bids for TCGs in pediatric TB, differentiated models of TB care, and the underreporting of TB deaths. We adapted our existing guidance for targeted solicitations, finalized the RFA requirements, worked with USAID and the central TB division (CTD) on the thematic areas, released the RFA to targeted organizations, and hosted a virtual bidders' conference by the end of December 2021. TIFA India continued to engage with potential organizations to develop TB commitment grants in coordination and collaboration with CTD and USAID India.

Supply Chain Management Strengthening (SCMS) Project for TB Drugs

JSI is a part of the "Supply Chain Management Strengthening (SCMS) Project for TB and HIV/AIDS drugs". The Project is led by Plan International (India Chapter), the Principal Recipient (PR) for the TB and HIV Supply Chain grant under the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) for India to support Central TB Division (CTD) towards TB elimination. The aim of the project is to strengthen the technical capacity of the Central TB Division (CTD), State TB Cells (STC) to design, manage and monitor supply chains for improved access and availability of high-quality TB drugs, diagnostics and other commodities across India.

As part of technical assistance, JSI is engaging closely with the CTD to revise the Standard Operating Procedures on key supply chain processes. JSI will develop a Learning Management System with digitized content to promote self-learning, particularly in the current context of COVID-19 pandemic and execute a series of face-to-face trainings. The project intends to work towards increasing the usage of Nikshay Aushadhi, the electronic Logistics Management System cross last mile facilities.

Centers for Disease Control and Prevention India

The U.S. Centers for Disease Control and Prevention (CDC) India continued to support the Government of India's (GOI) tuberculosis (TB) elimination efforts in 2021, supporting the broader effort during COVID-19 pandemic challenges. CDC expanded its efforts to support the National TB Elimination Program (NTEP) in TB infection prevention and control (IPC), latent TB infection (LTBI) diagnosis and treatment, drug-resistant TB (DR TB), laboratory system strengthening, and TB data quality improvement across India.

TB infection prevention control

The COVID-19 pandemic underscored the need for IPC at healthcare facilities. In collaboration with the Municipal Corporation of Greater Mumbai (MCGM), CDC and partners supported the airborne infection control (AIC) unit in Mumbai to build institutional capacity and strengthen AIC measures in primary and secondary health care facilities in ten wards. Through this effort, the HCF staff were trained on AIC, and five follow-up assessments in 313 HCFs were conducted during 2021. In the follow up period, between 2020 and 2021, there was significant improvement in AIC compliance in indicators of N95 respirators use by healthcare workers crowd management and use of outside space for social distancing by 22, 15, and 17% respectively.

AIC efforts ongoing, and with support from CDC-SHARE, and in collaboration with Mumbai NTEP, next steps include sustaining and mainstreaming the IPC activities within MCGM through a national health mission supported IPC unit at city level. Beyond Mumbai, CDC and partners are also working with the Central TB Division and State TB programs to expand the IPC activities in support of the TB Mukt Bharat initiative to 10 states of India (Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Himachal Pradesh, Tamil Nadu, Telangana, West Bengal).

Latent TB Infection

CDC continued to support NTEP Nagpur (Maharashtra) and Indira Gandhi Government Medical college (IGGMC) to implement **H**ousehold contact **A**ctive and **L**atent **T**uberculosis **I**ntervention in Nagpur (HAaLT TB in Nagpur) project. Even with the challenges of the COVID-19 pandemic, the CDC team and partners initiated latent TB infection diagnosis and treatment among household contacts (HHC) and enhanced pediatric diagnosis using stool, saliva, and nasopharyngeal samples. Additionally, in collaboration with IGGMC, CDC with implementing partner SHARE India, conducted training in HAaLT project LTBI diagnosis, treatment, adverse drug reaction (ADR) management, enhanced pediatric diagnosis for medical officers, Nagpur NTEP staff, and ASHA workers. To assess the feasibility of interferon gamma release assays (IGRA), the CDC India and CDC Atlanta team trained lab technician (LT) from IGGMC Nagpur in IGRA testing. For enhanced pediatric diagnosis, CDC teams trained LTs in CBNAAT based TB diagnosis using stool sample and nasopharyngeal swab. Total 456 HHCs received IGRA testing, of them 198 were found positive and 118 individuals meeting the criteria were initiated on TB preventive therapy (TPT) and 9 TB cases started on anti-TB treatment in 2021.

CDC expanded the LTBI programming to Mumbai where CDC and implementing partner SHARE India supported MCGM, kicking off 'Moving towards TB-free Mumbai: prevalence and treatment of latent TB infection (LTBI) among household contacts of persons with TB' initiative. The project successfully tested 500 HHCs, 273 were IGRA positive, 169 eligible individuals were initiated on TPT and 5 TB cases started on anti-TB treatment.

The End DR-TB Dharavi Project

The End DR-TB project in Dharavi slum of Mumbai aimed to improve treatment outcomes among DR TB patients by monitoring for ADR using point-of-care technology, reducing lost-to-follow-ups (LTFU) by tracking migration, and diagnosing tuberculosis earlier through active case finding among household contacts of DR TB patients. In 2021, 352/355 DR TB patients were screened for ADR monthly using POC audiometry and ECG. Eighty-four (24 %) patients reporting ADR were referred for ADR management at public health facilities in Mumbai. Trained project field coordinators (FC) successfully tracked migrant patients and re-engaged them in care during COVID-19 pandemic. The FCs along with NTEP team successfully managed to improve treatment adherence to more than 98% on treatment during COVID-19 pandemic. Moreover, FCs were able to diagnose 19 new TB cases during HHC screening of DR TB cases in this slum. MCGM has planned to use the tools and Dharavi slum best practices in Malwani slum in Mumbai.

Expand ELEVATE (Engaging Local Experts to Validate and Analyze TB data to End TB) Project

CDC is supporting NTEP towards responding to the 2019 Joint Monitoring Mission (JMM) NTEP recommendation to improve the use of surveillance data to inform programmatic needs and strategies. The objective of the Expand ELEVATE project (E2) is to improve the capacity of selected state, district, and subdistrict level health staff to effectively conduct data analyses and data reviews to improve data quality and use TB data for informing program improvement. The Expand ELEVATE project is implemented in 11 states in India (Himachal Pradesh, Mizoram, Sikkim, West Bengal, Bihar, Odisha, Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, and Chhattisgarh).

CDC through implementing partner SHARE India provided 7 data analysts (DA) to support the state NTEP to implement the project in select districts. CDC conducted E2 training of trainers for DAs and pilot state (Haryana) NTEP staff in Dec 2021.

CDC Country Director, Dr. Megnha Desai (middle), TB branch chief, Dr. Christine Ho (right)and CDC public health specialist, Dr. Toufique Ahmed, at World TB Day 2021 event.

The International Union Against Tuberculosis and Lung Disease, South-East Asia

The International Union Against Tuberculosis and Lung Disease (The Union) is the world's first scientific global health organization, founded in 1920. The Union, a leader in ending TB, HIV. The Union provides project implementation, operations research, technical support, and capacity building services.

The Union and the Central TB Division have been closely working to raise the public discourse and build awareness about TB in India.

Notable interventions in India

Axshya Plus

Axshya Plus is an initiative to strengthen preventive care for contacts of TB Patients and create a suitable environment by collaborating with various stakeholders. The project focuses on four essential interventions- TB prevention therapy, multi-sectoral engagement, public financial management system and operational research. Programmatic Management of TB preventive treatment- PMTPT component is being implemented in 107 districts across seven states- Assam, Himachal Pradesh, Maharashtra, West Bengal, Chhattisgarh, Jharkhand, Madhya Pradesh.

PFMS technical assistance is being provided in 24 States and 2 Union territories. The multi-sectoral engagement component would be implemented in pan India.

iDEFEAT TB

The iDEFEAT TB project is an initiative that strives to strengthen India's TB-related institutions that focuses on the programmatic and clinical management of people with TB and DR-TB.

The project works towards the establishment of Centres of Excellence in DRTB Care; has completed two batches of DTOs Program Management Training and baseline assessment of 7 STDCs, deployed the Health Volunteers training on NTEP using the Modernised Training Strategy, and 23 ECHO Hubs at STDCs and strategic NTEP institutions and is engaging 138 corporate sector engagement through Corporate TB Pledge. It is also supporting the mBPaL regimen trial, and building capacity of WGS labs across the country and the DRTB surveillance system framework.

National Technical Support Unit: Advocacy, Communication, and Social Mobilization

The Union hosts a Secretariat in steering the Advocacy, Communication and Social Mobilisation (ACSM) activities towards the mass movement (*Jan Andolan*) goals of eliminating TB by 2025. The structure envisaged consists of a National Technical Support Unit (NTSU) that will implement the key functions of advocacy and social mobilization, creative design and campaign development, knowledge management and measurement and evaluation.

Capacity building workshop in Lucknow to develop state ACSM plans

Research

An operational research study on the implementation status of TB preventive treatment (TPT) among child contacts <6years of pulmonary TB patients and people living with HIV was conducted across 12 districts in India under The Global Fund supported Project Axshya. It was a mixed-methods study utilizing the quantitative programmatic data, a field survey and telephonic interviews with patients and providers. The study was completed in March 2021. The study found about 40% of eligible child contacts and about 29% of the PLHIVs were initiated on TPT among whom the completion rates were 60% and 72% respectively. Several challenges in initiating and completing TPT were identified by the participants, key challenges included limited and overburdened staff for service delivery, lack of counselling, lack of awareness about TPT, adverse events, lack of TPT drugs, TB related stigma and migration. Research publications are underway.

A systematic review was published under the Research, Evidence, And Development Initiative (READ IT) project, on Active Case Finding programmatic (ACF) data (Sharath et al, 2021). The review used the program ACF data obtained from states and from various projects that conducted ACF activities. Many implementation challenges, related to health systems, healthcare provision and difficulties experienced by patients, were elicited.

A series of strategic interventions were recommended addressing the implementation challenges, the six gaps identified in ACF outcomes and the expected indicators that could potentially improve the efficacy and effectiveness of community-based ACF in India (Burugina Nagaraja, S.; Thekkur, P.; Satyanarayana, S.; Tharyan, P.; Sagili, K.D.; Tonsing, J.; Rao, R.; Sachdeva, K.S. Active Case Finding for Tuberculosis in India: A Syntheses of Activities and Outcomes Reported by the National Tuberculosis Elimination Programme. Trop. Med. Infect. Dis. 2021, 6, 206. https://doi.org/10.3390/tropicalmed6040206)

William J. Clinton Foundation (WJCF)

Service Delivery

- Joint Effort for Elimination of Tuberculosis (JEET)

  Implemented from 2018-2021, the GFATM supported project JEET was implemented across 182 districts with the objectives of notifying patients receiving care in the private sector and improving access to quality care, free drugs and diagnostics through the NTEP. JEET facilitated over 500,000 patient notifications over three years, while nationally the share of private sector notification improved from 24% in 2018 to 33% in 2021.

- Scaling up TB Preventive Therapy (TPT) (JEET 2.0)

  To support NTEP's priority to address the burden of latent TB, the JEET 2.0

project initiated in 2021, expanded access to Tuberculosis Preventive Therapy (TPT) for children and adult contacts of Index Pulmonary TB patients in 66 districts across 11 states as per the approved national guidelines. In six of these districts, the "Test & Treat" model is being piloted to demonstrate the effectiveness of IGRA testing for LTBI followed by X-ray to rule out active TB whilst the "Treat only" model via an X-ray screening to out active pulmonary TB before starting preventive treatment, is being implemented in remaining districts.

Innovations in Private Sector Engagement

▼ Partnership with TATA-1mg for improving access to FDCs in the Private Sector

WJCF partnered with TATA-1MG, a digital healthcare platform, with the aim to improve quality of service delivery and increase access to government Fixed-Dose Combinations (FDC) in the private sector.

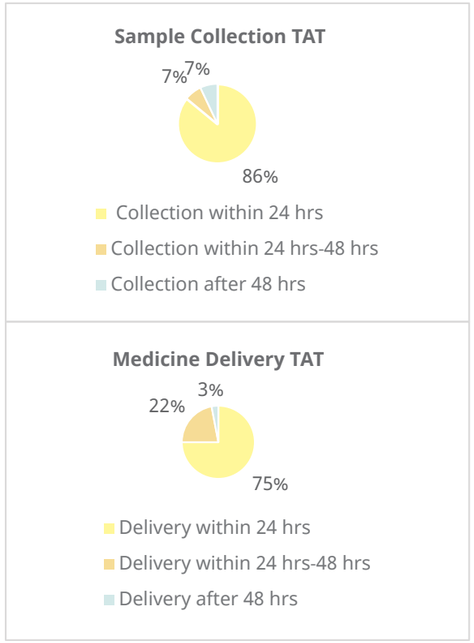
▼ Faridabad Pilot

To understand the feasibility of for-profit organizations to implement PPSAs as well as establish a model for such partnerships with NTEP, 1MG was brought on-board to implement a PPSA in Faridabad via a BMGF grant. 1MG leverages their existing capability of doorstep sample collection, medicine delivery and patient counselling. While notifications and follow-ups were facilitated by tele-counsellors with the compounder's support. Under this pilot, 3080 patients have been provided with services as of Dec. 2021.

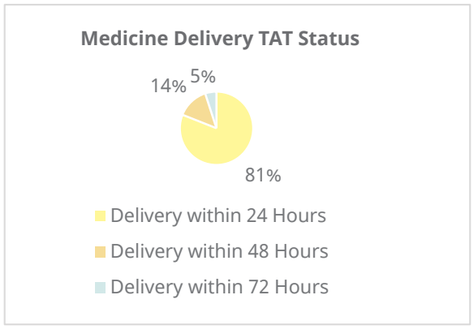
▼ Drug-Delivery Pilot

To demonstrate alternative models for improving access to FDCs and ensure refill monitoring, WJCF partnered with 1MG to home deliver FDCs to private-sector patients in three districts. This intervention has improved access of free government FDC drugs to private sector patients.

Achievements of the Faridabad Pilot



Achievements of Drug Delivery Pilot



▼ Deploying Medicine Event Reminder Monitor (MERM) and 99 DOTS Sticker for TB patients in the private sector

Given limited experience of MERM and 99DOTS in the private sector, WJCF is conducting a pilot across seven districts of Gujarat and Bihar to demonstrate the operational feasibility of deploying these technologies, identifying appropriate patient and provider segments for adoption and measuring the impact on adherence for each technology. Approximately 700 patients have been enrolled in the pilot till Dec 2021, which is expected to be completed by August 2022.

▼ Project ADITYA – A technology augmented, low HR PPSA model

Project ADITYA, supported by TB Reach and launched in February 2021 at Durg, aims to demonstrate a model of comprehensive engagement of all formal and informal providers through a resource light model with the aim to reduce diagnostic delays. ADITYA has deployed a one-of-its-kind patient management system to enable chemists and informal providers to offer free X-ray to any symptomatic patient. The project has contributed to notifications increasing by 32%, notifying providers increasing by 83% and microbiological confirmations increasing by 6x compared to 2019.

ADITYA project Launch by STO

Technical Assistance at the Central and State level

▼ Building capacity of states in engagement with private sector and strengthening uptake of Direct Benefits Transfer

WJCF, with under the grant from BMGF, undertook pilots and research studies to inform states' plans to contract, implement and monitor Patient Provider Support Agencies (PPSAs) through state funding, and ensure efficient disbursement of Direct Benefit Transfer (DBT) schemes in focus geographies. WJCF supported states in strategic procurement of PPSA services, working closely with STOs and NHM teams to provide technical assistance for effective contract management. Some of these initiatives include:

- Support Bank Account seeding in Bihar

  To increase bank account seeding of notified TB patients under NPY, a pilot communications campaign was conducted through automated voice blasts, on-demand content and IVRS. Over a four-month pilot, the bank seeding amongst patients in

the intervention districts (9.5%) was statistically significant and higher than that in the non-intervention districts (7.7%).

- Capacity Building Initiatives

  WJCF has supported the State and District NTEP team to increase the awareness and adoption of the Nikshay application. In 2021, 41 Nikshay Paramarsh virtual sessions were conducted across 314 districts. In 2022, self-paced Nikshay e-learning module courseware will be launched in 10 regional languages.

Overall Status (From start of pilot)	Total
Patients receiving services on-boarded Ahmedabad	3452
Patients receiving service Surat	2355
Patients receiving services Delhi	535

Nikshay Paramarsha Trainings in Madhya Pradesh

- Establishing a War Room at Central TB Division

  WJCF, is working closely with WHO, BMGF, Imperial College London, Gramener and Everwell to set up a War Room at the Central TB Division. The War Room is envisaged to enable real-time monitoring of the TB programme, establish a system for evidence-based decision-making and estimate implications of programme performance and interventions on the status of the TB epidemic. Dashboard to track programmatic indicators and integration of the 'All-India TB Model', developed by the Imperial College London, is currently underway.

Research

▼ UNITAID-backed demonstration study for a new short drug regimen (3HP) for TB preventive therapy for vulnerable groups

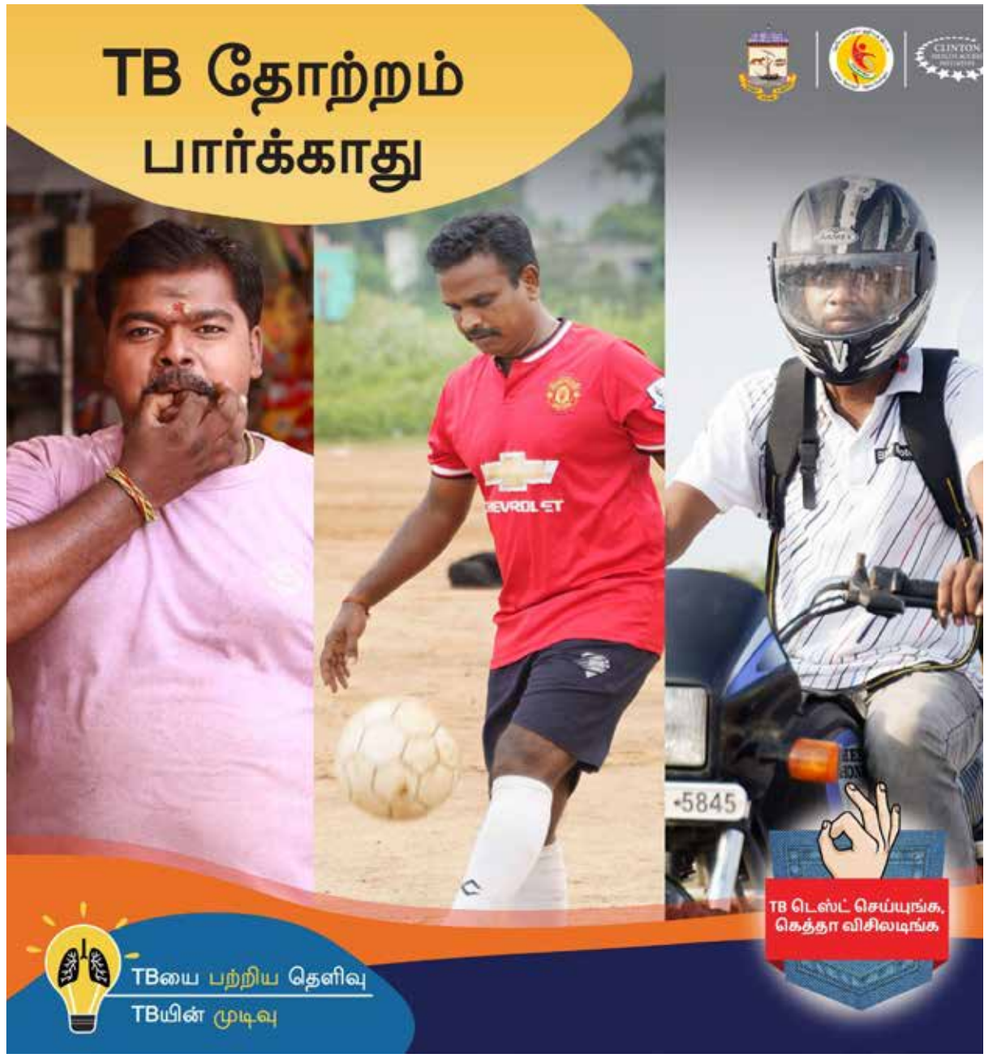
As a coordinating partner for IMPAACT4TB, WJCF is facilitating a demonstration study to roll out a new short drug regimen (3HP) for TB preventive therapy. The key objective of the study is to gather evidence on the effectiveness of the new regimen, the feasibility of rollout under programmatic conditions, and to document and analyze any drug-drug reactions that may occur.

▼ Exploring feasibility and effectiveness of mHealth to improve TB care-seeking among key population segments

WJCF, with the support of Surgo Ventures, supported the Greater Chennai Corporation (GCC) to improve case detection through innovations in active case finding and better care-seeking by vulnerable groups. A care-seeking study was conducted in Chennai between 2018-20 to identify subgroups with the highest risk for TB and determine drivers of care-seeking. A pilot was undertaken to explore the feasibility andeffectiveness of mHealth entry points for improving TB care-seeking among men using social media.

mHealth campaign launch by GCC Commissioner

Sample social media ad



Multi-sectoral Convergence for TB Elimination

The multisectoral collaboration aims to strengthen the national response against Tuberculosis elimination through a "Whole of Government" approach and engagement of key corporate sectors to achieve the targets of ending TB by 2025. It has become an integral part of NTEP to take convergent action and reach out to the key population served by various Ministries/ Public Sector Undertakings, civil society and other key stakeholders.

Mission 'End TB by 2025' needs concerted and collaborative action to address TB challenges as the disease is driven by the number of socio-economic factors, and ending TB requires a multi-sectoral approach that includes active participation of Ministries, PSUs, Corporates and other several organisations with shared responsibilities.

The convergent and integrated response for strengthening national response against TB through;

- Integrating TB service in the health facilities under various Ministries/ PSEs.
- Reaching out to the masses with awareness & prevention activities and information on TB care and related services.
- Adoption of TB free workplace policy and workplace intervention
- Addressing socio-economic determinants of TB and reducing stigma & discrimination against people infected and affected by tuberculosis.
- Promoting local action for Active Case Finding (ACF).

Several activities have been undertaken to engage various Ministries, Public Sector Enterprises, corporates & business associations and other key stakeholders for collaborative action on vulnerability reduction, integration of TB related services in existing health infrastructure and social protection for TB patients and affected families.

Formation of National Inter-Ministerial Task Force on Tuberculosis (NIMTE-TB)

The MoH&FW has proposed 'National Inter-Ministerial Task Force on Tuberculosis (NIMTF-TB) for the engagement of all key Ministries of Govt. of India for meaningful partnership and convergence at policy programme and scheme for accelerated action towards TB elimination in the mission mode. For inter-ministerial collaboration, 23 key ministries have been targeted, and communications have been sent to ensure commitment and action at the highest level.

Partnership with Key Ministries of GoI for Multi-sectoral collaboration, efforts have been made to

- strengthen partnership and formulation of Joint Working Group where MoUs are already in place;
- follow up with Ministries where partnership/ MoUs are already proposed, and
- explore collaboration and engagement with new Ministries/PSUs.

Several meetings were organised in the virtual platforms and physical follow-up meetings. These meetings were attended by senior officials, consultants and nodal officers identified by Ministries. E.g., Meetings were conducted with M/o Rural Development (28 June), M/o Consumer Affairs (01 July), M/o of Statistics and Program Implementation (07 July), M/o of Electronics & Information Technology (22 July), M/o Road Transport & Highways (10 Aug), M/o Panchyati Raj (11 Aug), M/o of Heavy Industries (12 Aug), M/o Small, Micro & Medium Enterprises, M/o Youth Affairs & Sports etc.

- **Meetings with North-Eastern Council (NEC)**

  A meeting under the Chairmanship of Shri C.H. Kharshiing, Planning Adviser & I/C Adviser (Health), North Eastern Council (NEC), was held to discuss and develop an action plan for implementation of activities as laid out in the Memorandum of Understanding (MOU) signed between North Eastern Council and Central TB Division on 8th October 2020. The meeting was attended, among others, by the representatives of Central TB Division (CTD), State Tuberculosis Officer (STO) Meghalaya and Consultant WHO-NTEP.

  The Action Plan has been developed and shared with the North Eastern Council. Action points with tentative timelines have been prioritised in sync with activities laid out in the signed MoU between NEC and CTD.

- **Ministry of Labour & Employment**

  The Policy Framework to address TB, related co-morbidities and HIV in the World of Work developed by the Ministry of Labour & Employment and CTD has been shared with major Corporates, industries of public and private sector and business associations. State Governments have been encouraged to adopt TB Workplace Policy in sync with the national policy framework. The 'Workplace policy on TB and related Comorbidities including Occupational Lung Diseases' developed by Govt. of Jharkhand has been shared with all State TB Cells to develop similar workplace policy for their respective States/UTs. It will influence and engage industries and workplaces to ensure access to information and services related to TB at workplaces. In this regard, the necessary communications were sent to industries/ corporates and Principal Secretary (Health) of all States/UTs in November 2021.

- **Ministry of Railways**

  Coordination and follow-up meetings were held with the Ministry of Railways to implement activities as laid out in the signed MoU with CTD. Further state-level coordination meetings were held to enrol health facilities under M/o Railways in NIKSHAY. State and district level coordination has been expedited for mapping Peripheral Health Institutions (PHIs) and registration in NIKSHAY.

Corporate Sector Engagement

Ministry of Health and Family Welfare, Government of India, launched the Corporate TB Pledge (CTP) initiative to galvanise corporates to jointly work towards a shared vision of eliminating TB in India. The initiative was launched in April 2019 and offered a tiered based approach for corporates to use their resources (human and financial) to combat TB, raise awareness on TB as a curable disease, and ultimately improve TB health outcomes. CTP, an initiative under NTEP, aims to engage corporate, industries and business associations to work jointly as a shared

responsibility of TB elimination in the country. Currently, there are 138 members under the corporate TB Pledge, including 10 Business Associations.

In the last one year, through various corporate supported initiatives, more than five lac TB screening and facilitating TB testing for over 18,000 people have been carried out. About 1500 TB patients were identified through CTP efforts in the last one year.

Key CSR projects/activities initiated/ implemented by CTP members during the last one year are:

- Fujifilm launched the Mobile X-ray van initiative; the van with portable digital X-ray will cover around nine lac people in selected north and east India pockets, focusing on truckers, migrants, and slum dwellers.
- RITES Limited – One mobile X-Ray Van donated by RITES was flagged off by the honourable Chief Minister of Haryana
- Dow Chemical ACF project- Dow Chemical launched a pilot project associated with NTEP in Malad Mumbai to screen 50,000 people from slum areas.
- Nayara Energy extended its nutrition support initiative for TB patients to Jamnagar district Gujarat. The project was first launched in Devbhumi Dwarka district of Gujarat.
- Seven new DMCs were launched by Apollo Tyres Foundation to improve access for truckers and migrants. Apollo Tyres Foundation, in association with NTEP, also implemented two rounds of campaigns (ATF TB Free Transshipment campaign – Mar 2021 and Sep 2021). More than 1,30,000 people were screened, 3556 TB testing were facilitated to identify around 150 TB patients.
- Jubilant Bhartia Foundation started screening and nutrition support project among the elderly population in one block of Gajraula (UP)
- Ambuja Cement – Extended its TB services under the community engagement project to three more locations in the country.

Workplace intervention

Ten workplace interventions were initiated

- Adani – TB and Workplace intervention initiated at its Mundra port location targeting over 10,000 workforces. Adani formed a TB and workplace committee and signed a statement on a stigma-free workplace.
- Welspun Foundation. Started TB and workplace intervention by organising training of trainer's program in Gandhidham.
- FOKIA- formed a TB and workplace committee and adopted a statement of commitment
- Parry Agro, McLeod Russel, Goodricke and APPL – Tea sector-focused TB free Workplace interventions initiated in Assam.
- BATA – Initiated Workplace intervention at its Patna plant.
- Effectual services organised TB and workplace awareness activities
- Apollo Tyres Foundation - Initiated Workplace intervention at its Kerala plants.
- BEST, Mumbai – was recognised for their TB and workplace intervention.

DR-TB

- Vitaris/Mylan supported project on improving access to new drugs for patients in the private sector was also approved by NTEP; the project is expected to start soon.
- Integration of DR-TB in corporate-led testing initiatives including Apollo Tyres, APPL, Goodricke, BEST Mumbai etc.
- DR-TB Consortium under Corporate TB Pledge

  DR-TB Consortium is providing a platform for the corporate sector to deliberate the programme need and support to be extended under corporate social responsibility. Three meetings of DR-TB consortium members were organized by the Union in 2021. Through DR-TB consortium, following partnerships have been facilitated in DR-TB:

  - Initiation of DR-TB clinic facilitated in Medanta Hospital, Gurugram and a formal MoU was established with support of WHO
  - Pilot project in three districts of Maharashtra to improve access to newer drugs for patients in the private sector
  - Initiation of certification process of culture and DST of Pathkind lab, Gurugram
  - Active case finding through mobile X-Ray along with NAAT services in Rewari

State Level engagement

The Corporate TB Pledge secretariat engages with State TB Cells for providing technical support for corporate engagement at the state level. Support extended for TB workplace policy, organising state consultations for corporate engagement, workplace intervention, training for DTOs and PPM coordinators etc. Focus states are Haryana, Uttarakhand, Telangana, Assam, Gujarat, Mumbai and Maharashtra.

Other Achievements

- Online platform- To service the increasing number of corporate TB pledge members more effectively, the CTP secretariat developed and launched a comprehensive CTP online platform (www.corporatetbpledge.org) in March 2021. The platform aims to serve as an informative and interactive channel for existing and new members and provide access to TB resources like a menu of CSR investment opportunities, best practices and campaigns materials etc., to the Corporate TB Pledge members.
- Recognition of CTP members- Four CTP members were felicitated by the MoHFW on the occasion of World TB Day in March 2021 for their exceptional work in TB.
- Cluster-based screening – Pilot intervention on cluster-based screening in Kutch district with Adani and Welspun is being implemented.
- First Regional Workshop on TB and Workplace organised in Assam focusing on the tea sector.
- Business Associations Engagement-
  - The Union signed MoU with ASSOCHAM to mobilise member companies to work on TB.
  - NTEP and The Union organised TB and workplace training programs with 15 companies associated with Ranjan Gaon Industries association in Pune.
  - Federation of Kutch Industries Association (FOKIA) signed LoI with The Union to promote corporate engagement in TB.
  - NTEP and The Union organised corporate consultation in Ahmedabad in association with PHD Chamber.

People’s movement towards a TB-free India by 2025

ADVOCACY, COMMUNICATION AND COMMUNITY ENGAGEMENT

09

Advocacy, Communication and Community Engagement

Advocacy, communication and community engagement provides the necessary thrust to accelerate universal TB Care coverage and preventive services. In recognition of the clarion call for Ending TB in India by the Hon'ble Prime Minister, the Ministry of Health and Family Welfare (MoHFW) launched the *TB-Mukt Bharat Abhiyaan - A Jan Andolan* to eliminate TB from India by 2025.

Well-designed Advocacy and IEC is crucial as it plays a complementary and catalytic role across all thematic areas of the programme while aligning efforts with other public health programmes for synergised communication.

Under the National Strategic Plan (2017-25), a community-led response is one of the key catalysts to reach the last mile and support TB patients through their treatment and recovery phase.

Efforts are being made under the National TB Elimination Programme to actively engage various stakeholders including civil society and community in programme planning and design, service delivery, monitoring and in advocacy. These include Elected Representatives and local self-governments, Civil Society Organizations, industries, etc. and TB affected communities.

Thus, community engagement as a strategy is critical for the country's aim of Ending TB by 2025. In addition, there was concerted effort to spread TB awareness through media and other channels including political advocacy for garnering support to end TB in the country.

Some notable interventions include:

Highest Political Commitment towards TB Mukt Bharat Abhiyaan by Hon'ble Governors

In a first of its kind, highest level advocacy commitment, TB was a key agenda point at the 51st Conference of Governors, held on11 November 2021. The conference was chaired by the President of India. A comprehensive kit on tuberculosis has been prepared and shared with Governors and Lieutenant Governors (including: factsheets, state-wise information on the TB burden, success stories of patients, and the government's roadmap for eliminating TB by 2025). In his address, the President of India also urged the delegates to support TB elimination efforts at the state level.

TB elimination was on the agenda during the 51st Annual Governor's Conference

Second Parliamentary Meeting on TB

After the successful and widely acclaimed sensitization of Members of Parliament (MP) on TB in 2019, the CTD got the opportunity to organise a second round of sensitization for the MPs on 9th July 2021. The meeting was chaired by the Vice President of India, M. Venkaiah Naidu and attended by the Speaker of the Lok Sabha (Lower House of Parliament), India's Union Health Minister, and over 55 MPs from across party lines. The provision of a dashboard for MPs, to review and track the progress of the TB program was announced and the MPs were urged to utilise that to provide supportive supervision to the TB program in their respective constituencies. The meeting ended with the TB pledge taken by all Members of Parliament (MP).

Vice President addressing Members of Parliament at the second Parliamentary meeting on TB in July 2021

National Conference on Women Winning Against TB

The MoHFW and the Ministry of Women and Child Development (MoWCD) jointly organized a national conference on gender-based approach to TB elimination on 16th December 2021. The conference was chaired by the Vice President of India and attended by the Union Ministers for Women and Child Development and Health and Family Welfare, State Ministers and Secretaries from both these ministries, Members of Parliament, senior ministry functionaries, partner organizations and TB champions and survivors. The delegates were sensitised about the challenges faced by TB afflicted women, and the parliamentarians were requested to promote implementation of gender-sensitive policies for TB elimination.

National Conference on Women Winning against TB with Members of Parliament.

New India@75

The New India@75 initiative, to commemorate India's 75th Independence Day, was rolled out as a mega mass mobilization and engagement movement. For this, NACO has been entrusted with the task of organising three major awareness campaigns on HIV/AIDS, Tuberculosis and Voluntary Blood Donation.

To align with the 75th year of Independence, it was envisioned to fruitfully engage 75 schools and 75 Red Ribbon Clubs (RRCs) in a phased manner throughout the year to spread awareness about HIV, TB and Voluntary Blood Donation Day.

Launch of Phase I

In this context, the 1st phase of the campaign was launched on 12th August 2021 on International Youth Day by Hon'ble Union Minister of Health & Family Welfare. More than 1,23,000 students, from different schools and colleges across the country, attended this event virtually. After the launch, students from 25 schools and 25 colleges from each state participated in awareness activities on HIV/AIDS, Tuberculosis and Voluntary Blood Donation for two months.

Launch of Phase II of Azadi Ka Amrit Mahotsav

The National AIDS Control Organization (NACO), MoHFW, launched the Phase II (HIV & TB campaign) of the New India@75 Azadi ka Amrit Mahotsav on 12th October 2021 in a hybrid mode. Students of 25 schools and 25 colleges from each State participated in this event. Approximately, 75,000 students joined the event virtually and the programme was live-streamed on social media handles of NACO and MoHFW. The event was graced by Hon'ble Minsiter of State, Dr. Bharati Pravin Pawar. To continue the celebration, activities were carried out in schools and colleges across the country in both the physical as well as the online modes as per the COVID situation prevailing in the State. During these campaigns, activities designed to generate awareness on HIV and TB among members of RRCs and school students (class 9th & 11th) were conducted.

Other Significant Events

◄ ACSM Planning Workshop (Pilot intervention in 5 States)

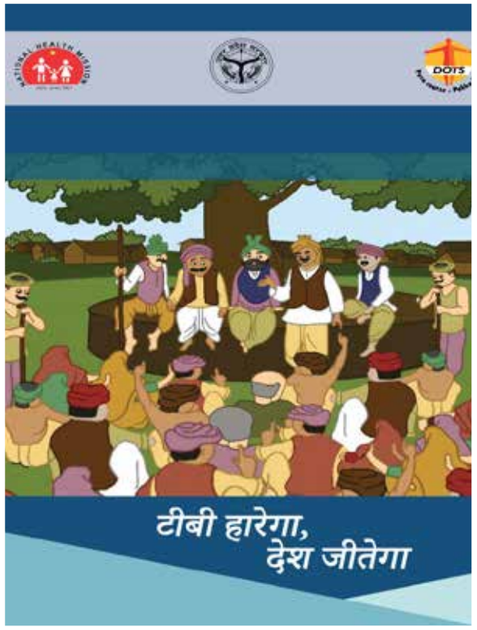
Five priority states - Uttar Pradesh, Madhya Pradesh, Meghalaya, Himachal Pradesh and Telangana - have been chosen to pilot innovative ACSM interventions. The CTD organized a capacity building workshop for the State TB Officers and State IEC Officers to facilitate the States in designing their State specific plans with budgeting considerations and expected outcomes.

◄ Implementation of ACSM in Uttar Pradesh

The CTD supported Uttar Pradesh in implementing various ACSM interventions including a media briefing workshop, chaired by the Hon'ble State Health Minister. More than 140 journalists from across the state participated in this resulting in over 270 media articles published on tuberculosis. CTD's support to the State TB Office towards PRI engagement helped in securing the inclusion of a chapter on TB in the induction training

of newly elected Gram Pradhans. The social media training, conceptualized and organized for state and district TB program officials, helped to build their capacity to engage digital platforms for TB messaging. In just four months post the training, there was a 417% increase in the number of Twitter posts from NTEP district handles, and a 484% increase in the reach of these posts

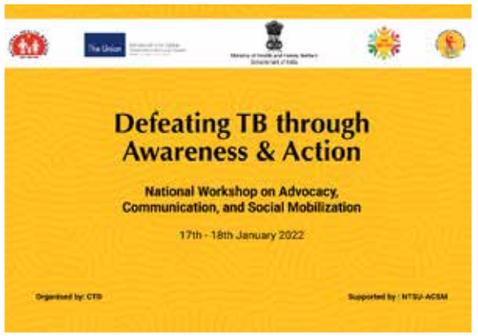
◄ TB module included in the Gram Pradhan induction material in Uttar Pradesh



◄ National Workshop on Advocacy, Communication & Social Mobilization

The National Workshop on Advocacy, Communication & Social Mobilization was held virtually on 17th & 18th January. The workshop aimed at building the capacity of the IEC teams across all States to help them execute the ACSM function at the State as well as District levels in a structured and systematic manner.

In this workshop the State IEC/ACSM officials were supported in (1) preparing State-specific ACSM annual activity plans, along with timelines and budgets, for the upcoming PIP cycle (April 2022- Mar 2023) and (2) building capacity on specific ACSM activities, including engagement with elected representatives, media, TB survivors, religious leaders, faith-based organizations, and social media interventions.



In addition to the State IEC/ACSM Officers and State TB Officers, this workshop was attended by WHO consultants, PPM coordinators, ACSM NTSU Team including all the partners, CTD team & representatives from BMGF. Around 210 participants attended the workshop on day 1 and around 114 participants attended the workshop on day 2.

◄ A Pilot to Build Radio Consortium

The All India Radio (AIR) network is the world's largest terrestrial broadcaster and can play a proactive and meaningful role in contributing to Ending TB by 2025 in the country. In that context and to explore engaging with AIR, a team from CTD visited Uttar Pradesh in July and held initial consultative meetings with the Station Directors of four major AIR stations in UP (Lucknow, Kanpur, Prayagraj, Varanasi). The proposal received an enthusiastic response and is being taken up for a planned engagement.

Nikshay Patrika Newsletter

Nikshay Patrika is the quarterly newsletter of National Tuberculosis Elimination Programme. In the past few months, it has not only widened the coverage but also carries informative articles on diverse themes and topics. This reaches out to a steadily growing community involving NTEP staff, partner organisations working in the field and sharing educative and informative updates, learnings and reflections on a quarterly basis. It is also heartening that the teams at the state and district levels are voluntarily coming forward with their submissions/contributions to share and amplify their learnings and good practices to a national audience.

Besides the extensive advocacy and communication intervention, combined community engagement efforts were also fostered through activities at various levels:

◄ A facilitator's manual for TB Champion Training

A facilitator's manual on Training curriculum for empowering TB Survivor to TB Champions has been developed incorporating newer initiatives in the programme.

◄ Three Zonal levels National Training of Trainers on Community Engagement

Three Zonal levels National Training of Trainers on Community Engagement were conducted covering all States/UTs across the country. The trainers were identified through the nominations from the States/UTs.

◄ 3500 TB Survivors Trained

More than 3500 TB survivors were trained as TB Champions across the country.

◄ Guidance Document on Community Engagement

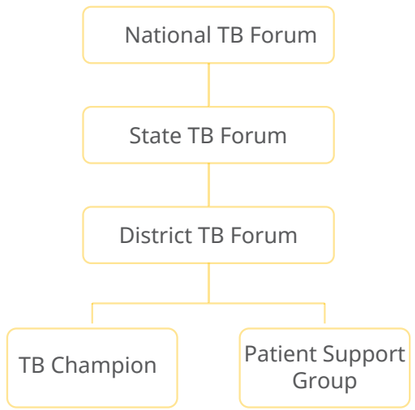
A "Guidance Document on Community Document" has been developed by the CTD in collaboration with WHO and partners implementing community engagement activities. The document aims to guide the States/ UTs in planning, designing and monitoring the activities under community engagement.

◄ Self learning courses for TB Champions

A certificate course titled "Self learning courses for TB Champions" has been developed and hosted on e-platforms. These are now available through Arogya Sathi on iGOT, Gramvani and Swasthy e-Gurukul. The certificate is auto-generated upon successfully completing the courses. The aim is to provide different platforms for any interested citizen to undergo the courses at his or her convenience.

Engaging with TB affected Communities

While there are multiple strategies under NTEP to increase awareness and mitigate stigma, it is well established that affected communities play a vital role in enhancing effectiveness of these strategies and bridge the gaps. Communities, especially those who had been affected with TB in the past, have the unique advantage of being able to motivate their peers, understanding the issues on the ground and the ability to articulate their requirements. Thus, community engagement as a strategy is critical for the country's aim of Ending TB by 2025.



Institutional Mechanisms for a Community-led response to TB

TB Forums at National, State and District levels provide an institutional platform to:

- ◄ Include community as an important stakeholder under the programme
- ◄ Improve the quality of TB services and
- ◄ Facilitate setting up of patient centric services.

These forums have representation from people affected by TB, elected representatives, policy makers, civil society organisations/ NGOs, and programme managers. Creation of community-led TB forums of people affected by TB at the sub-district and village level, is also being facilitated.

TB Forums have the mandate:

- To advise on ensuring patient centric delivery of services.
- To advise on formulation of policies and strategies for engaging communities, increasing community participation and providing feedback on their implementation.
- To discuss concerns of TB affected communities, including that on TB related stigma & discrimination and of patient support requirements, and advocate for their solutions.
- To identify and recognise (1) best practices across the country on community engagement and (2) the contribution made by community members, survivor networks and civil society organizations to the fight against TB.

The National TB Forum was reconstituted with civil society and ICMR representatives as co-chairs. Equal representation was ensured from line ministries, namely, Ministry of Rural Development, Ministry of Panchayati Raj, Ministry of Social Justice & Empowerment, Ministry of Health & Family Welfare, departments, civil societies, affected community, academician, media, subject experts, etc. By the end of 2021, all States had formed TB Forums, while 711 districts had District TB Forums in place. Most of the States and Districts also reported convening their meetings and discussing relevant issues.

Promoting holistic well-being through best practices and success stories

BEST PRACTICES AND SUCCESS STORIES

10

Best Practices and Success Stories

Introduction

India is now better prepared to address TB better than ever before. It possesses advanced and effective interventions and technologies for diagnosis, treatment and care of TB. This includes mandatory notification of all TB cases, integration of the programme with the general health services (National Health Mission), expansion of diagnostics services, programmatic management of drug resistant TB (PMDT) service expansion, single window service for TB-HIV cases, national drug resistance surveillance and revision of partnership guidelines.

NTEP further supports and encourages future endeavours on enabling and fostering innovations at all levels, through public and private sector and addressing various dimensions of health systems challenges, both unfinished and emerging.

This chapter captures best practices and success stories designed and implemented at various levels of health care delivery as a response to a specific problem to improve a health outcome or addressing a programmatic dimension required for improved performance. This may include (but are not limited to) innovations that apply systems thinking to health problems such as the use of information technology to strengthen continuum of TB cascade care and to addressing human resource shortages and challenges in capacity building, and innovations that address the needs of the program.

Health Auto for Timely Transport

Intervention

Health Autos were introduced in Warangal (Urban) District of Telangana.

The following free services are being provided:

- On-demand pick-up and drop-off service to the healthcare facility for presumptive and current TB patients
- For Pre-booking
- For sputum collection,
- Going to testing centers, medicine collection, follow-up visits and any other TB hospital visits,

This ensures timely visits to the hospital free of cost thus supports to reduce Out-of-Pocket Expenditure (OOPE)

Problem Statement

- Early and timely detection of TB.
- absence of local transport in the rural context,
- Further, even if transport is available it leads to loss employment/ daily wages to reach health institution

Progress

12 autos were in operation, 59 individuals with TB symptoms were transported wherein all the 59 were tested and 8 were diagnosed for TB.

Kerala

SWEET (System for Workplace Engagement to Eliminate TB)

Objective

- To promote awareness on TB prevention, screening and treatment across selected workplace
- To advocate for and facilitate an environment that minimizes and prevents TB transmission across selected workplace
- To support and facilitate early and free TB diagnosis across workplaces
- To facilitate and ensure access to free TB drugs and adherence to all workers
- To ensure care and support to all workforce post the completion of treatment
- To advocate and facilitate a stigma free environment for accessing TB associated services

Activities

- Collected the list of prominent workplaces, industries with numbers of employees working there from the District Labour Office.
- Identified 5916 work places, industries and 42358 workers throughout the state
- Screened in 219 industries with 8956 workers.
- Identified 465 presumptive TB cases and tested 256 from them and One individual diagnosed to have TB and initiated the treatment
- State took initiative for Airborne Infection Control (AIC) measures in 60 workplaces
- 18 TB Survivors and 26 LSG heads participated in the workplace intervention.

Conclusion

- SWEET program provides TB awareness, screening and treatment across selected workplaces.
- Education and support for AIC activities, modifications in the workplace and prevent TB transmission across selected workplace.
- Ensured care and support to the TB patient and provide free TB drugs.
- Providing Periodic Sensitization of all workers and displayed IEC materials at workplaces.
- Facilitate stigma free environment for accessing TB associated services
- SWEET program activities documented quarterly.
- A TB champion/socially committed volunteer is coordinating the activities.

TAMILNADU

Post-COVID catch-up campaign for augmenting case-finding activities under NTEP- a programmatic experience from Tamilnadu

Objective

The TB disease notifications in the months of April and May (months of major lockdowns due to COVID waves) had declined by 63% in 2020 and by 52% in 2021, compared to the base year of 2019. Certain mathematical modelling studies have predicted an increase in TB notifications as well as mortalities due to TB during the post-pandemic (Global TB report 2020). Also, evidence is gaining globally on the interactions between COVID and TB as well as other comorbidities which might increase the risk for TB disease among the post-COVID individuals.

In this context, under the collaboration of Mission director - National Health Mission, State and district TB Cell, WHO Consultants-Tamilnadu and Directorate of Medical Education (DME) institutions, a short study among post-COVID individuals under programmatic settings was planned and conducted in 4 districts – Chennai, Kanniyakumari, Thoothukudi and Tiruvannamalai of Tamil Nadu between last week of June-2021 to August-2021 to understand the risk for TB among them and subsequently guide the programme managers in developing policies.

Brief Methodology

In the above four districts, teams were formed from respective District TB Offices, WHO-Consultants, and the respective medical colleges (Department of Thoracic Medicine and Community Medicine, where available). The following activities were conducted:

- Individuals affected with COVID between the months of March-May 2021 were contacted for consent through telephonic interview.
- Those consented for the interview were requested to come to a nearby health facility for screening.
- In one group, everyone who visited was subjected to Chest X-Ray and Random Blood Glucose. If eligible were requested to deposit a sputum sample for TRUNAT testing for TB.
- In another group, symptoms were elicited and those found eligible were requested to deposit a sputum sample for TRUNAT testing for TB.
- Information on comorbidities, treatment with steroids during their COVID illness in the past as well as hospitalization for the same was elicited.

Results of the study

Response Rate:

A total of 5378 individuals who had been affected with COVID during the months of March-June were contacted through telephonic interview for their consent to visit the nearby health facility for screening for TB through Chest X-Ray or symptom assessment. Of which 25% (1210) of the individuals accepted to come to the facility. However, only 6.7% (358) of the individuals visited the facility for TB screening.

TB and related comorbidities

- Total number of individuals diagnosed with TB: 11 (3.1%). 13% (11/ of the overall NAAT tests performed were positive.
- Total reported to have any symptoms (fever/cough/hemoptysis/loss weight/ appetite): 124 (34%).
- Total number of individuals who underwent a sputum testing by TruNAAT: 126(35%)
- Total number of individuals having any Chest X-ray abnormality: 123 (34%).
- Total number of individuals having an abnormal Random Blood Sugar (>140 mg/dl): 135 (38%).
- Total self-reported to have past H/o Diabetes: 107 (29%).

Concluding remarks and potential for scale up

- The yield for TB was higher among post-COVID-19 individuals as compared to general active case finding campaigns conducted in the state.
- Post-COVID-19 recovered individuals were found to be at a higher risk of developing TB disease and experiences from Tamilnadu shows that integrated testing for TB among post-COVID-19 recovered population is feasible under the routine program setting.
- TB case finding could be improved by including the same under vulnerable groups for active case finding (ACF) campaigns.
- Also, it was found that many of the individuals had a residual lung abnormality through Chest X-Ray and symptoms which warrants guidance on rehabilitative support and regular screening either with radiological imaging, symptoms screening or through microbiological (NAAT) testing for TB as the above findings clearly shows that they are higher risk to TB per se because of COVID-19 illness or due to other added co-morbidities and their drug-intake history.

ASSAM

Reaching out to the Tea Garden population and unreached (The Trans Gender Community) in Assam during Covid pandemic

Problem Statement

- Identifying the TB cases of tea gardens
- Reaching the unreached community (The Trans Gender Community)

Intervention

- Intersectoral Engagement with ABITA (Assam Branch of Indian Tea Association)

Progress

- 17 TB Detection Centers (TDC) have been established at Tea Gardens. Resources like HR & Equipment were provided by tea garden authorities. Lab consumables supply chain management has been managed by NTEP.
- In addition to this, 3 TB detection centers were made functional during the social isolation period due to the COVID-19 pandemic.
- As a result that all tea gardens of Assam are now having TB treatment centers and 20 TDCs where tea garden workers along with nearby villagers of the gardens are getting TB services.
- Capacity building for tea garden workers and drivers on sputum collection drives were organized by gardens in collaboration with NTEP.
- A training program on ill-effects of Tobacco and awareness on TB and HIV was organized in Kamrup (Metro) among the members of the transgender community.

Involvement of Panchayati Raj Institution for TB Elimination

While encouraging larger inter-departmental participation to promote multi-sectoral approach towards TB elimination in Uttar Pradesh, the State TB Cell involved Panchayati Raj Institution (PRI) representatives especially newly elected Gram Pradhans in TB programmes.

Initially, the State TB Cell (STC) approached Panchayati Raj Department to include TB programme related activities in the Gram Pradhan induction training module. A five-pager TB module was successfully developed to meet the purpose.

The newly elected Gram Pradhans was sensitized at the block-level towards TB during their induction training conducted from September 16th, 2021 through October 31st, 2021. District TB Officers/ NTEP District Coordinators in close collaboration with Panchayati Raj Department actively discussed TB during induction training. Convincing role for stakeholders, frontline workers and community at large to combat TB at the grass-root level were expected from Gram Pradhans out of these TB sensitisation sessions.

Eventually, it encouraged Gram Pradhans to participate in Active Case Findings (ACFs) campaigns. It is noteworthy to mention that Uttar Pradesh elects over 59,000 Gram Pradhans and probably the first state to conduct TB sensitisation sessions for all elected village representatives.

Inclusion of ACF in Dastak Abhiyan

A massive door-to-door campaign was launched by the Government of Uttar Pradesh to ensure active case finding and eradication of communicable diseases.

Frontline health workers team visited every house from door to door and screened the community for symptoms of communicable diseases – Acute Diarrhoeal diseases, Influenza - H1N1, Dengue, Chikungunya, Acute Encephalitis syndrome, Japanese Encephalitis, Malaria, Kala Azar and Tuberculosis.

The initiative witnessed the convergence of various departments such Panchayati Raj/ Municipal Corporation, Education, Agriculture and Animal Husbandry with Health and Family Welfare being nodal departments.

In this Marathon exercise, 1809 TB cases were diagnosed while 1791 patients were initiated with treatment and introduced to Nikshay.

It is worth to mentioning that Dastak Abhiyan commenced across seven districts of Gorakhpur and Basti division focusing on Encephalitis in 2018. Later on, it was gradually extended to 18 districts in 2019. While 2020 witnessed its implementation across the entire 75 districts of Uttar Pradesh focusing on all communicable diseases including Tuberculosis.

Success story of Mr. Tuvitho Ngouri

Mr. Tuvitho Ngouri age 46/ male from Meluri Village, under Phek district of Nagaland. He is delighted to share his battle with TB and success of healing. Well, to begin with his short struggle with the disease. He was struggling for several months with fluctuation of weight and often my body feels sluggish. Sometimes his body used to sweat a lot and he was off with fever for several months. Later on, he started to cough but he thought it was a normal flu, like any other day. However, it prolonged for a long period of time. He took some coughing syrup, pain-killer like every person would do but it only reduced the pain for a few days and the same sickness used to occur again like a cycle of sickness. One day, a group of TB Active case founders came to his locality and he also took the initiative to go for a check-up. Later on, it came to his notice that he was diagnosed with active TB. The Doctor advised him to take treatment and medication for six months. With that, he started his treatment on 23 July 2019. For six months, he sincerely took TB antibiotics which were given to him by the TB Active case finding group. He was not left alone with the medication. However, the TB supervisors and team which was send to his locality had done a tremendous job by attending him when to take the dose, enquiring whether he was out of medication and needed more, and not forgetting the counselling, assuring that the disease was curable. With the help of the TB Supervisor, he completed his treatment course on 7 January 2020. And his final report came out negative. Today, he is proud to say that he was completely healed from his TB disease because of the aid and service provided. He was grateful to the TB monitoring team and supervisors who assiduously worked and offered constant provisions to him to be cured. Today, people's fear has increased in due course of time because of many kinds of sickness. Likewise, people are aware of TB being contagious, most TB patients face discrimination and criticism. Due to this issue, some don't go for a check-up, some because of ignorance and some with many other reasons. However, he would encourage people not to live in fear of TB patients because it is curable disease. And to those who are fighting with TB do not lose hope but sincerely receive treatment and medication.

Success story of Mr. Chekhro Tsuha,

Mr. Chekhro Tsuha, 24 years old and a TB survivor from Dimapur, Nagaland. A few years ago, he moved to Chennai for his higher studies. After some few years of moving in to Chennai, he realized that he was not feeling well. He was coughing a lot and he had no appetite and also his chest was hurting. So, he decided to go for a check up to the hospital where he did his Chest X-ray, CT scan and Sputum test. He was given medicines for some few days until the result of his test came in. So, after a week he returned to the hospital to collect his result and it came out to be TB positive. The doctor then told him that the medication for TB treatment is usually six months so he got scared at first because it felt like forever. When he started his medication, he vomited every time he swallows a pill because he was taking them with only little amount of food as had no appetite. So, the doctor gave him some vitamins for his appetite which helped him to take the medicine. After few months of his medication, he decided to go back home with his parents and take proper rest but after getting home he was still having fever and vomiting was not stopping, so, he was advised to go and get another check up from the Government TB centre so he went for another checkup and did sputum test again. After the results came in the Doctor told me that he had MDR-TB also known as multidrug resistant TB, which is resistant to many different drugs due to which he developed side effects from the medication. After few months of the medication the report for his culture test came out to be negative but he had to continue his medication and complete the course as to prevent from getting infected again in the future. After 18 months long of treatment, his final culture test which came out as negative and he was declared cured. After having TB, he now appreciates being healthy much more, TB changed his life. It has humbled him as well as enriched him as a person, teaching how much we have to be thankful for. He felt like, he can now relate to the suffering of so many people in around the world who have TB and hope more will be done to not just treat the disease, but treat the person - providing nutritional and emotional support. He believes that could give people with TB the hope they need.

Technological breakthroughs to reduce TB incidence rates

RESEARCH AND INNOVATIONS

11

Research and Innovations

Introduction

Tuberculosis research and development are critical for meeting the global TB targets set out in the United Nations' Sustainable Development Goals (SDGs) and the World Health Organization's End TB Strategy. A substantial technological breakthrough will be necessary to dramatically accelerate the rate at which tuberculosis incidence reduces relative to previous levels. "Intensified research and innovation" are the third pillar of the End TB Strategy. SDG 3b calls for funding research on new vaccines and medicines for communicable and non-communicable diseases that disproportionately affectdeveloping nations.

To end the TB epidemic in India, we need:

- Affordable and accessible diagnostics, which are rapid point-of-care tests for detecting TB infection and disease, including presence of drug resistance if any.
- Shorter, safer, and more effective regimens for treating TB infection, drug-susceptible TB, and drug-resistant TB
- A TB vaccine that is effective before and after exposure, as well as across a wide-range of age groups and geographical settings and
- Innovative strategies to address broader determinants of TB infection and disease.

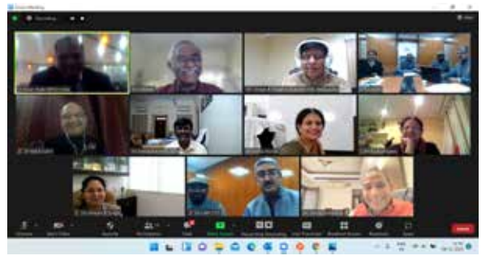
Keeping in view the recommendations of the Joint Monitoring Mission (JMM) 2019 with respect to the third pillar of NSP 2017-25 on research & innovations, the programme is collaborating with the different stakeholders like ICMR, DBT, DST & SERB-DST towards augmenting development of additional new tools required to end TB as well as reinforcing the rapid uptake of available tools and products. These can be varied – such as simple triage/screening, use of non-sputum clinical specimens for accurate bacteriologic diagnosis of extrapulmonary and pediatric TB, simpler/ safer/shorter universal curative TB treatment regimens and rapid scale up of available tools, such as novel specific skin tests (*e.g.,* C-TB) for diagnosing latent TB, automated digital chest x-ray interpretation and newer drugs/regimens, all of which in line with and based on the latest global guidance.

Implementation Arrangements

The National TB Elimination Programme supports Operational Research (OR) under the guidance of a task force mechanism at State and National levels. The Global scientific evidence as well as evidence from the in country OR studies help bring in periodical changes in policies and programme management practices.

National Operational Research Committee (NORC)

A National OR Committee meeting was held under the Chairmanship of Dr D.C.S. Reddy (Chairman National OR Committee) from 7th to 9th December 2021 consequent to the OR call given out in November 2020. 65 proposals were received of, which 36 were considered based on NTEP priorities, scoring and selection criteria.



Collaboration with other stakeholders (ICMR, DBT, DST, SERB-DST)

Various National entities such as Indian Council of Medical Research (ICMR) through India TB Research Consortium (ITRC), Department of Biotechnology (DBT), Department of Science & Technology (DST) and Science and Engineering Research Board (SERB-DST) are actively engaged in research based on the priorities articulated by NTEP.

Key research activities undertaken in the year 2020-21 are as follows:

◄ Diagnostics

- ▼ Validation studies for a few diagnostic equipment *viz.,* TB detection kit, TB sample concentration and transport kit, TB DNA extraction kit etc., which are aimed at conducting point of care tests to address challenges in sample transport.
- ▼ A multi-state validation study of C-TB skin test to detect TB infection.
- ▼ Blood based triage test (POC)- Supported by Department of Biotechnology.

◄ Therapeutics

- ▼ HICON-R study- High dose of Rifampicin (25mg/kg) in comparison to the conventional regimen of 10 mg/kg.
  - BEAT (Building Evidence for Advance treatment against Tuberculosis) study – using Bedaquiline, Delamanid, Linezolid and Clofazimine, to reduce XDR TB treatment to 6 – 9 months from the current duration of 18 months.
- ▼ Modified BPaL regimen (BDQ, Pretomanid and Linezolid), a three-year study was initiated in October 2021 as a pilot in 10 sites across the country.
- ▼ End TB trial – is a multi-country trial on shorter (6-9 month) regimen for MDR-TB.

◄ Vaccines

A study on the utility of r-BCG for prevention of disease among household contacts was initiated by ICMR. 12,722 participants were enrolled in three arms, (1) Immuvac (2) VPM1002 (recombinant BCG) and (3) Placebo. At the end of one year of follow up, the safety of both vaccines has been established.

◄ Implementation Research

The Science & Engineering Board, DST (SERB-DST) is supporting NTEP in mathematical modelling for TB and for the various studies being undertaken on the basic biology and other research studies.

BRICS Multi-country study, as part of BRICS-STI framework program

BRICS multi-country project titled 'Epidemiological impact and intersection of the COVID-19 and tuberculosis pandemics in Brazil, Russia, India and South Africa' (IMPAC19TB) a multi-country study is being undertaken with the objective to estimate differential losses along the TB care cascade attributable to COVID-19, the impact of COVID-19 on trends in mycobacterium tuberculosis population structure, determine the effect of TB on patient-level COVID-19 outcomes, to determine programme and other in-country response measures to mitigate the negative impacts of COVID-19 on TB healthcare services, and to use mathematical modelling to estimate the impact of COVID-19 and COVID-19 response measures, on TB incidence and TB associated mortality, and model the impact of "recovery" measures. This study is done by AIIMS, New Delhi in collaboration with the Central TB Division and is supported by the Department of Science & Technology.

Innovations

Artificial Intelligence (AI) holds great promise for improving the delivery of healthcare and medicine worldwide. AI, especially in the case of TB, can assist in increasing the accuracy of diagnosis, screening for disease and support diverse public health interventions, such as disease surveillance, outbreak response, and health systems management.

Key initiatives undertaken are:

- ◄ Automated reading of Chest X ray: The CTD in collaboration with NIC and ICMR is developing this AI solution to detect TB related changes from X-Ray images
- ◄ Automated reading of LPA strips: LPA is one of the critical tools for DST of TB patients. The solution is in the final stages of development and work is in progress towards integration into Nikshay with the support of Wadhwani Institute of Artificial Intelligence (WIAI).
- ◄ Prediction of Lost to follow up: An AI algorithm to identify patients who are potentially at risk for not being able to complete the full course of treatment is being developed with the support of WIAI. This can allow the health system/ treatment supporters to focus more on such patients right from treatment initiation, thus assisting implementation of Differentiated TB care.
- ◄ An AI solution to detect TB from Cough sounds and Voices.
- ◄ An AI solution is being developed to screen for TB from cough sounds and voices with the support of WIAI.
- ◄ Chatbot: A chatbot has been developed in collaboration with NIC for providing information on TB, Treatment of TB and available TB services under NTEP.

HEALTH FINANCING

12

Health Financing

Introduction

National TB Elimination Programme is a centrally sponsored scheme under NHM to implement the programme activities as envisaged under NSP 2017-25 as per NTEP guidelines.

The procedures for the financial management are being followed as per the manuals and guidelines available on the programme website (Financial Manual for NTEP). The financial management arrangements to account for and report on program funds, includes both Domestic Budgetary Support (DBS) and External Aided Component (EAC). The arrangements are as follows:

Institutional Arrangements

The Central TB Division, 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 levels, the State TB Cell and the District TB Centre are responsible respectively.

Budget

Program expenditures are budgeted under the Demand for Grants of the MoHFW Flexible Pool for Communicable Diseases funding arrangement. These are reflected in two separate budget lines- General Component (GC) and Externally Aided Component (EAC).

- **Fund 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 installments through State Treasury.
- **Sanctions & Approvals**: All procurements of commodities are processed by the Central Medical Services Society (CMSS), an autonomous society under MoHFW, the Government of India approved by the Cabinet. All fund releases for commodity advances for approved contracts are routed through the Integrated Finance Division (IFD) and processed by the Drawing and Disbursing Office (DDO) and Pay and Accounts Office (PAO). All the program expenditures follow the standard government systems of the PAO and are subject to control as per the General Financial Rules (GFR) of the Government of India. Payments are made through electronic funds transfer through treasury since the financial year 2014-2015.
- **Accounting**: The accounting records for all payments are made against approved budget. Budget lines are maintained by the Principal Accounts Officer and compiled by the Controller General of Accounts (CGA). The compiled monthly accounts are reconciled with the CTD record of transactions.
- **Financial Reporting**: A financial report is submitted by the CTD to MoHFW and the donors like The Global Fund and World Bank on periodic intervals based on the compiled monthly accounts and the CTD's own record of expenditures.
- **External Audit**: The audits are being conducted as per the standard terms of reference. The audit reports are being made available to all donors as per the agreement. At State-level audits are being done as per State NHM manual and guidance for audit by empaneled chartered accountancy firms. All the States are required to submit the annual audit report to CTD by 30th September.

Financial Performance of NTEP

(Rs. in crores)

Description	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Budget Requested	1000.00	2200.00	4115.00	3525.00	3554.00	3628.85	18022.85
Budget Estimates/ Approved Budget	640.00	1840.00	3140.00	3333.21	3109.93	3409.94	15473.08
Total Releases to States	533.17	871.36	907.65	870.81	629.71	480.35	4293.05
Total Expenditure	677.78	2759.44	2237.79	3130.11	3097.98	1811.91	13715.01

*Till 11th March 2022

Program Implementation Planning

◄ Introduction

▼ Programme Implementation Plan (PIP) of NTEP is an integral part of the NHM and it is the most crucial instrument by which States submit their costed plans and propose strategies, activities & receive resources under the NHM.

▼ State-specific TB elimination plans are aligned with the National strategic plan 2017-2025. All Key Activities as per the NSP are distributed with 37 FMR codes under 18 budget heads of the Planning tool.

◄ Achievements in 2021

▼ NTEP PIP guidance document to support States/UTs on Planning NTEP activities in alignment with NHM PIP template has been developed and disseminated. Rs. 2516.82 crores have been recommended with approval of competent authority.

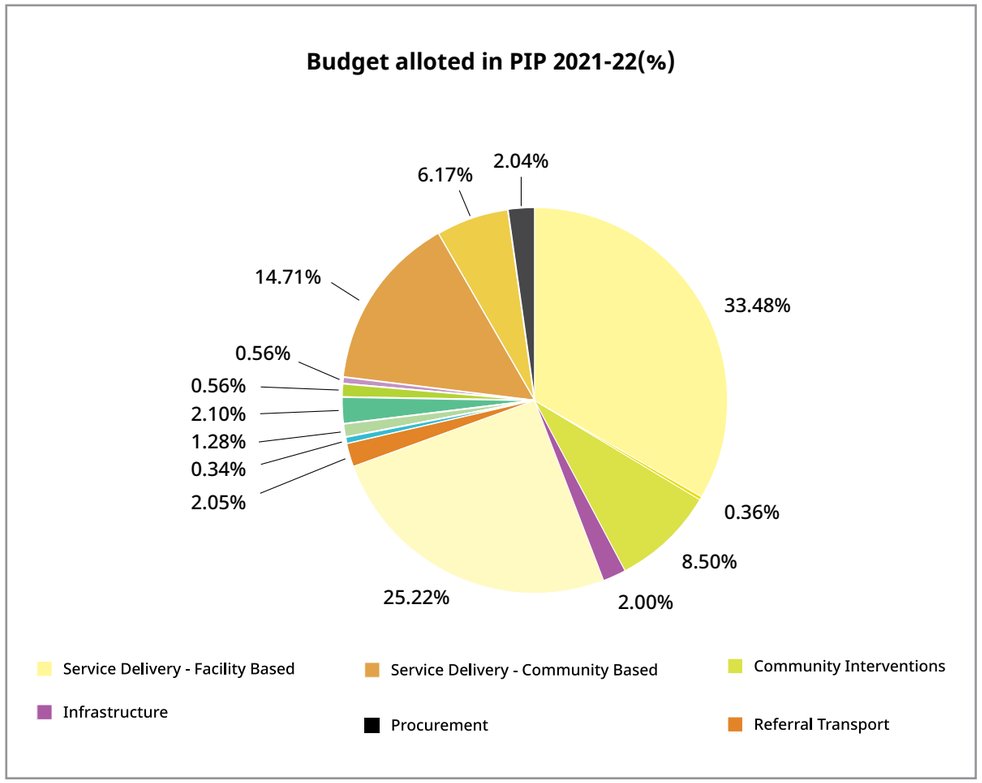
▼ Additional Rs. 25.48 crores have been recommended in Supplementary PIP for four States.

◄ Way Forward

▼ NTEP PIP guidance note has been updated as per simplified two-year PIP matrix (2022-23 and 2023-24) of NHM and circulated with all States and UTs

▼ The programme division has prepared District Health Action Plan along with the key interventions in alignment with 15th Finance Commission, PM ABHIM and ECRP.

▼ Mid-Term Reviews are planned at the end of every quarter to provide course corrections in case of shifting of priorities.



External Aided Component (EAC)

World Bank - Program Towards Elimination of Tuberculosis (PTETB)

◄ Introduction

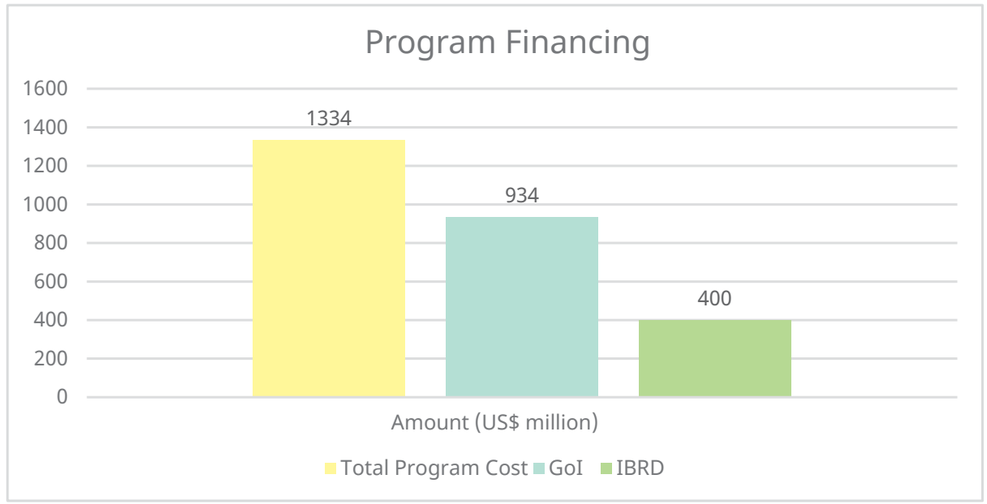
GoI, has engaged with World Bank project PTETB (PI 67523) (Loan No. 8926) and availed an International Bank for Reconstruction and Development (IBRD) loan of USD 400 million to advance progress toward priority outcomes of the NSP 2017-25. IBRD financing is US$400 million or 30 percent of the total program cost estimate of US$1.334 billion. The GOI will finance the remaining 70 percent. The full GOI request for IBRD financing for the period 2019 to 2025 is US$500 million and the remaining US$100 million requested by GOI will be considered by the World Bank by March 2022.

◄ Implementation Arrangements

The PTETB was carved out of the NSP by result area, geographical area with the selection of priority States and timeframe. The program focuses on four result areas (PfR) and these results areas are inter-linked and mutually reinforcing:

- scaling up private sector engagement Rolling out TB patient management and support interventions;
- Strengthening diagnostics and management of DR-TB; and
- Strengthening the NTEP (then, RNTCP) institutional capacity and information systems.

Considering the estimated TB burden and the gap between private notifications and estimated TB burden, the GOI selected nine States for the participation in the program: Uttar Pradesh, Maharashtra, Bihar, Rajasthan, Madhya Pradesh, Karnataka, West Bengal, Assam, and Tamil Nadu.



Result Area 1: Scaling-up Private Provider Engagement (US$176 Million)

The aim is to scale up private sector engagement to ensure timely diagnosis and notification and effective management of TB among patients in line with Standards of TB Care in India.

Four Disbursement Linked Indicators (DLIs) will be used to incentivize this results area. Prior result #1.0 will be about revision of national guidelines for engagement with private providers. DLI# 1.1 and DLI# 1.2 are related to results in TB notifications, management, and treatment outcomes by private providers. DLI# 1.3 will be about institutional strengthening to support private sector engagement. The GOI will provide incentives to private providers who notify TB patients.

Result Area 2: Rolling out TB Patient Management and Support Interventions (US$60 Million)

TB control outcomes depend on whether TB patients seek care early and adhere to treatment. Thus, the GOI is rolling out TB patient support as one of its strategic interventions to eliminate TB.

Three DLIs will be used to incentivize this results area. Prior result #2.0 will be about the development of information systems modules in Nikshay 2.0 to enable implementation of the DBT schemes. DLI#2.1 will be about rolling out digital payment and certification systems at district level for processing DBT payments to patients and private providers. DLI#2.2 will be about the proportion of patients receiving DBT through Nikshay.

Result Area 3: Strengthening Detection, Treatment, and Monitoring of Drug-Resistant TB (US$70 Million)

The aim is to scale-up DR-TB interventions in India to aggressively respond to the complex and costly DR-TB challenge.

Under this Results Area, DLI#3.1 will incentivize rifampicin susceptibility testing for TB patients.

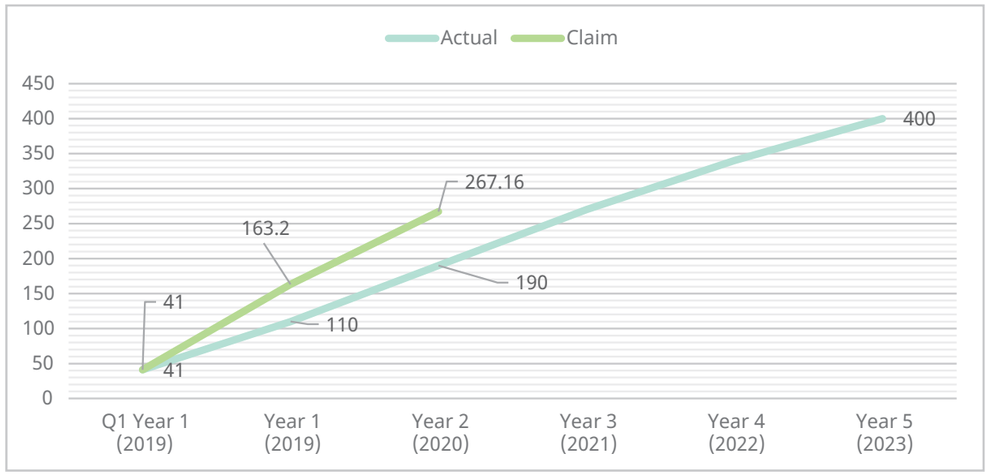
Result Area 4: Strengthening RNTCP Institutional Capacity and Information Systems (US$93 Million)

The transformative nature of India's NSP and the scale of its ambition are unprecedented among countries with high burdens of TB. The Program will help the GOI build the institutional capacities required to succeed.

Three DLIs will be used to incentivize this results area. The prior result #4.0 will be about a Nikshay mechanism for deduplication (of patients and providers) and reconciliation of different provider types. DLI#4.1 will be about human resources for health in TB. DLI#4.2 will be about the development and roll-out of a performance-based management scheme between the central government and States. The amounts included under the DLI#4.2 only serve as incentives under the Program. These amounts will not match the exact amount of performance-based management incentives paid by CTD to States. World Health Organization (WHO) has been appointed as Independent Verification Agency (IVA) for verifying programmatic DLIs.

Achievements in 2021

- 10 Technical Support Units (TSUs) have been established under this project. One National TSU and 9 State TSUs were made functional by December 2021.
- In line with Result Area 4 of PTETB, Human Resource Plan and Capacity Building Plan for NTEP has been developed with the support of National Health Systems Resource Centre and same has been approved for further implementation. Dissemination of HRH operational Plan findings to the all States/UTs during the National Consultative Workshop in October 2021.
- Program Division prepared the claim for year 2 results by analyzing the achievements of DLIs to WHO which is the Independent Verification Agency (IVA) and IVA has completed the verification process for year 2 claim on Disbursement Linked Indicators (DLIs) achievements has been completed in December 2021. Subsequent to this Central TB Division has submitted the revised claim of (USD 103.96 million) to World Bank.
- 66% (USD 267.16 million) of total project cost has been submitted for disbursement in year 2 itself.
- Program Division is performing well in most of the DLIs, 6 DLIs out of total 10 DLIs have achieved the final year targets in 2nd year itself. Hence full claim has been submitted for disbursement.
- Implementation Mission by the World Bank is undertaken biannually to understand the technical and financial implementation progress of PTETB. Last Biannual Implementation Mission was held on July 2021.



PTETB Technical Assistance (TA) Facility

The World Bank executed TA trust fund facility with BMGF funding was established in December 2020. The TA will leverage the World Bank comparative advantage and global expertise to strengthen the NTEP and State capacity to carry forward bold policy, managerial and implementation reforms through capacity building and knowledge sharing. The objectives for TA facilities are as follows:

(i) Deploy targeted, just-in-time TA in critical areas to strengthen the GOI's execution of PTETB interventions at central and, State levels;

(ii) generate evidence to inform policy decisions and mid-course adjustments; and

(iii) facilitate learning and knowledge exchanges between India and other peer countries.

Way Forward

The World Bank and Central TB Division have identified the following areas for TA support:

- NTEP HRH operational staff plan and TA to CTD and select States in HRH planning, recruitment, and deployment; Four States *viz.,* West Bengal, Bihar, Maharashtra and Madhya Pradesh have been identified for TA support for operationalizing HRH Plan.
- Review and documentation of technical and implementation lessons and experiences of the CTD's roll-out of performance incentives to States in line with the TB index; private sector scale-up; and DBT experiences.

The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM)

The Global Fund has been a long-standing partner, supporting the National Tuberculosis Elimination Programme (NTEP) in reducing TB burden of the country. As a part of the Global Fund grant of USD 201 million, received by Central TB Division for grant period January 2018 to March 2021, division successfully implemented high impact program activities across the country including procurement of Second Line Drugs, newer drugs (Bedaquiline), rapid molecular diagnostics (CBNAAT & TrueNat), CBNAAT cartridges and TrueNat chips, digital X-ray machines, AMC services for the diagnostic equipment, technical support to strengthen Public Financial Management Services, Operational Research, ACF in vulnerable groups and counselling support to DR-TB patients.

Fostering the partnership, the Global Fund has allocated USD 200 million grant to Central TB Division for next three years i.e. from April, 2021-March, 2024, under Payment for Result modality (PfR), allowing high degree of flexibility for the National Program to focus on impact and achievement of results, and autonomy to focus on health outcomes. The entire grant is tied with three Disbursement Linked Indicators related to achievement of MDR/RR TB-notification and treatment outcome; and increase in presumptive TB testing through rapid molecular diagnostics against the set targets.

As part of current Global Fund Grant 2021-2024, Central TB Division has engaged following Sub-Recipients to supplement NTEP efforts:

- **National Institute for Research (NIRT):** NIRT has been roped in to strengthen TB surveillance under National Tuberculosis Elimination Programme by undertaking District Level Annual Survey and District Level Sentinel Survey (DLSS). The project aims to provide sub national level measure of TB burden of newly diagnosed bacteriological pulmonary cases, level of underreporting and annual trend of TB prevalence and incidence. NIRT through DLAS will also support the CTD in verification of State/district claims for awarding a National Certification of progress towards TB free status.
- **Tata Institute of Social Sciences (TISS):** TISS will continue supporting NTEP through Saksham Pravaah project as the Sub Recipient to strengthen DRTB treatment and adherence support through psycho-social counseling services and other social protection and nutrition linkages in four States i.e. Maharashtra, Gujarat, Karnataka and Rajasthan. Another crucial component of project is to transition counselling services to NTEP staff (STS and TBHV) through their capacity building by creating a pool of Master trainers across the Country.

Annexures

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Annexures

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1.1 Presumptive TB cases examination

State	Population 2021 (in lakhs)	Presumptive TB Cases examination			Presumptive TB Cases examination			Number Needed to Test by	
		Number examined by			Number examined by		Rate* (per lakh population)		
		Microscopy	CBNAAT	Truenat	NAAT Total (% of total tested)	Total		Microscopy	NAAT
Andaman & Nicobar Islands	4	4588	323	1113	1436 (23.8%)	6024	1,542	33	6
Andhra Pradesh	529	270481	66940	413065	480005 (64.0%)	750486	1,419	71	40
Arunachal Pradesh	17	8154	3023	6124	9147 (52.9%)	17301	1,038	7	16
Assam	355	110846	13317	1915	15232 (12.1%)	126078	355	9	4
Bihar	1,271	318041	22291	40501	62792 (16.5%)	380833	300	14	6
Chandigarh	12	11203	3007	184	3191 (22.2%)	14394	1,213	7	6
Chhattisgarh	305	146736	27731	40198	67929 (31.6%)	214665	703	15	8
Dadra and Nagar Haveli and Daman and Diu	8	11502	3168	1198	4366 (27.5%)	15868	1,915	27	9
Delhi	193	102802	11944	18824	30768 (23.0%)	133570	692	7	4
Goa	16	58	7116	6280	13396 (99.6%)	13454	868	12	11
Gujarat	708	803728	24170	61476	85646 (9.6%)	889374	1,256	20	10
Haryana	299	175602	20540	24152	44692 (20.3%)	220294	737	10	5
Himachal Pradesh	76	99539	31620	25230	56850 (36.4%)	156389	2,066	19	11
Jammu & Kashmir	148	163371	11907	19950	31857 (16.3%)	195228	1,323	44	9
Jharkhand	402	162810	15403	24343	39746 (19.6%)	202556	504	9	5
Karnataka	724	336786	43696	158000	201696 (37.5%)	538482	743	24	11
Kerala	346	89664	43674	94758	138432 (60.7%)	228096	660	20	14
Ladakh	3	1546	2277	151	2428 (61.1%)	3974	1,137	22	35
Lakshadweep	1	0	64	981	1045 (100.0%)	1045	1,572	NA	21
Madhya Pradesh	857	560826	16270	57623	73893 (11.6%)	634719	741	11	8
Maharashtra	1,272	863458	152089	43309	195398 (18.5%)	1058856	832	22	2
Manipur	32	7710	5764	174	5938 (43.5%)	13648	431	17	7
Meghalaya	37	15747	6595	1479	8074 (33.9%)	23821	637	12	6
Mizoram	13	4843	2836	0	2836 (36.9%)	7679	600	18	6
Nagaland	21	8003	7041	794	7835 (49.5%)	15838	761	8	6
Odisha	468	795396	38278	40380	78658 (9.0%)	874054	1,867	31	8
Puducherry	15	11070	3826	515	4341 (28.2%)	15411	1,011	9	5
Punjab	310	106845	19888	12575	32463 (23.3%)	139308	449	7	4
Rajasthan	812	438494	21004	33231	54235 (11.0%)	492729	607	9	6
Sikkim	7	7104	4653	1161	5814 (45.0%)	12918	1,952	17	8
Tamil Nadu	824	650499	36156	98991	135147 (17.2%)	785646	953	19	9
Telangana	382	191017	21751	40953	62704 (24.7%)	253721	664	13	9
Tripura	40	15274	3270	4992	8262 (35.1%)	23536	590	13	11
Uttar Pradesh	2,361	907245	73989	187842	261831 (22.4%)	1169076	495	8	5
Uttarakhand	118	65282	5027	8533	13560 (17.2%)	78842	668	7	8
West Bengal	1,009	812795	50552	91939	142491 (14.9%)	955286	947	21	8
INDIA	**13,993**	**8279065**	**821200**	**1562934**	**2384134 (22.4%)**	**10663199**	**762**		

1.2 TB Case Notification

State/UT	Target TB patients expected to be notified				TB patients notified (Achievement against target %)			TB case notification rate		
	Public	Private	Total		Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	590	10	600		502 (85%)	5 (50%)	507 (85%)	128	1	130
Andhra Pradesh	90000	25000	115000		62100 (69%)	24732 (99%)	86832 (76%)	117	47	164
Arunachal Pradesh	3450	50	3500		2710 (79%)	14 (28%)	2724 (78%)	163	1	163
Assam	51100	11000	62100		29389 (58%)	8252 (75%)	37641 (61%)	83	23	106
Bihar	90000	100000	190000		61467 (68%)	70236 (70%)	131703 (69%)	48	55	104
Chandigarh	6900	600	7500		4220 (61%)	500 (83%)	4720 (63%)	356	42	398
Chhattisgarh	35000	20000	55000		23644 (68%)	8772 (44%)	32416 (59%)	77	29	106
Dadra and Nagar Haveli and Daman and Diu	1450	150	1600		948 (65%)	65 (43%)	1013 (63%)	114	8	122
Delhi	80000	30000	110000		67726 (85%)	35312 (118%)	103038 (94%)	351	183	534
Goa	2400	800	3200		1648 (69%)	370 (46%)	2018 (63%)	106	24	130
Gujarat	128000	67000	195000		92888 (73%)	51843 (77%)	144731 (74%)	131	73	204
Haryana	60000	34000	94000		45741 (76%)	23342 (69%)	69083 (73%)	153	78	231
Himachal Pradesh	13500	1500	15000		12997 (96%)	1495 (100%)	14492 (97%)	172	20	191
Jammu & Kashmir	10900	3100	14000		9458 (87%)	1368 (44%)	10826 (77%)	64	9	73
Jharkhand	43000	22000	65000		35146 (82%)	17033 (77%)	52179 (80%)	87	42	130
Karnataka	80000	55000	135000		52922 (66%)	19513 (35%)	72435 (54%)	76	28	104
Kerala	22000	6000	28000		15364 (70%)	6508 (108%)	21872 (78%)	44	19	63
Ladakh	460	100	560		280 (61%)	11 (11%)	291 (52%)	80	3	83
Lakshadweep	20	0	20		12 (60%)	NA	12 (60%)	18	0	18
Madhya Pradesh	150100	90000	240100		110814 (74%)	55532 (62%)	166346 (69%)	129	65	194
Maharashtra	160000	110000	270000		110136 (69%)	89840 (82%)	199976 (74%)	87	71	157
Manipur	2500	1000	3500		1251 (50%)	542 (54%)	1793 (51%)	39	17	57
Meghalaya	5250	750	6000		3281 (62%)	871 (116%)	4152 (69%)	88	23	111
Mizoram	3850	150	4000		1480 (38%)	269 (179%)	1749 (44%)	116	21	137
Nagaland	4250	750	5000		2924 (69%)	724 (97%)	3648 (73%)	141	35	175
Odisha	55000	10000	65000		45047 (82%)	7334 (73%)	52381 (81%)	96	16	112
Puducherry	4400	100	4500		3396 (77%)	48 (48%)	3444 (77%)	223	3	226
Punjab	52000	20000	72000		35870 (69%)	14272 (71%)	50142 (70%)	116	46	162
Rajasthan	152200	72800	225000		103011 (68%)	46214 (63%)	149225 (66%)	127	57	184
Sikkim	1480	170	1650		1272 (86%)	101 (59%)	1373 (83%)	190	15	206
Tamil Nadu	90000	55000	145000		64456 (72%)	18367 (33%)	82823 (57%)	78	22	100
Telangana	49200	32800	82000		41484 (84%)	19230 (59%)	60714 (74%)	109	50	159
Tripura	3450	50	3500		2433 (71%)	110 (220%)	2543 (73%)	61	3	64
Uttar Pradesh	375000	225000	600000		314042 (84%)	139670 (62%)	453712 (76%)	133	59	192
Uttarakhand	20300	11700	32000		17290 (85%)	5499 (47%)	22789 (71%)	147	47	193
West Bengal	105000	35000	140000		69352 (66%)	21135 (60%)	90487 (65%)	69	21	90
INDIA	**1952750**	**1041580**	**2994330**		**1446701 (74%)**	**689129 (66%)**	**2135830 (71%)**	**104**	**49**	**153**

TB Patients Notification is based on notification by diagnosing PHI.

1.3 Notified TB Patients - Characteristics

State/UT	Type of Case			Site of disease			Basis of Diagnosis		Diagnostic Test			
	New	Previously Treated	DRTB	Pulmonary		Extra Pulmonary	Bacteriologically Confirmed	Clinically Diagnosed	Microscopy	Molecular Tests	Chest X-ray	Others
Andaman & Nicobar Islands	437 (86.2%)	35 (6.9%)	35 (6.9%)	294 (58%)		213 (42%)	283 (56%)	224 (44%)	146 (29%)	137 (27%)	86 (17%)	138 (27%)
Andhra Pradesh	74857 (86.2%)	9403 (10.8%)	2572 (3.0%)	64910 (75%)		21922 (25%)	43878 (51%)	42954 (49%)	3992 (5%)	39834 (46%)	25564 (29%)	17442 (20%)
Arunachal Pradesh	2235 (82.0%)	313 (11.5%)	176 (6.5%)	1708 (63%)		1016 (37%)	1677 (62%)	1047 (38%)	503 (18%)	1174 (43%)	483 (18%)	564 (21%)
Assam	33370 (88.7%)	3520 (9.4%)	751 (2.0%)	27699 (74%)		9942 (26%)	16080 (43%)	21561 (57%)	11462 (30%)	4604 (12%)	12768 (34%)	8807 (23%)
Bihar	119930 (91.1%)	8942 (6.8%)	2831 (2.1%)	106915 (81%)		24788 (19%)	38859 (30%)	92844 (70%)	18553 (14%)	20218 (15%)	76011 (58%)	16921 (13%)
Chandigarh	4013 (85.0%)	587 (12.4%)	120 (2.5%)	2394 (51%)		2326 (49%)	2243 (48%)	2477 (52%)	1515 (32%)	718 (15%)	381 (8%)	2106 (45%)
Chhattisgarh	29331 (90.5%)	2499 (7.7%)	586 (1.8%)	22877 (71%)		9539 (29%)	14586 (45%)	17830 (55%)	8511 (26%)	6015 (19%)	11407 (35%)	6483 (20%)
Dadra and Nagar Haveli and Daman and Diu	875 (86.4%)	108 (10.7%)	30 (3.0%)	586 (58%)		427 (42%)	413 (41%)	600 (59%)	196 (19%)	217 (21%)	205 (20%)	395 (39%)
Delhi	88334 (85.7%)	11374 (11.0%)	3330 (3.2%)	46741 (45%)		56297 (55%)	54067 (52%)	48971 (48%)	25682 (25%)	26988 (26%)	20864 (20%)	29504 (29%)
Goa	1830 (90.7%)	134 (6.6%)	54 (2.7%)	1155 (57%)		863 (43%)	1155 (57%)	863 (43%)	43 (2%)	1107 (55%)	144 (7%)	724 (36%)
Gujarat	115756 (80.0%)	25749 (17.8%)	3226 (2.2%)	109471 (76%)		35260 (24%)	51105 (35%)	93626 (65%)	38277 (26%)	12525 (9%)	65767 (45%)	28162 (19%)
Haryana	59461 (86.1%)	8223 (11.9%)	1399 (2.0%)	47042 (68%)		22041 (32%)	38979 (56%)	30104 (44%)	16119 (23%)	22639 (33%)	12778 (18%)	17547 (25%)
Himachal Pradesh	12279 (84.7%)	1845 (12.7%)	368 (2.5%)	9495 (66%)		4997 (34%)	9957 (69%)	4535 (31%)	5015 (35%)	4918 (34%)	978 (7%)	3581 (25%)
Jammu & Kashmir	9555 (88.3%)	1158 (10.7%)	113 (1.0%)	6359 (59%)		4467 (41%)	5459 (50%)	5367 (50%)	2966 (27%)	2485 (23%)	1873 (17%)	3502 (32%)
Jharkhand	47948 (91.9%)	3450 (6.6%)	781 (1.5%)	43885 (84%)		8294 (16%)	22897 (44%)	29282 (56%)	14043 (27%)	8814 (17%)	23369 (45%)	5953 (11%)
Karnataka	62621 (86.5%)	7471 (10.3%)	2343 (3.2%)	49199 (68%)		23236 (32%)	41591 (57%)	30844 (43%)	16455 (23%)	24888 (34%)	12250 (17%)	18842 (26%)
Kerala	20196 (92.3%)	1364 (6.2%)	312 (1.4%)	12784 (58%)		9088 (42%)	13355 (61%)	8517 (39%)	4391 (20%)	8862 (41%)	949 (4%)	7670 (35%)
Ladakh	246 (84.5%)	41 (14.1%)	4 (1.4%)	182 (63%)		109 (37%)	184 (63%)	107 (37%)	72 (25%)	112 (38%)	10 (3%)	97 (33%)
Lakshadweep	12 (100.0%)	0 (.0%)	(.0%)	10 (83%)		2 (17%)	9 (75%)	3 (25%)	0 (0%)	9 (75%)	2 (17%)	1 (8%)
Madhya Pradesh	145696 (87.6%)	18054 (10.9%)	2596 (1.6%)	131339 (79%)		35007 (21%)	54931 (33%)	111415 (67%)	36085 (22%)	18711 (11%)	84109 (51%)	27441 (16%)
Maharashtra	170295 (85.2%)	17477 (8.7%)	12204 (6.1%)	122403 (61%)		77573 (39%)	87565 (44%)	112411 (56%)	27547 (14%)	56622 (28%)	61722 (31%)	54085 (27%)
Manipur	1577 (88.0%)	181 (10.1%)	35 (2.0%)	1189 (66%)		604 (34%)	1148 (64%)	645 (36%)	420 (23%)	727 (41%)	289 (16%)	357 (20%)
Meghalaya	3523 (84.9%)	374 (9.0%)	255 (6.1%)	2613 (63%)		1539 (37%)	2538 (61%)	1614 (39%)	1085 (26%)	1451 (35%)	631 (15%)	985 (24%)
Mizoram	1446 (82.7%)	191 (10.9%)	112 (6.4%)	1011 (58%)		738 (42%)	1057 (60%)	692 (40%)	151 (9%)	905 (52%)	140 (8%)	553 (32%)
Nagaland	3149 (86.3%)	407 (11.2%)	92 (2.5%)	2467 (68%)		1181 (32%)	1909 (52%)	1739 (48%)	776 (21%)	1132 (31%)	873 (24%)	867 (24%)
Odisha	47988 (91.6%)	3908 (7.5%)	485 (.9%)	37920 (72%)		14461 (28%)	27908 (53%)	24473 (47%)	20507 (39%)	7389 (14%)	12285 (23%)	12200 (23%)
Puducherry	2875 (83.5%)	217 (6.3%)	352 (10.2%)	2148 (62%)		1296 (38%)	2437 (71%)	1007 (29%)	1353 (39%)	1059 (31%)	143 (4%)	889 (26%)
Punjab	44311 (88.4%)	5005 (10.0%)	826 (1.6%)	33800 (67%)		16342 (33%)	26095 (52%)	24047 (48%)	13958 (28%)	12025 (24%)	11842 (24%)	12317 (25%)
Rajasthan	126803 (85.0%)	19356 (13.0%)	3066 (2.1%)	110028 (74%)		39197 (26%)	65866 (44%)	83359 (56%)	44954 (30%)	20780 (14%)	56343 (38%)	27148 (18%)
Sikkim	1028 (74.9%)	123 (9.0%)	222 (16.2%)	874 (64%)		499 (36%)	890 (65%)	483 (35%)	151 (11%)	731 (53%)	205 (15%)	286 (21%)
Tamil Nadu	72513 (87.6%)	8005 (9.7%)	2305 (2.8%)	59997 (72%)		22826 (28%)	51426 (62%)	31397 (38%)	29800 (36%)	21503 (26%)	11941 (14%)	19579 (24%)
Telangana	53332 (87.8%)	5959 (9.8%)	1423 (2.3%)	44842 (74%)		15872 (26%)	31254 (51%)	29460 (49%)	13494 (22%)	17718 (29%)	17713 (29%)	11789 (19%)
Tripura	2288 (90.0%)	237 (9.3%)	18 (.7%)	1941 (76%)		602 (24%)	1614 (63%)	929 (37%)	895 (35%)	719 (28%)	368 (14%)	561 (22%)
Uttar Pradesh	397821 (87.7%)	42904 (9.5%)	12987 (2.9%)	341444 (75%)		112268 (25%)	175391 (39%)	278321 (61%)	90138 (20%)	84916 (19%)	203981 (45%)	74677 (16%)
Uttarakhand	19924 (87.4%)	2360 (10.4%)	505 (2.2%)	16508 (72%)		6281 (28%)	10260 (45%)	12529 (55%)	6311 (28%)	3872 (17%)	8054 (35%)	4552 (20%)
West Bengal	78530 (86.8%)	9130 (10.1%)	2827 (3.1%)	63770 (70%)		26717 (30%)	60264 (67%)	30223 (33%)	41413 (46%)	18761 (21%)	10385 (11%)	19928 (22%)
INDIA	**1856385 (86.9%)**	**220104 (10.3%)**	**59341 (2.8%)**	**1528000 (72%)**		**607830 (28%)**	**959330 (45%)**	**1176500 (55%)**	**496979 (23%)**	**455285 (21%)**	**746913 (35%)**	**436653 (20%)**

1.4 Patient Transfer Status & Treatment Initiation Status

State	Patients Notified	Transfer Out	Transfer In	Net TB Patients Notified	Net TB Patients Initiated on Treatment
Andaman & Nicobar Islands	507	8	17	516	497 (96%)
Andhra Pradesh	86832	510	1440	87762	86146 (98%)
Arunachal Pradesh	2724	42	190	2872	2707 (94%)
Assam	37641	569	658	37730	35807 (95%)
Bihar	131703	842	4627	135488	128535 (95%)
Chandigarh	4720	1847	369	3242	3052 (94%)
Chhattisgarh	32416	248	447	32615	31871 (98%)
Dadra and Nagar Haveli and Daman and Diu	1013	314	65	764	750 (98%)
Delhi	103038	20017	1281	84302	73226 (87%)
Goa	2018	113	133	2038	1942 (95%)
Gujarat	144731	4169	722	141284	138983 (98%)
Haryana	69083	3053	5223	71253	65704 (92%)
Himachal Pradesh	14492	339	644	14797	14430 (98%)
Jammu & Kashmir	10826	129	308	11005	10237 (93%)
Jharkhand	52179	370	1367	53176	51466 (97%)
Karnataka	72435	1926	933	71442	68641 (96%)
Kerala	21872	361	513	22024	20950 (95%)
Ladakh	291	17	45	319	308 (97%)
Lakshadweep	12	1	9	20	20 (100%)
Madhya Pradesh	166346	1817	3719	168248	163022 (97%)
Maharashtra	199976	4931	1550	196595	186264 (95%)
Manipur	1793	14	95	1874	1734 (93%)
Meghalaya	4152	112	153	4193	3957 (94%)
Mizoram	1749	8	40	1781	1757 (99%)
Nagaland	3648	41	80	3687	3611 (98%)
Odisha	52381	620	386	52147	50657 (97%)
Puducherry	3444	2099	64	1409	1303 (93%)
Punjab	50142	863	2797	52076	48160 (92%)
Rajasthan	149225	2151	3960	151034	140997 (93%)
Sikkim	1373	31	97	1439	1387 (96%)
Tamil Nadu	82823	749	2936	85010	81562 (96%)
Telangana	60714	825	1035	60924	59141 (97%)
Tripura	2543	13	247	2777	2670 (96%)
Uttar Pradesh	453712	4023	15210	464899	439242 (94%)
Uttarakhand	22789	974	1761	23576	22180 (94%)
West Bengal	90487	1078	2103	91512	87593 (96%)
INDIA	**2135830**	**55224**	**55224**	**2135830**	**2030509 (95%)**

Net TB Patients – TB Notified patients that are currently in the facility/ District/ State whom are accounted after transferred out and transferred in patients.

1.5 Paediatric TB cases notification & Treatment initiation status

State	Paediatric TB patients notified (Based On Diagnosing PHI)			Net paediatric TB patients* notified (Based On Current PHI)			Paediatric Patients initiated on treatment		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	22	0	22	22	0	22	21 (95%)	0 (NA)	21 (95%)
Andhra Pradesh	1405	977	2382	1646	791	2437	1607 (98%)	785 (99%)	2392 (98%)
Arunachal Pradesh	258	1	259	274	0	274	260 (95%)	0 (NA)	260 (95%)
Assam	878	304	1182	1045	121	1166	975 (93%)	114 (94%)	1089 (93%)
Bihar	3070	8873	11943	3127	8977	12104	2863 (92%)	8949 (100%)	11812 (98%)
Chandigarh	404	31	435	257	9	266	244 (95%)	7 (78%)	251 (94%)
Chhattisgarh	772	629	1401	885	527	1412	871 (98%)	522 (99%)	1393 (99%)
Dadra and Nagar Haveli and Daman and Diu	62	7	69	39	4	43	39 (100%)	4 (100%)	43 (100%)
Delhi	8119	2365	10484	8139	1398	9537	7295 (90%)	1183 (85%)	8478 (89%)
Goa	56	8	64	54	7	61	49 (91%)	7 (100%)	56 (92%)
Gujarat	2865	3555	6420	3584	2683	6267	3507 (98%)	2674 (100%)	6181 (99%)
Haryana	2171	1476	3647	2682	1142	3824	2474 (92%)	1097 (96%)	3571 (93%)
Himachal Pradesh	394	53	447	448	22	470	435 (97%)	19 (86%)	454 (97%)
Jammu & Kashmir	480	99	579	521	62	583	494 (95%)	59 (95%)	553 (95%)
Jharkhand	1072	1617	2689	1159	1557	2716	1101 (95%)	1554 (100%)	2655 (98%)
Karnataka	1845	1127	2972	2215	696	2911	2158 (97%)	665 (96%)	2823 (97%)
Kerala	376	276	652	573	92	665	558 (97%)	86 (93%)	644 (97%)
Ladakh	4	0	4	4	0	4	4 (100%)	0 (NA)	4 (100%)
Lakshadweep	1	0	1	1	0	1	1 (100%)	0 (NA)	1 (100%)
Madhya Pradesh	7724	4517	12241	8700	3647	12347	8518 (98%)	3601 (99%)	12119 (98%)
Maharashtra	5827	6872	12699	7430	5189	12619	6987 (94%)	4996 (96%)	11983 (95%)
Manipur	42	12	54	49	7	56	43 (88%)	6 (86%)	49 (88%)
Meghalaya	173	108	281	222	61	283	209 (94%)	59 (97%)	268 (95%)
Mizoram	64	13	77	70	7	77	69 (99%)	7 (100%)	76 (99%)
Nagaland	164	33	197	169	28	197	163 (96%)	28 (100%)	191 (97%)
Odisha	1528	370	1898	1690	194	1884	1626 (96%)	182 (94%)	1808 (96%)
Puducherry	98	3	101	47	0	47	45 (96%)	0 (NA)	45 (96%)
Punjab	1835	918	2753	2078	809	2887	1945 (94%)	787 (97%)	2732 (95%)
Rajasthan	3801	3490	7291	4123	3198	7321	3847 (93%)	3144 (98%)	6991 (95%)
Sikkim	52	7	59	57	6	63	56 (98%)	6 (100%)	62 (98%)
Tamil Nadu	1541	1170	2711	1733	1022	2755	1664 (96%)	998 (98%)	2662 (97%)
Telangana	1183	724	1907	1353	562	1915	1309 (97%)	543 (97%)	1852 (97%)
Tripura	35	2	37	42	0	42	41 (98%)	0 (NA)	41 (98%)
Uttar Pradesh	14265	12063	26328	17001	9987	26988	16021 (94%)	9813 (98%)	25834 (96%)
Uttarakhand	760	240	1000	845	174	1019	816 (97%)	167 (96%)	983 (96%)
West Bengal	1973	973	2946	2592	377	2969	2489 (96%)	356 (94%)	2845 (96%)
India	**65319**	**52913**	**118232**	**72284**	**42979**	**115263**	**70804 (98%)**	**42418 (99%)**	**113222 (98%)**

* - Net TB Patients – TB Notified patients that are currently in the facility/ District/ State whom are accounted after transferred out and transferred in patients.

1.6 Tribal TB cases notification & Treatment initiation status

State	Number of Districts mapped as Tribal district (partly or wholly)	Tribal TB patients notified (Based On Diagnosing PHI)				Net Tribal TB patients* notified (Based On Current PHI)			Tribal TB Patients initiated on treatment		
		Public	Private	Total		Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	NA	59	0	59		63	0	63	62 (98.4%)	NA	62 (98.4%)
Andhra Pradesh	8	9257	2596	11853		9460	2351	11811	9253 (97.8%)	2347 (99.8%)	11600 (98.2%)
Arunachal Pradesh	14	2549	14	2563		2714	0	2714	2574 (94.8%)	NA	2574 (94.8%)
Assam	7	6132	818	6950		6394	674	7068	6226 (97.4%)	653 (96.9%)	6879 (97.3%)
Bihar	NA	NA	NA	0		0	0	0	NA	NA	NA
Chandigarh	NA	NA	NA	0		0	0	0	NA	NA	NA
Chhattisgarh	19	9785	1025	10810		10664	980	11644	10481 (98.3%)	938 (95.7%)	11419 (98.1%)
Dadra and Nagar Haveli and Daman and Diu	1	643	45	688		432	38	470	426 (98.6%)	38 (100.0%)	464 (98.7%)
Delhi	NA	NA	NA	0		0	0	0	NA	NA	NA
Goa	NA	NA	NA	0		0	0	0	NA	NA	NA
Gujarat	14	16631	5369	22000		18624	3828	22452	18245 (98.0%)	3815 (99.7%)	22060 (98.3%)
Haryana	NA	NA	NA	0		0	0	0	NA	NA	NA
Himachal Pradesh	3	162	1	163		380	4	384	373 (98.2%)	4 (100.0%)	377 (98.2%)
Jammu & Kashmir	1	19	0	19		57	0	57	56 (98.2%)	NA	56 (98.2%)
Jharkhand	15	18847	9253	28100		19102	9000	28102	18192 (95.2%)	8965 (99.6%)	27157 (96.6%)
Karnataka	4	1836	287	2123		2684	110	2794	2274 (84.7%)	64 (58.2%)	2338 (83.7%)
Kerala	4	367	86	453		796	17	813	786 (98.7%)	13 (76.5%)	799 (98.3%)
Ladakh	2	280	11	291		286	24	310	275 (96.2%)	24 (100.0%)	299 (96.5%)
Lakshadweep	1	12	0	12		20	0	20	20 (100.0%)	NA	20 (100.0%)
Madhya Pradesh	20	18210	6470	24680		21239	5007	26246	20788 (97.9%)	4903 (97.9%)	25691 (97.9%)
Maharashtra	15	10479	2562	13041		12940	1759	14699	12503 (96.6%)	1731 (98.4%)	14234 (96.8%)
Manipur	6	683	118	801		866	94	960	821 (94.8%)	93 (98.9%)	914 (95.2%)
Meghalaya	7	3281	871	4152		3836	357	4193	3643 (95.0%)	358 (100.3%)	4001 (95.4%)
Mizoram	8	1478	269	1747		1589	192	1781	1574 (99.1%)	192 (100.0%)	1766 (99.2%)
Nagaland	11	2924	724	3648		3156	531	3687	3119 (98.8%)	527 (99.2%)	3646 (98.9%)
Odisha	13	18056	2253	20309		20276	1020	21296	20194 (99.6%)	1004 (98.4%)	21198 (99.5%)
Puducherry	NA	NA	NA	0		0	0	0	NA	NA	NA
Punjab	1	0	4	4		0	1	1	NA	NA	NA
Rajasthan	8	12385	2492	14877		15003	2350	17353	14210 (94.7%)	2291 (97.5%)	16501 (95.1%)
Sikkim	1	49	0	49		86	0	86	81 (94.2%)	NA	81 (94.2%)
Tamil Nadu	NA	171	6	177		442	1	443	440 (99.5%)	1 (100.0%)	441 (99.5%)
Telangana	8	5096	2053	7149		5235	2060	7295	5112 (97.7%)	2046 (99.3%)	7158 (98.1%)
Tripura	NA	238	0	238		266	1	267	261 (98.1%)	1 (100.0%)	262 (98.1%)
Uttar Pradesh	NA	3347	242	3589		3692	302	3994	3619 (98.0%)	294 (97.4%)	3913 (98.0%)
Uttarakhand	1	12	0	12		46	0	46	46 (100.0%)	NA	46 (100.0%)
West Bengal	NA	NA	NA	0		0	0	0	NA	NA	NA
INDIA	**205**	**142988**	**37569**	**180557**		**160348**	**30701**	**191049**	**155654 (97.1%)**	**30302 (98.7%)**	**185956 (97.3%)**

Net TB Patients – TB Notified patients that are currently in the facility/ District/ State whom are accounted after transferred out and transferred in patients.

1.7 Gender-disaggregated data on Total TB notification, Paediatric TB notification & Treatment initiation

State	TB Cases Notified			Paediatric TB Cases Notified			Total TB Cases initiated on treatment		
	Male	Female	Trans Gender	Male	Female	Trans Gender	Male	Female	Trans Gender
Andaman & Nicobar Islands	288	228	0	9	13	0	279 (97%)	218 (96%)	0 (NA)
Andhra Pradesh	57380	30345	36	1190	1246	1	56324 (98%)	29787 (98%)	35 (97%)
Arunachal Pradesh	1554	1312	6	136	137	1	1465 (94%)	1237 (94%)	5 (83%)
Assam	25178	12543	11	534	631	1	23916 (95%)	11882 (95%)	9 (82%)
Bihar	83314	52105	66	7097	5000	7	78711 (94%)	49761 (96%)	63 (95%)
Chandigarh	1727	1509	7	100	162	4	1627 (94%)	1418 (94%)	7 (100%)
Chhattisgarh	20529	12070	17	727	682	3	20036 (98%)	11818 (98%)	17 (100%)
Dadra and Nagar Haveli and Daman and Diu	454	309	0	13	30	0	444 (98%)	306 (99%)	0 (NA)
Delhi	42360	41952	55	3539	5990	8	36197 (85%)	36982 (88%)	47 (85%)
Goa	1227	810	1	30	31	0	1166 (95%)	775 (96%)	1 (100%)
Gujarat	90173	51076	41	3060	3205	2	88533 (98%)	50409 (99%)	41 (100%)
Haryana	42386	28833	32	1641	2181	2	38791 (92%)	26883 (93%)	30 (94%)
Himachal Pradesh	9154	5641	2	206	264	0	8924 (97%)	5504 (98%)	2 (100%)
Jammu & Kashmir	6410	4591	4	259	324	0	5918 (92%)	4315 (94%)	4 (100%)
Jharkhand	35967	17191	19	1437	1278	1	34803 (97%)	16646 (97%)	17 (89%)
Karnataka	44975	26433	35	1456	1453	2	43181 (96%)	25425 (96%)	35 (100%)
Kerala	14203	7816	4	305	360	0	13482 (95%)	7464 (95%)	4 (100%)
Ladakh	169	150	0	1	3	0	165 (98%)	143 (95%)	0 (NA)
Lakshadweep	9	11	0	0	1	0	9 (100%)	11 (100%)	0 (NA)
Madhya Pradesh	104097	64085	65	6528	5811	8	100545 (97%)	62415 (97%)	62 (95%)
Maharashtra	104495	92037	88	4857	7760	2	98722 (94%)	87465 (95%)	77 (88%)
Manipur	1205	667	1	34	22	0	1119 (93%)	614 (92%)	1 (100%)
Meghalaya	2540	1650	3	131	152	0	2390 (94%)	1564 (95%)	3 (100%)
Mizoram	1030	751	0	47	30	0	1013 (98%)	744 (99%)	0 (NA)
Nagaland	2270	1414	3	95	102	0	2223 (98%)	1385 (98%)	3 (100%)
Odisha	34763	17367	18	930	954	0	33768 (97%)	16872 (97%)	17 (94%)
Puducherry	911	496	1	25	22	0	837 (92%)	465 (94%)	1 (100%)
Punjab	29536	22507	34	1080	1802	5	27202 (92%)	20925 (93%)	33 (97%)
Rajasthan	99101	51876	57	3862	3456	3	91979 (93%)	48967 (94%)	51 (89%)
Sikkim	737	701	0	25	38	0	712 (97%)	675 (96%)	0 (NA)
Tamil Nadu	57201	27702	30	1372	1382	1	54824 (96%)	26709 (96%)	29 (97%)
Telangana	36515	24387	27	773	1141	1	35353 (97%)	23761 (97%)	27 (100%)
Tripura	2080	696	0	26	16	0	1999 (96%)	671 (96%)	0 (NA)
Uttar Pradesh	269072	195598	224	12475	14501	12	253280 (94%)	185755 (95%)	207 (92%)
Uttarakhand	13647	9912	15	409	610	0	12780 (94%)	9386 (95%)	14 (93%)
West Bengal	61412	30065	23	1299	1670	0	58856 (96%)	28718 (96%)	19 (83%)
India	**1298069**	**836836**	**925**	**55708**	**62460**	**64**	**1231573 (95%)**	**798075 (95%)**	**861 (93%)**

1.8 Gender-disaggregated data on TB notification, Treatment outcomes

State	TB Cases Notified-2020			Success Rate			Death Rate		
	Male	Female	Trans Gender	Male	Female	Trans Gender	Male	Female	Trans Gender
Andaman & Nicobar Islands	263	171	0	216 (82%)	154 (90%)	0 (NA)	12 (5%)	4 (2%)	0 (NA)
Andhra Pradesh	41020	21862	32	36519 (89%)	20127 (92%)	29 (91%)	1838 (4%)	650 (3%)	2 (6%)
Arunachal Pradesh	1288	1132	4	1061 (82%)	949 (84%)	4 (100%)	53 (4%)	25 (2%)	0 (0%)
Assam	23167	11352	21	19208 (83%)	9667 (85%)	21 (100%)	1022 (4%)	400 (4%)	0 (0%)
Bihar	63111	36546	74	48458 (77%)	28995 (79%)	50 (68%)	2189 (3%)	1149 (3%)	3 (4%)
Chandigarh	1515	1309	5	1151 (76%)	1123 (86%)	4 (80%)	87 (6%)	42 (3%)	0 (0%)
Chhattisgarh	18493	10593	18	15818 (86%)	9248 (87%)	14 (78%)	1002 (5%)	376 (4%)	2 (11%)
Dadra and Nagar Haveli and Daman and Diu	460	275	0	431 (94%)	255 (93%)	0 (NA)	10 (2%)	7 (3%)	0 (NA)
Delhi	38153	35181	56	26398 (69%)	26460 (75%)	35 (63%)	1290 (3%)	716 (2%)	2 (4%)
Goa	887	695	2	729 (82%)	607 (87%)	2 (100%)	57 (6%)	32 (5%)	0 (0%)
Gujarat	73866	41423	56	63970 (87%)	37464 (90%)	50 (89%)	4027 (5%)	1444 (3%)	1 (2%)
Haryana	37986	25019	31	29102 (77%)	20380 (81%)	23 (74%)	1907 (5%)	730 (3%)	1 (3%)
Himachal Pradesh	8210	5082	7	7070 (86%)	4567 (90%)	6 (86%)	538 (7%)	185 (4%)	0 (0%)
Jammu & Kashmir	5162	3634	4	4251 (82%)	3036 (84%)	3 (75%)	196 (4%)	113 (3%)	0 (0%)
Jharkhand	31191	14460	9	25783 (83%)	12250 (85%)	8 (89%)	1144 (4%)	424 (3%)	0 (0%)
Karnataka	39537	22949	48	31243 (79%)	19481 (85%)	32 (67%)	3267 (8%)	1219 (5%)	4 (8%)
Kerala	13414	7219	8	10720 (80%)	6045 (84%)	5 (63%)	1217 (9%)	450 (6%)	1 (13%)
Ladakh	127	116	0	99 (78%)	89 (77%)	0 (NA)	8 (6%)	11 (9%)	0 (NA)
Lakshadweep	8	9	0	7 (88%)	8 (89%)	0 (NA)	0 (0%)	0 (0%)	0 (NA)
Madhya Pradesh	85532	50151	76	66420 (78%)	41525 (83%)	61 (80%)	3471 (4%)	1323 (3%)	1 (1%)
Maharashtra	81008	66324	88	67268 (83%)	56972 (86%)	77 (88%)	4614 (6%)	2370 (4%)	4 (5%)
Manipur	1008	555	1	808 (80%)	436 (79%)	1 (100%)	35 (3%)	20 (4%)	0 (0%)
Meghalaya	2254	1606	4	1787 (79%)	1318 (82%)	4 (100%)	122 (5%)	63 (4%)	0 (0%)
Mizoram	1088	900	0	962 (88%)	811 (90%)	0 (NA)	26 (2%)	24 (3%)	0 (NA)
Nagaland	2134	1380	4	1718 (81%)	1121 (81%)	2 (50%)	57 (3%)	39 (3%)	1 (25%)
Odisha	30204	14766	25	26649 (88%)	13324 (90%)	22 (88%)	1803 (6%)	703 (5%)	0 (0%)
Puducherry	783	436	1	627 (80%)	367 (84%)	0 (0%)	58 (7%)	22 (5%)	0 (0%)
Punjab	26639	19811	41	20749 (78%)	16224 (82%)	33 (80%)	1769 (7%)	892 (5%)	6 (15%)
Rajasthan	87795	45619	46	71039 (81%)	38893 (85%)	40 (87%)	3495 (4%)	1120 (2%)	1 (2%)
Sikkim	642	497	0	575 (90%)	447 (90%)	0 (NA)	29 (5%)	16 (3%)	0 (NA)
Tamil Nadu	47157	21757	29	38192 (81%)	18666 (86%)	27 (93%)	3109 (7%)	940 (4%)	1 (3%)
Telangana	37280	23549	28	32791 (88%)	21362 (91%)	23 (82%)	1356 (4%)	519 (2%)	1 (4%)
Tripura	1593	542	2	1279 (80%)	458 (85%)	2 (100%)	123 (8%)	36 (7%)	0 (0%)
Uttar Pradesh	212835	150653	176	174676 (82%)	128972 (86%)	137 (78%)	10414 (5%)	4494 (3%)	5 (3%)
Uttarakhand	11595	8074	12	9485 (82%)	6917 (86%)	10 (83%)	539 (5%)	204 (3%)	0 (0%)
West Bengal	52038	25416	23	43509 (84%)	21637 (85%)	19 (83%)	3167 (6%)	1151 (5%)	2 (9%)
India	**1079443**	**671063**	**931**	**880768 (82%)**	**570355 (85%)**	**744 (80%)**	**54051 (5%)**	**21913 (3%)**	**38 (4%)**

2.1 TB – HIV

State	TB patients with known HIV status (%)			TB-HIV co-infected patients		
	Public	Private	Total	Diagnosed	Put on ART*	Put on CPT*
Andaman & Nicobar Islands	488 (95%)	1 (100%)	489 (95%)	3	2 (100%)	0 (%)
Andhra Pradesh	63099 (100%)	24320 (100%)	87419 (100%)	4286	4142 (97%)	4196 (98%)
Arunachal Pradesh	2707 (94%)	0 (NA)	2707 (94%)	2	5 (250%)	5 (250%)
Assam	29733 (88%)	3485 (84%)	33218 (88%)	289	241 (83%)	269 (93%)
Bihar	53840 (84%)	66080 (92%)	119920 (89%)	1429	1240 (87%)	1044 (73%)
Chandigarh	3034 (97%)	84 (69%)	3118 (96%)	209	194 (93%)	208 (100%)
Chhattisgarh	24763 (97%)	6483 (90%)	31246 (96%)	390	345 (88%)	379 (97%)
Dadra and Nagar Haveli and Daman and Diu	710 (100%)	50 (100%)	760 (100%)	NA	NA	NA
Delhi	58661 (87%)	10707 (64%)	69368 (82%)	1080	975 (90%)	1055 (98%)
Goa	1618 (98%)	255 (67%)	1873 (92%)	62	60 (97%)	62 (100%)
Gujarat	100124 (99%)	38146 (94%)	138270 (98%)	2834	2788 (98%)	2897 (102%)
Haryana	50431 (96%)	17811 (95%)	68242 (96%)	447	421 (94%)	383 (86%)
Himachal Pradesh	14099 (99%)	560 (97%)	14659 (99%)	87	85 (98%)	94 (108%)
Jammu & Kashmir	9546 (92%)	586 (90%)	10132 (92%)	42	36 (86%)	41 (98%)
Jharkhand	33922 (93%)	13165 (79%)	47087 (89%)	347	294 (85%)	266 (77%)
Karnataka	58094 (98%)	11349 (95%)	69443 (97%)	3848	3718 (97%)	3840 (100%)
Kerala	17868 (94%)	2651 (85%)	20519 (93%)	215	193 (90%)	210 (98%)
Ladakh	280 (95%)	22 (92%)	302 (95%)	NA	NA	NA
Lakshadweep	20 (100%)	0 (NA)	20 (100%)	NA	NA	NA
Madhya Pradesh	116120 (96%)	43580 (91%)	159700 (95%)	1397	1190 (85%)	1301 (93%)
Maharashtra	123404 (98%)	66692 (95%)	190096 (97%)	5808	5570 (96%)	5754 (99%)
Manipur	1479 (88%)	117 (62%)	1596 (85%)	117	112 (96%)	116 (99%)
Meghalaya	3331 (87%)	231 (65%)	3562 (85%)	110	99 (90%)	103 (94%)
Mizoram	1579 (99%)	192 (100%)	1771 (99%)	259	250 (97%)	256 (99%)
Nagaland	2968 (94%)	413 (78%)	3381 (92%)	279	255 (91%)	280 (100%)
Odisha	47891 (99%)	3903 (99%)	51794 (99%)	545	512 (94%)	540 (99%)
Puducherry	1389 (99%)	0 (NA)	1389 (99%)	31	31 (100%)	31 (100%)
Punjab	36421 (95%)	12388 (90%)	48809 (94%)	1034	969 (94%)	975 (94%)
Rajasthan	102792 (96%)	40507 (93%)	143299 (95%)	1404	1315 (94%)	1367 (97%)
Sikkim	1287 (96%)	98 (99%)	1385 (96%)	8	6 (75%)	8 (100%)
Tamil Nadu	68272 (99%)	12256 (78%)	80528 (95%)	2984	2788 (93%)	2941 (99%)
Telangana	43689 (99%)	16489 (98%)	60178 (99%)	1720	1354 (79%)	1010 (59%)
Tripura	2680 (97%)	11 (85%)	2691 (97%)	40	40 (100%)	39 (98%)
Uttar Pradesh	334691 (96%)	107212 (93%)	441903 (95%)	2454	2330 (95%)	2341 (95%)
Uttarakhand	18163 (94%)	3750 (86%)	21913 (93%)	121	84 (69%)	95 (79%)
West Bengal	80239 (98%)	8268 (90%)	88507 (97%)	997	913 (92%)	979 (98%)
INDIA	**1509432 (96%)**	**511862 (92%)**	**2021294 (95%)**	**34877**	**32577 (93%)**	**33085 (95%)**

*- Source of data – NACP Monthly Progress Reports

2.2 Provider initiated testing and counselling among presumptive TB cases and Paediatric TB patients

State	Presumptive TB Cases			Paediatric TB Patients		
	Examined	With known HIV status*	HIV positive cases among tested*	Notified	With known HIV status	HIV positive patients among tested
Andaman & Nicobar Islands	6024	423 (7%)	187 (3%)	22	21 (95%)	0 (0.0%)
Andhra Pradesh	750486	159610 (21%)	65473 (9%)	2389	2368 (99%)	9 (0.4%)
Arunachal Pradesh	17301	1671 (10%)	830 (5%)	274	259 (95%)	0 (0.0%)
Assam	126078	22065 (18%)	7294 (6%)	1161	944 (81%)	1 (0.1%)
Bihar	380833	31558 (8%)	8834 (2%)	12069	10039 (83%)	42 (0.4%)
Chandigarh	14394	6278 (44%)	2414 (17%)	259	252 (97%)	4 (1.6%)
Chhattisgarh	214665	12130 (6%)	5459 (3%)	1404	1252 (89%)	8 (0.6%)
Dadra and Nagar Haveli and Daman and Diu	15868	3392 (21%)	970 (6%)	42	42 (100%)	0 (0.0%)
Delhi	133570	22155 (17%)	8220 (6%)	9521	7790 (82%)	9 (0.1%)
Goa	13454	24 (%)	24 (%)	61	56 (92%)	0 (0.0%)
Gujarat	889374	219076 (25%)	73387 (8%)	6208	5810 (94%)	11 (0.2%)
Haryana	220294	63487 (29%)	21597 (10%)	3805	3663 (96%)	1 (0.0%)
Himachal Pradesh	156389	8757 (6%)	3315 (2%)	469	463 (99%)	0 (0.0%)
Jammu & Kashmir	195228	5834 (3%)	1241 (1%)	581	542 (93%)	0 (0.0%)
Jharkhand	202556	19160 (9%)	5778 (3%)	2706	2019 (75%)	3 (0.1%)
Karnataka	538482	65656 (12%)	41028 (8%)	2845	2706 (95%)	5 (0.2%)
Kerala	228096	6608 (3%)	2769 (1%)	665	612 (92%)	0 (0.0%)
Ladakh	3974	97 (2%)	26 (1%)	4	4 (100%)	0 (0.0%)
Lakshadweep	1045	9 (1%)	9 (1%)	1	1 (100%)	0 (0.0%)
Madhya Pradesh	634719	136721 (22%)	38173 (6%)	12301	11223 (91%)	8 (0.1%)
Maharashtra	1058856	544082 (51%)	83589 (8%)	12555	12038 (96%)	32 (0.3%)
Manipur	13648	1071 (8%)	390 (3%)	55	46 (84%)	1 (2.2%)
Meghalaya	23821	2764 (12%)	1244 (5%)	280	192 (69%)	0 (0.0%)
Mizoram	7679	1239 (16%)	522 (7%)	75	74 (99%)	1 (1.4%)
Nagaland	15838	1644 (10%)	743 (5%)	192	178 (93%)	2 (1.1%)
Odisha	874054	114541 (13%)	38294 (4%)	1878	1853 (99%)	0 (0.0%)
Puducherry	15411	4327 (28%)	1076 (7%)	47	41 (87%)	0 (0.0%)
Punjab	139308	32250 (23%)	12834 (9%)	2872	2701 (94%)	4 (0.1%)
Rajasthan	492729	153499 (31%)	54445 (11%)	7294	6845 (94%)	11 (0.2%)
Sikkim	12918	290 (2%)	177 (1%)	63	61 (97%)	0 (0.0%)
Tamil Nadu	785646	293348 (37%)	98198 (12%)	2734	2441 (89%)	2 (0.1%)
Telangana	253721	69771 (27%)	24489 (10%)	1882	1842 (98%)	8 (0.4%)
Tripura	23536	666 (3%)	332 (1%)	42	42 (100%)	0 (0.0%)
Uttar Pradesh	1169076	234041 (20%)	56644 (5%)	26952	24966 (93%)	16 (0.1%)
Uttarakhand	78842	6355 (8%)	2200 (3%)	1012	946 (93%)	2 (0.2%)
West Bengal	955286	277894 (29%)	127336 (13%)	2959	2810 (95%)	0 (0.0%)
INDIA	**10663199**	**2522493 (24%)**	**789541 (7%)**	**118232**	**107142 (91%)**	**180 (0.2%)**

* Data source for HIV status among presumptive TB cases: Annexure M reports

2.3 Intensified TB case finding activities in ICTC Centres – Year 2021 (January to November 2021)

State	ICTC attendees (excl. pregnant women)	Clients attending ICTC Centres		
		Referred for TB testing	Diagnosed with TB	Put on treatment
Andaman & Nicobar Islands	14,294	206	28	6
Andhra Pradesh	4,52,847	47,207	2,696	2,484
Arunachal Pradesh	8,404	369	132	1
Assam	89,119	5,665	595	245
Bihar	2,77,381	20,504	3,502	337
Chandigarh	45,906	29	3	-
Chhattisgarh	1,66,919	12,146	586	388
Dadra and Nagar Haveli and Daman and Diu	14,307	420	304	49
Delhi	1,98,533	7,717	232	127
Goa	20,511	1,052	21	10
Gujarat	6,45,401	61,114	2,873	2,522
Haryana	3,25,106	13,918	1,511	241
Himachal Pradesh	84,270	4,359	133	84
Jammu & Kashmir	42,250	2,853	74	1
Jharkhand	1,16,207	9,239	1,076	344
Karnataka	11,48,449	80,870	3,367	2,967
Kerala	2,78,818	12,868	105	36
Ladakh	589	11	-	-
Lakshadweep	-	-	-	-
Madhya Pradesh	2,97,730	20,858	2,101	1,054
Maharashtra	18,86,193	1,68,692	8,184	7,307
Manipur	26,543	564	13	2
Meghalaya	14,817	599	101	42
Mizoram	27,234	1,961	63	16
Nagaland	34,297	1,854	137	75
Odisha	5,45,503	63,465	1,576	1,212
Puducherry	41,693	102	57	11
Punjab	3,24,462	16,054	608	239
Rajasthan	5,06,495	26,494	1,133	792
Sikkim	6,202	75	22	3
Tamil Nadu	17,08,569	1,14,383	2,650	2,593
Telangana	3,28,045	22,204	1,092	924
Tripura	31,201	3,612	66	11
Uttar Pradesh	6,91,953	52,723	4,877	2,519
Uttarakhand	70,360	2,937	607	122
West Bengal	5,44,526	22,822	973	590
INDIA	**1,10,15,134**	**7,99,946**	**41,498**	**27,354**

*- Source of data – NACP Monthly Progress Reports

2.4 Intensified TB case finding activities in ART centre - Year 2021 (January to December 2021)

State	Cumulative no. of PLHIV on ART at ARTCs as on Dec' 2021	No. of times PLHIV attended ART centre in 2021	PLHIV screened for TB	PLHIV with presumptive TB	PLHIV referred for TB diagnosis test	PLHIV tested for TB	PLHIV diagnosed with TB	PLHIV bacterio-logically con-firmed
Andaman & Nicobar Islands	136	686	686	8	8	8	-	-
Andhra Pradesh	1,94,189	14,13,132	13,53,571	54,119	53,736	52,747	2,921	2,105
Arunachal Pradesh	205	726	720	49	49	49	2	2
Assam	8,841	49,829	49,604	708	541	322	177	36
Bihar	65,221	4,39,614	4,10,336	8,710	7,021	5,076	1,371	643
Chandigarh	5,732	31,061	31,061	217	217	178	80	30
Chhattisgarh	16,318	1,28,109	1,24,068	3,378	2,788	2,626	331	241
Delhi	33,809	2,55,588	2,50,060	2,955	2,218	1,896	842	317
Goa	3,103	27,293	24,408	267	250	248	12	10
Gujarat	73,229	5,34,323	5,30,097	41,462	33,624	33,346	2,487	1,145
Haryana	21,121	94,026	92,838	1,558	1,554	1,234	404	303
Himachal Pradesh	4,780	34,992	34,464	384	377	377	47	32
J&K	3,045	30,521	30,503	89	89	81	41	11
Jharkhand	12,877	1,00,378	97,394	2,057	1,921	1,875	296	205
Karnataka	1,69,311	12,19,943	11,82,558	61,848	55,116	53,633	3,187	1,439
Kerala	14,846	1,20,094	1,20,029	2,117	2,068	2,005	193	92
Madhya Pradesh	31,861	1,63,582	1,57,281	10,790	10,337	9,502	998	356
Maharashtra	2,54,886	20,34,908	19,59,494	1,07,646	1,03,553	1,01,020	4,788	1,983
Manipur	13,604	1,05,142	1,05,136	529	529	522	84	42
Meghalaya	3,427	24,687	22,934	147	144	68	22	12
Mizoram	12,253	62,152	61,772	371	370	342	105	73
Nagaland	10,600	62,064	59,522	560	524	510	231	112
Odisha	22,209	1,14,088	1,05,371	7,565	4,270	4,199	282	178
Pondicherry	1,245	11,544	9,805	315	315	315	32	21
Punjab	44,928	2,87,293	2,84,583	4,263	3,707	3,466	641	427
Rajasthan	48,704	3,54,619	3,41,786	15,127	15,099	14,932	1,274	590
Sikkim	238	2,036	2,036	15	15	15	1	1
Tamil Nadu	1,21,550	10,24,651	9,94,193	46,299	45,941	45,266	2,701	1,586
Telangana	84,851	7,18,771	6,51,068	73,888	23,964	22,215	1,493	985
Tripura	2,560	12,252	12,209	213	213	204	17	8
Uttar Pradesh	94,126	7,49,896	7,47,761	13,103	12,402	12,063	1,672	861
Uttarakhand	4,495	35,422	31,139	4,247	682	447	160	92
West Bengal	45,236	2,94,154	2,90,132	4,589	3,106	3,038	397	235
India	**14,23,744**	**1,05,37,576**	**1,01,68,619**	**4,69,593**	**3,86,748**	**3,73,825**	**27,289**	**14,173**

2.5 TB-Diabetes

State	TB patients with known DM status (%)				TB - DM Patients diagnosed among tested (%)			TB- DM patients initiated on Anti-diabetic treatment (%)		
	Public	Private	Total		Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	475 (92%)	1 (100%)	476 (92%)		97 (20%)	1 (100%)	98 (21%)	73 (75%)	1 (100%)	74 (76%)
Andhra Pradesh	61941 (98%)	24186 (99%)	86127 (98%)		8510 (14%)	2730 (11%)	11240 (13%)	5624 (66%)	1513 (55%)	7137 (63%)
Arunachal Pradesh	2425 (84%)	NA	2425 (84%)		48 (2%)	NA	48 (2%)	38 (79%)	NA	38 (79%)
Assam	25194 (75%)	3082 (75%)	28276 (75%)		2003 (8%)	379 (12%)	2382 (8%)	926 (46%)	171 (45%)	1097 (46%)
Bihar	40308 (63%)	63915 (89%)	104223 (77%)		2236 (6%)	3668 (6%)	5904 (6%)	1327 (59%)	691 (19%)	2018 (34%)
Chandigarh	2913 (93%)	77 (64%)	2990 (92%)		272 (9%)	3 (4%)	275 (9%)	173 (64%)	3 (100%)	176 (64%)
Chhattisgarh	22815 (90%)	5976 (83%)	28791 (88%)		2062 (9%)	358 (6%)	2420 (8%)	1093 (53%)	137 (38%)	1230 (51%)
Dadra and Nagar Haveli and Daman and Diu	698 (98%)	50 (100%)	748 (98%)		36 (5%)	2 (4%)	38 (5%)	31 (86%)	2 (100%)	33 (87%)
Delhi	54940 (81%)	10714 (64%)	65654 (78%)		4438 (8%)	1205 (11%)	5643 (9%)	2249 (51%)	303 (25%)	2552 (45%)
Goa	1596 (96%)	231 (60%)	1827 (90%)		308 (19%)	36 (16%)	344 (19%)	237 (77%)	17 (47%)	254 (74%)
Gujarat	98844 (98%)	37285 (92%)	136129 (96%)		5561 (6%)	1939 (5%)	7500 (6%)	4856 (87%)	1641 (85%)	6497 (87%)
Haryana	48108 (92%)	17044 (91%)	65152 (91%)		3592 (7%)	1071 (6%)	4663 (7%)	2638 (73%)	826 (77%)	3464 (74%)
Himachal Pradesh	14048 (99%)	559 (97%)	14607 (99%)		1272 (9%)	38 (7%)	1310 (9%)	1096 (86%)	34 (89%)	1130 (86%)
Jammu & Kashmir	9078 (88%)	581 (89%)	9659 (88%)		592 (7%)	35 (6%)	627 (6%)	296 (50%)	23 (66%)	319 (51%)
Jharkhand	26703 (73%)	13216 (80%)	39919 (75%)		1405 (5%)	1342 (10%)	2747 (7%)	751 (53%)	305 (23%)	1056 (38%)
Karnataka	56623 (95%)	10801 (90%)	67424 (94%)		8683 (15%)	1472 (14%)	10155 (15%)	6271 (72%)	882 (60%)	7153 (70%)
Kerala	17523 (93%)	2582 (83%)	20105 (91%)		5834 (33%)	816 (32%)	6650 (33%)	3546 (61%)	455 (56%)	4001 (60%)
Ladakh	238 (81%)	18 (75%)	256 (80%)		12 (5%)	1 (6%)	13 (5%)	12 (100%)	1 (100%)	13 (100%)
Lakshadweep	20 (100%)	NA	20 (100%)		8 (40%)	NA	8 (40%)	7 (88%)	NA	7 (88%)
Madhya Pradesh	108962 (90%)	42289 (89%)	151251 (90%)		6194 (6%)	2659 (6%)	8853 (6%)	2994 (48%)	790 (30%)	3784 (43%)
Maharashtra	118769 (94%)	64409 (92%)	183178 (93%)		8136 (7%)	4140 (6%)	12276 (7%)	5771 (71%)	2473 (60%)	8244 (67%)
Manipur	1073 (64%)	91 (48%)	1164 (62%)		192 (18%)	11 (12%)	203 (17%)	139 (72%)	5 (45%)	144 (71%)
Meghalaya	3128 (82%)	226 (63%)	3354 (80%)		172 (5%)	1 (0%)	173 (5%)	119 (69%)	1 (100%)	120 (69%)
Mizoram	1549 (97%)	192 (100%)	1741 (98%)		89 (6%)	21 (11%)	110 (6%)	77 (87%)	21 (100%)	98 (89%)
Nagaland	2560 (81%)	391 (74%)	2951 (80%)		110 (4%)	29 (7%)	139 (5%)	65 (59%)	2 (7%)	67 (48%)
Odisha	46261 (96%)	3658 (93%)	49919 (96%)		3668 (8%)	230 (6%)	3898 (8%)	2773 (76%)	180 (78%)	2953 (76%)
Puducherry	1383 (98%)	NA	1383 (98%)		410 (30%)	NA	410 (30%)	326 (80%)	NA	326 (80%)
Punjab	34630 (90%)	11711 (86%)	46341 (89%)		3932 (11%)	1007 (9%)	4939 (11%)	1846 (47%)	317 (31%)	2163 (44%)
Rajasthan	96297 (90%)	38658 (89%)	134955 (89%)		3177 (3%)	1461 (4%)	4638 (3%)	2209 (70%)	852 (58%)	3061 (66%)
Sikkim	1260 (94%)	96 (97%)	1356 (94%)		117 (9%)	9 (9%)	126 (9%)	105 (90%)	8 (89%)	113 (90%)
Tamil Nadu	67118 (97%)	13423 (85%)	80541 (95%)		18321 (27%)	3515 (26%)	21836 (27%)	14874 (81%)	2720 (77%)	17594 (81%)
Telangana	42072 (95%)	15384 (91%)	57456 (94%)		2752 (7%)	980 (6%)	3732 (6%)	2321 (84%)	689 (70%)	3010 (81%)
Tripura	2577 (93%)	11 (85%)	2588 (93%)		405 (16%)	2 (18%)	407 (16%)	178 (44%)	1 (50%)	179 (44%)
Uttar Pradesh	303754 (87%)	97621 (84%)	401375 (86%)		16296 (5%)	4126 (4%)	20422 (5%)	6705 (41%)	1234 (30%)	7939 (39%)
Uttarakhand	17008 (88%)	3378 (78%)	20386 (86%)		1261 (7%)	146 (4%)	1407 (7%)	588 (47%)	77 (53%)	665 (47%)
West Bengal	77291 (94%)	8005 (87%)	85296 (93%)		10820 (14%)	1033 (13%)	11853 (14%)	7636 (71%)	801 (78%)	8437 (71%)
India	**1410182 (89%)**	**489861 (88%)**	**1900043 (89%)**		**123021 (9%)**	**34466 (7%)**	**157487 (8%)**	**79970 (65%)**	**17176 (50%)**	**97146 (62%)**

2.6 TB-Tobacco

State	TB patients with known Tobacco usage status (%)				Tobacco users identified amongst screened (%)			Tobacco users linked with Tobacco cessation centres (%)		
	Public	Private	Total		Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	439 (85%)	1 (100%)	440 (85%)		73 (17%)	0 (0%)	73 (17%)	26 (36%)	NA	26 (36%)
Andhra Pradesh	60037 (95%)	23811 (98%)	83848 (96%)		9480 (16%)	1576 (7%)	11056 (13%)	1713 (18%)	308 (20%)	2021 (18%)
Arunachal Pradesh	2375 (83%)	NA	2375 (83%)		235 (10%)	NA	235 (10%)	90 (38%)	NA	90 (38%)
Assam	22567 (67%)	2607 (63%)	25174 (67%)		6304 (28%)	285 (11%)	6589 (26%)	1240 (20%)	105 (37%)	1345 (20%)
Bihar	34313 (54%)	39063 (55%)	73376 (54%)		4203 (12%)	3198 (8%)	7401 (10%)	857 (20%)	62 (2%)	919 (12%)
Chandigarh	2850 (91%)	77 (64%)	2927 (90%)		169 (6%)	0 (0%)	169 (6%)	102 (60%)	NA	102 (60%)
Chhattisgarh	21280 (84%)	4208 (58%)	25488 (78%)		6572 (31%)	344 (8%)	6916 (27%)	3118 (47%)	186 (54%)	3304 (48%)
Dadra and Nagar Haveli and Daman and Diu	433 (61%)	40 (80%)	473 (62%)		53 (12%)	1 (3%)	54 (11%)	40 (75%)	1 (100%)	41 (76%)
Delhi	43358 (64%)	5474 (33%)	48832 (58%)		2833 (7%)	137 (3%)	2970 (6%)	711 (25%)	27 (20%)	738 (25%)
Goa	1504 (91%)	32 (8%)	1536 (75%)		116 (8%)	1 (3%)	117 (8%)	8 (7%)	0 (0%)	8 (7%)
Gujarat	97439 (97%)	37255 (92%)	134694 (95%)		16835 (17%)	3451 (9%)	20286 (15%)	7133 (42%)	1386 (40%)	8519 (42%)
Haryana	45995 (88%)	15922 (85%)	61917 (87%)		1984 (4%)	674 (4%)	2658 (4%)	890 (45%)	178 (26%)	1068 (40%)
Himachal Pradesh	13951 (98%)	547 (95%)	14498 (98%)		1956 (14%)	42 (8%)	1998 (14%)	1831 (94%)	34 (81%)	1865 (93%)
Jammu & Kashmir	7525 (73%)	488 (75%)	8013 (73%)		582 (8%)	18 (4%)	600 (7%)	205 (35%)	6 (33%)	211 (35%)
Jharkhand	23696 (65%)	4109 (25%)	27805 (52%)		3202 (14%)	190 (5%)	3392 (12%)	1085 (34%)	39 (21%)	1124 (33%)
Karnataka	52227 (88%)	9392 (78%)	61619 (86%)		9211 (18%)	472 (5%)	9683 (16%)	2952 (32%)	152 (32%)	3104 (32%)
Kerala	16539 (87%)	2149 (69%)	18688 (85%)		2289 (14%)	140 (7%)	2429 (13%)	1572 (69%)	82 (59%)	1654 (68%)
Ladakh	214 (73%)	17 (71%)	231 (72%)		6 (3%)	0 (0%)	6 (3%)	0 (0%)	NA	0 (0%)
Lakshadweep	20 (100%)	NA	20 (100%)		0 (0%)	NA	0 (0%)	NA	NA	NA
Madhya Pradesh	75801 (63%)	26134 (55%)	101935 (61%)		12259 (16%)	837 (3%)	13096 (13%)	2061 (17%)	187 (22%)	2248 (17%)
Maharashtra	105457 (83%)	47223 (67%)	152680 (78%)		10270 (10%)	1339 (3%)	11609 (8%)	3415 (33%)	335 (25%)	3750 (32%)
Manipur	1112 (66%)	77 (41%)	1189 (63%)		238 (21%)	14 (18%)	252 (21%)	41 (17%)	2 (14%)	43 (17%)
Meghalaya	3117 (81%)	235 (66%)	3352 (80%)		1179 (38%)	156 (66%)	1335 (40%)	217 (18%)	12 (8%)	229 (17%)
Mizoram	1517 (95%)	192 (100%)	1709 (96%)		539 (36%)	80 (42%)	619 (36%)	332 (62%)	57 (71%)	389 (63%)
Nagaland	2610 (83%)	394 (74%)	3004 (81%)		396 (15%)	69 (18%)	465 (15%)	244 (62%)	34 (49%)	278 (60%)
Odisha	44875 (93%)	3526 (89%)	48401 (93%)		8567 (19%)	206 (6%)	8773 (18%)	3637 (42%)	121 (59%)	3758 (43%)
Puducherry	1375 (98%)	NA	1375 (98%)		213 (15%)	NA	213 (15%)	208 (98%)	NA	208 (98%)
Punjab	32706 (85%)	8748 (64%)	41454 (80%)		1385 (4%)	150 (2%)	1535 (4%)	251 (18%)	2 (1%)	253 (16%)
Rajasthan	84291 (78%)	31990 (74%)	116281 (77%)		7215 (9%)	2401 (8%)	9616 (8%)	2090 (29%)	641 (27%)	2731 (28%)
Sikkim	794 (59%)	72 (73%)	866 (60%)		69 (9%)	3 (4%)	72 (8%)	2 (3%)	3 (100%)	5 (7%)
Tamil Nadu	61338 (89%)	11624 (74%)	72962 (86%)		11602 (19%)	807 (7%)	12409 (17%)	2558 (22%)	117 (14%)	2675 (22%)
Telangana	41637 (94%)	15167 (90%)	56804 (93%)		5618 (13%)	943 (6%)	6561 (12%)	2549 (45%)	522 (55%)	3071 (47%)
Tripura	1991 (72%)	9 (69%)	2000 (72%)		266 (13%)	1 (11%)	267 (13%)	17 (6%)	0 (0%)	17 (6%)
Uttar Pradesh	233920 (67%)	48157 (42%)	282077 (61%)		23646 (10%)	4351 (9%)	27997 (10%)	4803 (20%)	309 (7%)	5112 (18%)
Uttarakhand	14286 (74%)	2525 (58%)	16811 (71%)		1407 (10%)	143 (6%)	1550 (9%)	415 (29%)	41 (29%)	456 (29%)
West Bengal	70889 (86%)	7706 (84%)	78595 (86%)		15654 (22%)	1060 (14%)	16714 (21%)	4839 (31%)	435 (41%)	5274 (32%)
India	**1224478 (78%)**	**348971 (62%)**	**1573449 (74%)**		**166626 (14%)**	**23089 (7%)**	**189715 (12%)**	**51252 (31%)**	**5384 (23%)**	**56636 (30%)**

2.7 TB-Alcohol

State	TB patients with known Alcohol usage status (%)				Alcohol users identified amongst screened (%)			Alcohol users linked with Deaddiction centres (%)		
	Public	Private	Total		Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	456 (89%)	1 (100%)	457 (89%)		71 (16%)	0 (0%)	71 (16%)	32 (45%)	NA	32 (45%)
Andhra Pradesh	59221 (93%)	23646 (97%)	82867 (94%)		7896 (13%)	1254 (5%)	9150 (11%)	1329 (17%)	267 (21%)	1596 (17%)
Arunachal Pradesh	2353 (82%)	NA	2353 (82%)		164 (7%)	NA	164 (7%)	60 (37%)	NA	60 (37%)
Assam	21694 (65%)	2683 (65%)	24377 (65%)		3813 (18%)	166 (6%)	3979 (16%)	999 (26%)	75 (45%)	1074 (27%)
Bihar	33850 (53%)	38258 (54%)	72108 (53%)		774 (2%)	393 (1%)	1167 (2%)	193 (25%)	31 (8%)	224 (19%)
Chandigarh	2762 (88%)	77 (64%)	2839 (88%)		133 (5%)	3 (4%)	136 (5%)	63 (47%)	2 (67%)	65 (48%)
Chhattisgarh	20627 (81%)	4110 (57%)	24737 (76%)		4264 (21%)	184 (4%)	4448 (18%)	2239 (53%)	125 (68%)	2364 (53%)
Dadra and Nagar Haveli and Daman and Diu	402 (56%)	41 (82%)	443 (58%)		49 (12%)	1 (2%)	50 (11%)	34 (69%)	0 (0%)	34 (68%)
Delhi	42111 (62%)	5291 (32%)	47402 (56%)		2505 (6%)	60 (1%)	2565 (5%)	506 (20%)	12 (20%)	518 (20%)
Goa	1497 (90%)	32 (8%)	1529 (75%)		128 (9%)	2 (6%)	130 (9%)	17 (13%)	0 (0%)	17 (13%)
Gujarat	96594 (96%)	36838 (91%)	133432 (94%)		5638 (6%)	571 (2%)	6209 (5%)	2559 (45%)	245 (43%)	2804 (45%)
Haryana	45134 (86%)	15583 (83%)	60717 (85%)		1303 (3%)	309 (2%)	1612 (3%)	557 (43%)	93 (30%)	650 (40%)
Himachal Pradesh	13851 (97%)	545 (94%)	14396 (97%)		1530 (11%)	38 (7%)	1568 (11%)	1325 (87%)	25 (66%)	1350 (86%)
Jammu & Kashmir	7274 (70%)	460 (71%)	7734 (70%)		354 (5%)	7 (2%)	361 (5%)	104 (29%)	4 (57%)	108 (30%)
Jharkhand	22404 (61%)	4042 (24%)	26446 (50%)		2277 (10%)	58 (1%)	2335 (9%)	910 (40%)	7 (12%)	917 (39%)
Karnataka	51578 (87%)	9084 (76%)	60662 (85%)		7151 (14%)	278 (3%)	7429 (12%)	2222 (31%)	87 (31%)	2309 (31%)
Kerala	16341 (86%)	2052 (66%)	18393 (84%)		2333 (14%)	117 (6%)	2450 (13%)	1350 (58%)	59 (50%)	1409 (58%)
Ladakh	223 (76%)	17 (71%)	240 (75%)		11 (5%)	1 (6%)	12 (5%)	2 (18%)	0 (0%)	2 (17%)
Lakshadweep	20 (100%)	NA	20 (100%)		0 (0%)	NA	0 (0%)	NA	NA	NA
Madhya Pradesh	72595 (60%)	25995 (55%)	98590 (59%)		4322 (6%)	266 (1%)	4588 (5%)	1010 (23%)	60 (23%)	1070 (23%)
Maharashtra	103398 (82%)	45965 (66%)	149363 (76%)		6104 (6%)	629 (1%)	6733 (5%)	2200 (36%)	154 (24%)	2354 (35%)
Manipur	1152 (68%)	76 (40%)	1228 (66%)		183 (16%)	13 (17%)	196 (16%)	47 (26%)	3 (23%)	50 (26%)
Meghalaya	3048 (79%)	218 (61%)	3266 (78%)		641 (21%)	31 (14%)	672 (21%)	155 (24%)	3 (10%)	158 (24%)
Mizoram	1508 (95%)	190 (99%)	1698 (95%)		238 (16%)	50 (26%)	288 (17%)	57 (24%)	2 (4%)	59 (20%)
Nagaland	2592 (82%)	389 (73%)	2981 (81%)		209 (8%)	17 (4%)	226 (8%)	113 (54%)	3 (18%)	116 (51%)
Odisha	44705 (93%)	3522 (89%)	48227 (92%)		7349 (16%)	162 (5%)	7511 (16%)	3125 (43%)	94 (58%)	3219 (43%)
Puducherry	1374 (98%)	NA	1374 (98%)		273 (20%)	NA	273 (20%)	267 (98%)	NA	267 (98%)
Punjab	32273 (84%)	8535 (62%)	40808 (78%)		1291 (4%)	188 (2%)	1479 (4%)	227 (18%)	4 (2%)	231 (16%)
Rajasthan	81995 (76%)	30924 (71%)	112919 (75%)		2901 (4%)	644 (2%)	3545 (3%)	1021 (35%)	181 (28%)	1202 (34%)
Sikkim	750 (56%)	67 (68%)	817 (57%)		46 (6%)	2 (3%)	48 (6%)	4 (9%)	2 (100%)	6 (13%)
Tamil Nadu	61044 (88%)	11554 (73%)	72598 (85%)		13691 (22%)	804 (7%)	14495 (20%)	3060 (22%)	145 (18%)	3205 (22%)
Telangana	41309 (94%)	14994 (89%)	56303 (92%)		6422 (16%)	929 (6%)	7351 (13%)	3249 (51%)	458 (49%)	3707 (50%)
Tripura	1852 (67%)	10 (77%)	1862 (67%)		290 (16%)	1 (10%)	291 (16%)	19 (7%)	0 (0%)	19 (7%)
Uttar Pradesh	223052 (64%)	42624 (37%)	265676 (57%)		7423 (3%)	773 (2%)	8196 (3%)	1867 (25%)	195 (25%)	2062 (25%)
Uttarakhand	13804 (72%)	2417 (56%)	16221 (69%)		992 (7%)	89 (4%)	1081 (7%)	312 (31%)	33 (37%)	345 (32%)
West Bengal	69567 (85%)	7478 (81%)	77045 (84%)		8984 (13%)	524 (7%)	9508 (12%)	2947 (33%)	211 (40%)	3158 (33%)
India	**1194410 (76%)**	**337718 (60%)**	**1532128 (72%)**		**101753 (9%)**	**8564 (3%)**	**110317 (7%)**	**34181 (34%)**	**2580 (30%)**	**36761 (33%)**

2.8 TB COVID

State	TB notified patients screened for COVID-19 disease			TB-COVID 19 patients detected		
	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	220	1	221	1	0	1
Andhra Pradesh	59087	23212	82299	188	35	223
Arunachal Pradesh	1756	0	1756	2	0	2
Assam	19561	2300	21861	42	15	57
Bihar	33886	20059	53945	34	60	94
Chandigarh	2827	75	2902	15	0	15
Chhattisgarh	18430	3586	22016	69	3	72
Dadra and Nagar Haveli and Daman and Diu	324	35	359	2	0	2
Delhi	39309	4159	43468	70	56	126
Goa	1315	37	1352	53	1	54
Gujarat	63507	22105	85612	227	112	339
Haryana	37764	10943	48707	83	23	106
Himachal Pradesh	8060	261	8321	54	3	57
Jammu & Kashmir	7880	543	8423	14	0	14
Jharkhand	22607	3848	26455	29	11	40
Karnataka	46512	8035	54547	338	71	409
Kerala	11291	1909	13200	450	37	487
Ladakh	136	16	152	6	0	6
Lakshadweep	16	0	16	0	0	0
Madhya Pradesh	44622	9442	54064	167	32	199
Maharashtra	92453	39895	132348	623	218	841
Manipur	500	50	550	3	1	4
Meghalaya	1350	180	1530	15	1	16
Mizoram	928	130	1058	9	0	9
Nagaland	1029	12	1041	3	0	3
Odisha	39425	2805	42230	110	8	118
Puducherry	1128	0	1128	13	0	13
Punjab	25279	3796	29075	83	10	93
Rajasthan	46506	16799	63305	77	42	119
Sikkim	568	23	591	25	0	25
Tamil Nadu	54809	8047	62856	468	50	518
Telangana	40545	14640	55185	73	67	140
Tripura	1576	6	1582	9	0	9
Uttar Pradesh	228305	29543	257848	233	69	302
Uttarakhand	12743	2216	14959	40	5	45
West Bengal	70664	7102	77766	376	62	438
INDIA	**1036918**	**235810**	**1272728**	**4004**	**992**	**4996**

2.9 TB-Pregnancy

State	Female TB patients screened for Pregnancy			Pregnant TB patients identified		
	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	183	0	183	0	0	0
Andhra Pradesh	13351	4234	17585	93	34	127
Arunachal Pradesh	736	0	736	0	0	0
Assam	6758	895	7653	37	6	43
Bihar	11973	9085	21058	173	117	290
Chandigarh	635	33	668	7	0	7
Chhattisgarh	6105	1475	7580	45	9	54
Dadra and Nagar Haveli and Daman and Diu	233	22	255	1	0	1
Delhi	14811	3731	18542	134	25	159
Goa	451	101	552	1	0	1
Gujarat	23319	7726	31045	279	78	357
Haryana	11939	4026	15965	135	33	168
Himachal Pradesh	3892	218	4110	37	1	38
Jammu & Kashmir	2923	230	3153	17	2	19
Jharkhand	5881	2382	8263	51	12	63
Karnataka	15833	3217	19050	155	20	175
Kerala	5051	936	5987	35	6	41
Ladakh	101	12	113	4	0	4
Lakshadweep	10	0	10	0	0	0
Madhya Pradesh	26720	7683	34403	192	53	245
Maharashtra	37929	19381	57310	292	103	395
Manipur	413	36	449	5	0	5
Meghalaya	1076	92	1168	13	1	14
Mizoram	528	66	594	0	0	0
Nagaland	841	105	946	2	2	4
Odisha	10760	947	11707	61	4	65
Puducherry	384	0	384	3	0	3
Punjab	9456	3033	12489	84	9	93
Rajasthan	22552	7207	29759	192	65	257
Sikkim	501	51	552	0	1	1
Tamil Nadu	17026	4181	21207	268	19	287
Telangana	9028	3712	12740	115	61	176
Tripura	563	2	565	7	0	7
Uttar Pradesh	76896	22155	99051	572	135	707
Uttarakhand	4548	844	5392	41	3	44
West Bengal	18023	2612	20635	186	12	198
INDIA	**361429**	**110430**	**471859**	**3237**	**811**	**4048**

3.1 Treatment outcome of TB patients notified in 2020 (Public Sector)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	434	242	141 (58%)	370 (85%)		16 (3.7%)	6 (1.4%)	3 (0.7%)	8 (1.8%)	1 (0.2%)
Andhra Pradesh	45783	27954	22134 (79%)	40487 (88%)		2210 (4.8%)	349 (0.8%)	103 (0.2%)	867 (1.9%)	591 (1.3%)
Arunachal Pradesh	2420	1247	816 (65%)	2013 (83%)		78 (3.2%)	123 (5.1%)	23 (1.0%)	76 (3.1%)	23 (1.0%)
Assam	30860	15466	9216 (60%)	25853 (84%)		1256 (4.1%)	587 (1.9%)	113 (0.4%)	433 (1.4%)	1116 (3.6%)
Bihar	52661	30111	13951 (46%)	38953 (74%)		1310 (2.5%)	2109 (4.0%)	285 (0.5%)	633 (1.2%)	3482 (6.6%)
Chandigarh	2624	1291	916 (71%)	2146 (82%)		119 (4.5%)	99 (3.8%)	14 (0.5%)	51 (1.9%)	41 (1.6%)
Chhattisgarh	22127	10552	7910 (75%)	19267 (87%)		1142 (5.2%)	369 (1.7%)	113 (0.5%)	240 (1.1%)	581 (2.6%)
Dadra and Nagar Haveli and Daman and Diu	661	306	279 (91%)	616 (93%)		16 (2.4%)	5 (0.8%)	2 (0.3%)	1 (0.2%)	7 (1.1%)
Delhi	55183	27205	13193 (48%)	41432 (75%)		1330 (2.4%)	2601 (4.7%)	344 (0.6%)	1545 (2.8%)	1290 (2.3%)
Goa	1277	776	338 (44%)	1056 (83%)		84 (6.6%)	33 (2.6%)	8 (0.6%)	26 (2.0%)	4 (0.3%)
Gujarat	77114	36707	31039 (85%)	67086 (87%)		4250 (5.5%)	1111 (1.4%)	786 (1.0%)	1726 (2.2%)	155 (0.2%)
Haryana	44995	28947	17351 (60%)	35885 (80%)		1916 (4.3%)	1002 (2.2%)	297 (0.7%)	480 (1.1%)	1131 (2.5%)
Himachal Pradesh	12713	8501	5580 (66%)	11174 (88%)		695 (5.5%)	122 (1.0%)	42 (0.3%)	233 (1.8%)	127 (1.0%)
Jammu & Kashmir	8194	4091	2962 (72%)	6793 (83%)		294 (3.6%)	110 (1.3%)	46 (0.6%)	73 (0.9%)	459 (5.6%)
Jharkhand	30707	17520	10053 (57%)	25836 (84%)		902 (2.9%)	682 (2.2%)	150 (0.5%)	242 (0.8%)	1295 (4.2%)
Karnataka	49669	30794	22399 (73%)	40108 (81%)		3939 (7.9%)	1299 (2.6%)	333 (0.7%)	1411 (2.8%)	437 (0.9%)
Kerala	17696	10674	7538 (71%)	14459 (82%)		1379 (7.8%)	310 (1.8%)	121 (0.7%)	216 (1.2%)	573 (3.2%)
Ladakh	226	122	51 (42%)	171 (76%)		19 (8.4%)	4 (1.8%)	2 (0.9%)	1 (0.4%)	18 (8.0%)
Lakshadweep	17	8	9 (113%)	15 (88%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (11.8%)
Madhya Pradesh	106113	48914	30165 (62%)	88971 (84%)		3847 (3.6%)	3547 (3.3%)	642 (0.6%)	1233 (1.2%)	3524 (3.3%)
Maharashtra	94885	44916	30921 (69%)	79205 (83%)		4574 (4.8%)	1986 (2.1%)	532 (0.6%)	2704 (2.8%)	578 (0.6%)
Manipur	1387	763	521 (68%)	1132 (82%)		48 (3.5%)	38 (2.7%)	6 (0.4%)	17 (1.2%)	75 (5.4%)
Meghalaya	3451	1989	1206 (61%)	2770 (80%)		178 (5.2%)	109 (3.2%)	27 (0.8%)	86 (2.5%)	72 (2.1%)
Mizoram	1831	917	630 (69%)	1636 (89%)		50 (2.7%)	27 (1.5%)	5 (0.3%)	25 (1.4%)	49 (2.7%)
Nagaland	2844	1598	1214 (76%)	2294 (81%)		80 (2.8%)	65 (2.3%)	26 (0.9%)	24 (0.8%)	284 (10.0%)
Odisha	41418	24560	19934 (81%)	36741 (89%)		2421 (5.8%)	542 (1.3%)	105 (0.3%)	239 (0.6%)	431 (1.0%)
Puducherry	1219	826	542 (66%)	993 (81%)		80 (6.6%)	28 (2.3%)	14 (1.1%)	37 (3.0%)	3 (0.2%)
Punjab	35765	22516	13320 (59%)	28681 (80%)		1910 (5.3%)	1053 (2.9%)	176 (0.5%)	443 (1.2%)	1385 (3.9%)
Rajasthan	93363	54974	36008 (66%)	76759 (82%)		3327 (3.6%)	2720 (2.9%)	515 (0.6%)	1324 (1.4%)	1266 (1.4%)
Sikkim	1065	641	440 (69%)	956 (90%)		43 (4.0%)	9 (0.8%)	1 (0.1%)	17 (1.6%)	15 (1.4%)
Tamil Nadu	53983	36131	26817 (74%)	44529 (82%)		3437 (6.4%)	1177 (2.2%)	303 (0.6%)	1915 (3.5%)	612 (1.1%)
Telangana	39396	21593	19321 (89%)	34431 (87%)		1358 (3.4%)	246 (0.6%)	165 (0.4%)	1033 (2.6%)	1015 (2.6%)
Tripura	2134	1412	1043 (74%)	1737 (81%)		159 (7.5%)	50 (2.3%)	9 (0.4%)	60 (2.8%)	42 (2.0%)
Uttar Pradesh	257186	122589	71829 (59%)	213703 (83%)		9735 (3.8%)	8011 (3.1%)	1501 (0.6%)	3912 (1.5%)	2326 (0.9%)
Uttarakhand	14992	7052	4151 (59%)	12737 (85%)		589 (3.9%)	399 (2.7%)	74 (0.5%)	315 (2.1%)	199 (1.3%)
West Bengal	69430	47208	34523 (73%)	58574 (84%)		3914 (5.6%)	1396 (2.0%)	436 (0.6%)	1165 (1.7%)	1146 (1.7%)
INDIA	**1275823**	**691113**	**644070 (93%)**	**1059569 (83%)**		**56705 (4.4%)**	**32324 (2.5%)**	**7322 (0.6%)**	**22811 (1.8%)**	**24355 (1.9%)**

3.2 Treatment outcome of TB patients notified in 2020 (Private Sector)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	0	NA	NA	NA		NA	NA	NA	NA	NA
Andhra Pradesh	17131	3395	2245 (66%)	16188 (94%)		280 (1.6%)	150 (0.9%)	19 (0.1%)	145 (0.8%)	264 (1.5%)
Arunachal Pradesh	4	0	NA	1 (25%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
Assam	3680	759	170 (22%)	3043 (83%)		166 (4.5%)	47 (1.3%)	12 (0.3%)	17 (0.5%)	256 (7.0%)
Bihar	47070	4678	478 (10%)	38550 (82%)		2031 (4.3%)	1642 (3.5%)	231 (0.5%)	435 (0.9%)	3261 (6.9%)
Chandigarh	205	89	34 (38%)	132 (64%)		10 (4.9%)	5 (2.4%)	0 (0.0%)	2 (1.0%)	23 (11.2%)
Chhattisgarh	6977	806	524 (65%)	5813 (83%)		238 (3.4%)	316 (4.5%)	24 (0.3%)	21 (0.3%)	491 (7.0%)
Dadra and Nagar Haveli and Daman and Diu	74	8	6 (75%)	70 (95%)		1 (1.4%)	0 (0.0%)	0 (0.0%)	1 (1.4%)	1 (1.4%)
Delhi	18207	7638	68 (1%)	11461 (63%)		678 (3.7%)	847 (4.7%)	44 (0.2%)	100 (0.5%)	572 (3.1%)
Goa	307	68	10 (15%)	282 (92%)		5 (1.6%)	15 (4.9%)	0 (0.0%)	0 (0.0%)	4 (1.3%)
Gujarat	38231	4160	587 (14%)	34398 (90%)		1222 (3.2%)	1299 (3.4%)	90 (0.2%)	348 (0.9%)	589 (1.5%)
Haryana	18041	5519	1768 (32%)	13620 (75%)		722 (4.0%)	1003 (5.6%)	98 (0.5%)	95 (0.5%)	1589 (8.8%)
Himachal Pradesh	586	214	124 (58%)	469 (80%)		28 (4.8%)	22 (3.8%)	6 (1.0%)	11 (1.9%)	34 (5.8%)
Jammu & Kashmir	606	200	210 (105%)	497 (82%)		15 (2.5%)	10 (1.7%)	3 (0.5%)	0 (0.0%)	44 (7.3%)
Jharkhand	14953	1081	44 (4%)	12205 (82%)		666 (4.5%)	1696 (11.3%)	19 (0.1%)	67 (0.4%)	110 (0.7%)
Karnataka	12865	4615	1109 (24%)	10648 (83%)		551 (4.3%)	256 (2.0%)	35 (0.3%)	107 (0.8%)	436 (3.4%)
Kerala	2945	1463	576 (39%)	2311 (78%)		289 (9.8%)	61 (2.1%)	10 (0.3%)	18 (0.6%)	34 (1.2%)
Ladakh	17	5	5 (100%)	17 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Lakshadweep	0	0	NA	NA		NA	NA	NA	NA	NA
Madhya Pradesh	29646	4320	1747 (40%)	19035 (64%)		948 (3.2%)	2545 (8.6%)	125 (0.4%)	198 (0.7%)	5433 (18.3%)
Maharashtra	52535	18551	2151 (12%)	45112 (86%)		2414 (4.6%)	1102 (2.1%)	184 (0.4%)	620 (1.2%)	280 (0.5%)
Manipur	177	88	12 (14%)	113 (64%)		7 (4.0%)	5 (2.8%)	0 (0.0%)	0 (0.0%)	14 (7.9%)
Meghalaya	413	101	0 (0%)	339 (82%)		7 (1.7%)	39 (9.4%)	0 (0.0%)	3 (0.7%)	11 (2.7%)
Mizoram	157	64	46 (72%)	137 (87%)		0 (0.0%)	4 (2.5%)	0 (0.0%)	2 (1.3%)	3 (1.9%)
Nagaland	674	60	18 (30%)	547 (81%)		17 (2.5%)	25 (3.7%)	0 (0.0%)	0 (0.0%)	84 (12.5%)
Odisha	3577	416	373 (90%)	3254 (91%)		85 (2.4%)	42 (1.2%)	2 (0.1%)	9 (0.3%)	95 (2.7%)
Puducherry	1	1	1 (100%)	1 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Punjab	10726	3416	374 (11%)	8325 (78%)		757 (7.1%)	119 (1.1%)	28 (0.3%)	51 (0.5%)	989 (9.2%)
Rajasthan	40097	6714	1493 (22%)	33213 (83%)		1289 (3.2%)	2655 (6.6%)	241 (0.6%)	215 (0.5%)	1082 (2.7%)
Sikkim	74	29	9 (31%)	66 (89%)		2 (2.7%)	0 (0.0%)	0 (0.0%)	2 (2.7%)	0 (0.0%)
Tamil Nadu	14960	5817	1869 (32%)	12356 (83%)		613 (4.1%)	535 (3.6%)	39 (0.3%)	121 (0.8%)	696 (4.7%)
Telangana	21461	6340	4360 (69%)	19745 (92%)		518 (2.4%)	130 (0.6%)	61 (0.3%)	123 (0.6%)	522 (2.4%)
Tripura	3	0	NA	2 (67%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Uttar Pradesh	106478	9210	4051 (44%)	90082 (85%)		5178 (4.9%)	3869 (3.6%)	548 (0.5%)	1055 (1.0%)	1897 (1.8%)
Uttarakhand	4689	1090	116 (11%)	3675 (78%)		154 (3.3%)	215 (4.6%)	30 (0.6%)	35 (0.7%)	396 (8.4%)
West Bengal	8047	2753	1040 (38%)	6591 (82%)		406 (5.0%)	160 (2.0%)	31 (0.4%)	57 (0.7%)	275 (3.4%)
INDIA	**475614**	**93668**	**25618 (27%)**	**392298 (82%)**		**19297 (4.1%)**	**18814 (4.0%)**	**1880 (0.4%)**	**3858 (0.8%)**	**19486 (4.1%)**

3.3 Treatment outcome of TB patients notified in 2020 (Total)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	434	242	141 (58%)	370 (85%)		16 (3.7%)	6 (1.4%)	3 (0.7%)	8 (1.8%)	1 (0.2%)
Andhra Pradesh	62914	31349	24379 (78%)	56675 (90%)		2490 (4.0%)	499 (0.8%)	122 (0.2%)	1012 (1.6%)	855 (1.4%)
Arunachal Pradesh	2424	1247	816 (65%)	2014 (83%)		78 (3.2%)	123 (5.1%)	23 (0.9%)	76 (3.1%)	24 (1.0%)
Assam	34540	16225	9386 (58%)	28896 (84%)		1422 (4.1%)	634 (1.8%)	125 (0.4%)	450 (1.3%)	1372 (4.0%)
Bihar	99731	34789	14429 (41%)	77503 (78%)		3341 (3.4%)	3751 (3.8%)	516 (0.5%)	1068 (1.1%)	6743 (6.8%)
Chandigarh	2829	1380	950 (69%)	2278 (81%)		129 (4.6%)	104 (3.7%)	14 (0.5%)	53 (1.9%)	64 (2.3%)
Chhattisgarh	29104	11358	8434 (74%)	25080 (86%)		1380 (4.7%)	685 (2.4%)	137 (0.5%)	261 (0.9%)	1072 (3.7%)
Dadra and Nagar Haveli and Daman and Diu	735	314	285 (91%)	686 (93%)		17 (2.3%)	5 (0.7%)	2 (0.3%)	2 (0.3%)	8 (1.1%)
Delhi	73390	34843	13261 (38%)	52893 (72%)		2008 (2.7%)	3448 (4.7%)	388 (0.5%)	1645 (2.2%)	1862 (2.5%)
Goa	1584	844	348 (41%)	1338 (84%)		89 (5.6%)	48 (3.0%)	8 (0.5%)	26 (1.6%)	8 (0.5%)
Gujarat	115345	40867	31626 (77%)	101484 (88%)		5472 (4.7%)	2410 (2.1%)	876 (0.8%)	2074 (1.8%)	744 (0.6%)
Haryana	63036	34466	19119 (55%)	49505 (79%)		2638 (4.2%)	2005 (3.2%)	395 (0.6%)	575 (0.9%)	2720 (4.3%)
Himachal Pradesh	13299	8715	5704 (65%)	11643 (88%)		723 (5.4%)	144 (1.1%)	48 (0.4%)	244 (1.8%)	161 (1.2%)
Jammu & Kashmir	8800	4291	3172 (74%)	7290 (83%)		309 (3.5%)	120 (1.4%)	49 (0.6%)	73 (0.8%)	503 (5.7%)
Jharkhand	45660	18601	10097 (54%)	38041 (83%)		1568 (3.4%)	2378 (5.2%)	169 (0.4%)	309 (0.7%)	1405 (3.1%)
Karnataka	62534	35409	23508 (66%)	50756 (81%)		4490 (7.2%)	1555 (2.5%)	368 (0.6%)	1518 (2.4%)	873 (1.4%)
Kerala	20641	12137	8114 (67%)	16770 (81%)		1668 (8.1%)	371 (1.8%)	131 (0.6%)	234 (1.1%)	607 (2.9%)
Ladakh	243	127	56 (44%)	188 (77%)		19 (7.8%)	4 (1.6%)	2 (0.8%)	1 (0.4%)	18 (7.4%)
Lakshadweep	17	8	9 (113%)	15 (88%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (11.8%)
Madhya Pradesh	135759	53234	31912 (60%)	108006 (80%)		4795 (3.5%)	6092 (4.5%)	767 (0.6%)	1431 (1.1%)	8957 (6.6%)
Maharashtra	147420	63467	33072 (52%)	124317 (84%)		6988 (4.7%)	3088 (2.1%)	716 (0.5%)	3324 (2.3%)	858 (0.6%)
Manipur	1564	851	533 (63%)	1245 (80%)		55 (3.5%)	43 (2.7%)	6 (0.4%)	17 (1.1%)	89 (5.7%)
Meghalaya	3864	2090	1206 (58%)	3109 (80%)		185 (4.8%)	148 (3.8%)	27 (0.7%)	89 (2.3%)	83 (2.1%)
Mizoram	1988	981	676 (69%)	1773 (89%)		50 (2.5%)	31 (1.6%)	5 (0.3%)	27 (1.4%)	52 (2.6%)
Nagaland	3518	1658	1232 (74%)	2841 (81%)		97 (2.8%)	90 (2.6%)	26 (0.7%)	24 (0.7%)	368 (10.5%)
Odisha	44995	24976	20307 (81%)	39995 (89%)		2506 (5.6%)	584 (1.3%)	107 (0.2%)	248 (0.6%)	526 (1.2%)
Puducherry	1220	827	543 (66%)	994 (81%)		80 (6.6%)	28 (2.3%)	14 (1.1%)	37 (3.0%)	3 (0.2%)
Punjab	46491	25932	13694 (53%)	37006 (80%)		2667 (5.7%)	1172 (2.5%)	204 (0.4%)	494 (1.1%)	2374 (5.1%)
Rajasthan	133460	61688	37501 (61%)	109972 (82%)		4616 (3.5%)	5375 (4.0%)	756 (0.6%)	1539 (1.2%)	2348 (1.8%)
Sikkim	1139	670	449 (67%)	1022 (90%)		45 (4.0%)	9 (0.8%)	1 (0.1%)	19 (1.7%)	15 (1.3%)
Tamil Nadu	68943	41948	28686 (68%)	56885 (83%)		4050 (5.9%)	1712 (2.5%)	342 (0.5%)	2036 (3.0%)	1308 (1.9%)
Telangana	60857	27933	23681 (85%)	54176 (89%)		1876 (3.1%)	376 (0.6%)	226 (0.4%)	1156 (1.9%)	1537 (2.5%)
Tripura	2137	1412	1043 (74%)	1739 (81%)		159 (7.4%)	50 (2.3%)	9 (0.4%)	60 (2.8%)	42 (2.0%)
Uttar Pradesh	363664	131799	75880 (58%)	303785 (84%)		14913 (4.1%)	11880 (3.3%)	2049 (0.6%)	4967 (1.4%)	4223 (1.2%)
Uttarakhand	19681	8142	4267 (52%)	16412 (83%)		743 (3.8%)	614 (3.1%)	104 (0.5%)	350 (1.8%)	595 (3.0%)
West Bengal	77477	49961	35563 (71%)	65165 (84%)		4320 (5.6%)	1556 (2.0%)	467 (0.6%)	1222 (1.6%)	1421 (1.8%)
INDIA	**1751437**	**784781**	**484079 (62%)**	**1451867 (83%)**		**76002 (4.3%)**	**51138 (2.9%)**	**9202 (0.5%)**	**26669 (1.5%)**	**43841 (2.5%)**

3.4 Treatment outcome of New TB patients notified in 2020 (Public Sector)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	392	214	124 (58%)	335 (85%)		15 (3.8%)	4 (1.0%)	3 (0.8%)	6 (1.5%)	1 (0.3%)
Andhra Pradesh	38948	23336	18710 (80%)	34599 (89%)		1868 (4.8%)	279 (0.7%)	72 (0.2%)	669 (1.7%)	508 (1.3%)
Arunachal Pradesh	2109	1059	708 (67%)	1775 (84%)		65 (3.1%)	104 (4.9%)	20 (0.9%)	60 (2.8%)	19 (0.9%)
Assam	27270	13568	8136 (60%)	22908 (84%)		1094 (4.0%)	506 (1.9%)	86 (0.3%)	365 (1.3%)	982 (3.6%)
Bihar	45824	25850	12260 (47%)	34221 (75%)		1127 (2.5%)	1804 (3.9%)	247 (0.5%)	519 (1.1%)	3019 (6.6%)
Chandigarh	2299	1065	759 (71%)	1886 (82%)		104 (4.5%)	87 (3.8%)	13 (0.6%)	44 (1.9%)	36 (1.6%)
Chhattisgarh	19998	9289	7057 (76%)	17467 (87%)		1018 (5.1%)	312 (1.6%)	95 (0.5%)	198 (1.0%)	532 (2.7%)
Dadra and Nagar Haveli and Daman and Diu	562	262	236 (90%)	526 (94%)		13 (2.3%)	3 (0.5%)	1 (0.2%)	1 (0.2%)	7 (1.2%)
Delhi	46905	21782	10398 (48%)	35304 (75%)		1015 (2.2%)	2121 (4.5%)	251 (0.5%)	1164 (2.5%)	1133 (2.4%)
Goa	1167	688	306 (44%)	972 (83%)		75 (6.4%)	30 (2.6%)	5 (0.4%)	24 (2.1%)	4 (0.3%)
Gujarat	57012	24951	22211 (89%)	50590 (89%)		2917 (5.1%)	793 (1.4%)	377 (0.7%)	814 (1.4%)	114 (0.2%)
Haryana	38386	23455	14301 (61%)	30810 (80%)		1532 (4.0%)	840 (2.2%)	211 (0.5%)	361 (0.9%)	974 (2.5%)
Himachal Pradesh	10966	6956	4558 (66%)	9658 (88%)		595 (5.4%)	104 (0.9%)	31 (0.3%)	196 (1.8%)	109 (1.0%)
Jammu & Kashmir	7258	3420	2477 (72%)	6035 (83%)		249 (3.4%)	94 (1.3%)	37 (0.5%)	58 (0.8%)	392 (5.4%)
Jharkhand	27996	15931	9268 (58%)	23639 (84%)		819 (2.9%)	621 (2.2%)	130 (0.5%)	204 (0.7%)	1206 (4.3%)
Karnataka	42540	25365	18742 (74%)	34695 (82%)		3336 (7.8%)	1009 (2.4%)	219 (0.5%)	1125 (2.6%)	370 (0.9%)
Kerala	16379	9686	6911 (71%)	13458 (82%)		1282 (7.8%)	269 (1.6%)	99 (0.6%)	161 (1.0%)	537 (3.3%)
Ladakh	186	93	38 (41%)	145 (78%)		11 (5.9%)	3 (1.6%)	2 (1.1%)	0 (0.0%)	14 (7.5%)
Lakshadweep	16	8	9 (113%)	15 (94%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (6.3%)
Madhya Pradesh	92331	40858	25775 (63%)	77857 (84%)		3244 (3.5%)	3064 (3.3%)	509 (0.6%)	929 (1.0%)	3083 (3.3%)
Maharashtra	81822	37501	26234 (70%)	68847 (84%)		3803 (4.6%)	1518 (1.9%)	354 (0.4%)	2245 (2.7%)	468 (0.6%)
Manipur	1245	669	447 (67%)	1011 (81%)		42 (3.4%)	37 (3.0%)	5 (0.4%)	14 (1.1%)	68 (5.5%)
Meghalaya	3083	1737	1073 (62%)	2487 (81%)		159 (5.2%)	95 (3.1%)	17 (0.6%)	76 (2.5%)	64 (2.1%)
Mizoram	1632	770	550 (71%)	1465 (90%)		46 (2.8%)	25 (1.5%)	4 (0.2%)	17 (1.0%)	42 (2.6%)
Nagaland	2478	1338	1033 (77%)	2006 (81%)		66 (2.7%)	56 (2.3%)	22 (0.9%)	21 (0.8%)	242 (9.8%)
Odisha	37857	22114	18183 (82%)	33703 (89%)		2167 (5.7%)	462 (1.2%)	82 (0.2%)	193 (0.5%)	388 (1.0%)
Puducherry	1087	708	475 (67%)	903 (83%)		66 (6.1%)	18 (1.7%)	9 (0.8%)	29 (2.7%)	3 (0.3%)
Punjab	30938	18562	11041 (59%)	24883 (80%)		1592 (5.1%)	878 (2.8%)	134 (0.4%)	358 (1.2%)	1217 (3.9%)
Rajasthan	77611	42959	29005 (68%)	64712 (83%)		2586 (3.3%)	2204 (2.8%)	353 (0.5%)	1017 (1.3%)	1069 (1.4%)
Sikkim	944	541	363 (67%)	852 (90%)		39 (4.1%)	7 (0.7%)	1 (0.1%)	16 (1.7%)	14 (1.5%)
Tamil Nadu	46848	30295	22844 (75%)	39059 (83%)		2916 (6.2%)	905 (1.9%)	188 (0.4%)	1510 (3.2%)	535 (1.1%)
Telangana	34089	18061	16654 (92%)	30033 (88%)		1124 (3.3%)	172 (0.5%)	104 (0.3%)	834 (2.4%)	860 (2.5%)
Tripura	1891	1241	933 (75%)	1546 (82%)		142 (7.5%)	41 (2.2%)	9 (0.5%)	53 (2.8%)	38 (2.0%)
Uttar Pradesh	224050	102861	61417 (60%)	187420 (84%)		8300 (3.7%)	6999 (3.1%)	1214 (0.5%)	2915 (1.3%)	2019 (0.9%)
Uttarakhand	13122	5769	3413 (59%)	11187 (85%)		494 (3.8%)	349 (2.7%)	55 (0.4%)	253 (1.9%)	177 (1.3%)
West Bengal	61117	40724	30316 (74%)	52040 (85%)		3355 (5.5%)	1114 (1.8%)	303 (0.5%)	894 (1.5%)	1026 (1.7%)
INDIA	**1098358**	**573686**	**386965 (67%)**	**919049 (84%)**		**47276 (4.3%)**	**26927 (2.5%)**	**5262 (0.5%)**	**17343 (1.6%)**	**21271 (1.9%)**

3.5 Treatment outcome of Previously Treated TB patients notified in 2020 (Public Sector)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	42	28	17 (61%)	35 (83%)		1 (2.4%)	2 (4.8%)	0 (0.0%)	2 (4.8%)	0 (0.0%)
Andhra Pradesh	6835	4618	3424 (74%)	5888 (86%)		342 (5.0%)	70 (1.0%)	31 (0.5%)	198 (2.9%)	83 (1.2%)
Arunachal Pradesh	311	188	108 (57%)	238 (77%)		13 (4.2%)	19 (6.1%)	3 (1.0%)	16 (5.1%)	4 (1.3%)
Assam	3590	1898	1080 (57%)	2945 (82%)		162 (4.5%)	81 (2.3%)	27 (0.8%)	68 (1.9%)	134 (3.7%)
Bihar	6837	4261	1691 (40%)	4732 (69%)		183 (2.7%)	305 (4.5%)	38 (0.6%)	114 (1.7%)	463 (6.8%)
Chandigarh	325	226	157 (69%)	260 (80%)		15 (4.6%)	12 (3.7%)	1 (0.3%)	7 (2.2%)	5 (1.5%)
Chhattisgarh	2129	1263	853 (68%)	1800 (85%)		124 (5.8%)	57 (2.7%)	18 (0.8%)	42 (2.0%)	49 (2.3%)
Dadra and Nagar Haveli and Daman and Diu	99	44	43 (98%)	90 (91%)		3 (3.0%)	2 (2.0%)	1 (1.0%)	0 (0.0%)	0 (0.0%)
Delhi	8278	5423	2795 (52%)	6128 (74%)		315 (3.8%)	480 (5.8%)	93 (1.1%)	381 (4.6%)	157 (1.9%)
Goa	110	88	32 (36%)	84 (76%)		9 (8.2%)	3 (2.7%)	3 (2.7%)	2 (1.8%)	0 (0.0%)
Gujarat	20102	11756	8828 (75%)	16496 (82%)		1333 (6.6%)	318 (1.6%)	409 (2.0%)	912 (4.5%)	41 (0.2%)
Haryana	6609	5492	3050 (56%)	5075 (77%)		384 (5.8%)	162 (2.5%)	86 (1.3%)	119 (1.8%)	157 (2.4%)
Himachal Pradesh	1747	1545	1022 (66%)	1516 (87%)		100 (5.7%)	18 (1.0%)	11 (0.6%)	37 (2.1%)	18 (1.0%)
Jammu & Kashmir	936	671	485 (72%)	758 (81%)		45 (4.8%)	16 (1.7%)	9 (1.0%)	15 (1.6%)	67 (7.2%)
Jharkhand	2711	1589	785 (49%)	2197 (81%)		83 (3.1%)	61 (2.3%)	20 (0.7%)	38 (1.4%)	89 (3.3%)
Karnataka	7129	5429	3657 (67%)	5413 (76%)		603 (8.5%)	290 (4.1%)	114 (1.6%)	286 (4.0%)	67 (0.9%)
Kerala	1317	988	627 (63%)	1001 (76%)		97 (7.4%)	41 (3.1%)	22 (1.7%)	55 (4.2%)	36 (2.7%)
Ladakh	40	29	13 (45%)	26 (65%)		8 (20.0%)	1 (2.5%)	0 (0.0%)	1 (2.5%)	4 (10.0%)
Lakshadweep	1	0	0 (NA)	0 (0%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Madhya Pradesh	13782	8056	4390 (54%)	11114 (81%)		603 (4.4%)	483 (3.5%)	133 (1.0%)	304 (2.2%)	441 (3.2%)
Maharashtra	13063	7415	4687 (63%)	10358 (79%)		771 (5.9%)	468 (3.6%)	178 (1.4%)	459 (3.5%)	110 (0.8%)
Manipur	142	94	74 (79%)	121 (85%)		6 (4.2%)	1 (0.7%)	1 (0.7%)	3 (2.1%)	7 (4.9%)
Meghalaya	368	252	133 (53%)	283 (77%)		19 (5.2%)	14 (3.8%)	10 (2.7%)	10 (2.7%)	8 (2.2%)
Mizoram	199	147	80 (54%)	171 (86%)		4 (2.0%)	2 (1.0%)	1 (0.5%)	8 (4.0%)	7 (3.5%)
Nagaland	366	260	181 (70%)	288 (79%)		14 (3.8%)	9 (2.5%)	4 (1.1%)	3 (0.8%)	42 (11.5%)
Odisha	3561	2446	1751 (72%)	3038 (85%)		254 (7.1%)	80 (2.2%)	23 (0.6%)	46 (1.3%)	43 (1.2%)
Puducherry	132	118	67 (57%)	90 (68%)		14 (10.6%)	10 (7.6%)	5 (3.8%)	8 (6.1%)	0 (0.0%)
Punjab	4827	3954	2279 (58%)	3798 (79%)		318 (6.6%)	175 (3.6%)	42 (0.9%)	85 (1.8%)	168 (3.5%)
Rajasthan	15752	12015	7003 (58%)	12047 (76%)		741 (4.7%)	516 (3.3%)	162 (1.0%)	307 (1.9%)	197 (1.3%)
Sikkim	121	100	77 (77%)	104 (86%)		4 (3.3%)	2 (1.7%)	0 (0.0%)	1 (0.8%)	1 (0.8%)
Tamil Nadu	7135	5836	3973 (68%)	5470 (77%)		521 (7.3%)	272 (3.8%)	115 (1.6%)	405 (5.7%)	77 (1.1%)
Telangana	5307	3532	2667 (76%)	4398 (83%)		234 (4.4%)	74 (1.4%)	61 (1.1%)	199 (3.7%)	155 (2.9%)
Tripura	243	171	110 (64%)	191 (79%)		17 (7.0%)	9 (3.7%)	0 (0.0%)	7 (2.9%)	4 (1.6%)
Uttar Pradesh	33136	19728	10412 (53%)	26283 (79%)		1435 (4.3%)	1012 (3.1%)	287 (0.9%)	997 (3.0%)	307 (0.9%)
Uttarakhand	1870	1283	738 (58%)	1550 (83%)		95 (5.1%)	50 (2.7%)	19 (1.0%)	62 (3.3%)	22 (1.2%)
West Bengal	8313	6484	4207 (65%)	6534 (79%)		559 (6.7%)	282 (3.4%)	133 (1.6%)	271 (3.3%)	120 (1.4%)
INDIA	**177465**	**117427**	**71496 (61%)**	**140520 (79%)**		**9429 (5.3%)**	**5397 (3.0%)**	**2060 (1.2%)**	**5468 (3.1%)**	**3084 (1.7%)**

3.6 Treatment outcome of TB-HIV patients notified in 2020 (Public)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	4	2	2 (100%)	3 (75%)		1 (25.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Andhra Pradesh	3287	2130	1353 (64%)	2582 (79%)		453 (13.8%)	31 (0.9%)	9 (0.3%)	52 (1.6%)	56 (1.7%)
Arunachal Pradesh	5	3	3 (100%)	4 (80%)		1 (20.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Assam	201	69	30 (43%)	131 (65%)		27 (13.4%)	5 (2.5%)	2 (1.0%)	2 (1.0%)	20 (10.0%)
Bihar	1287	625	201 (32%)	777 (60%)		77 (6.0%)	59 (4.6%)	8 (0.6%)	9 (0.7%)	193 (15.0%)
Chandigarh	154	21	6 (29%)	59 (38%)		26 (16.9%)	28 (18.2%)	0 (0.0%)	3 (1.9%)	15 (9.7%)
Chhattisgarh	465	262	141 (54%)	343 (74%)		62 (13.3%)	14 (3.0%)	4 (0.9%)	3 (0.6%)	32 (6.9%)
Dadra and Nagar Haveli and Daman and Diu	13	3	3 (100%)	10 (77%)		3 (23.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Delhi	854	328	128 (39%)	538 (63%)		49 (5.7%)	70 (8.2%)	9 (1.1%)	7 (0.8%)	125 (14.6%)
Goa	47	28	6 (21%)	37 (79%)		6 (12.8%)	0 (0.0%)	0 (0.0%)	1 (2.1%)	0 (0.0%)
Gujarat	2463	1037	588 (57%)	1759 (71%)		394 (16.0%)	112 (4.5%)	30 (1.2%)	23 (0.9%)	15 (0.6%)
Haryana	512	302	152 (50%)	382 (75%)		54 (10.5%)	11 (2.1%)	5 (1.0%)	3 (0.6%)	19 (3.7%)
Himachal Pradesh	108	69	33 (48%)	79 (73%)		20 (18.5%)	1 (0.9%)	1 (0.9%)	2 (1.9%)	3 (2.8%)
Jammu & Kashmir	59	19	6 (32%)	46 (78%)		3 (5.1%)	1 (1.7%)	0 (0.0%)	0 (0.0%)	7 (11.9%)
Jharkhand	256	141	43 (30%)	169 (66%)		18 (7.0%)	9 (3.5%)	3 (1.2%)	4 (1.6%)	11 (4.3%)
Karnataka	4027	2332	1212 (52%)	2717 (67%)		794 (19.7%)	192 (4.8%)	17 (0.4%)	82 (2.0%)	43 (1.1%)
Kerala	231	78	33 (42%)	132 (57%)		65 (28.1%)	7 (3.0%)	2 (0.9%)	1 (0.4%)	8 (3.5%)
Ladakh	1	0	NA	0 (0%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Lakshadweep	#N/A	#N/A	NA	NA		NA	NA	NA	NA	NA
Madhya Pradesh	1190	511	225 (44%)	858 (72%)		148 (12.4%)	56 (4.7%)	6 (0.5%)	12 (1.0%)	55 (4.6%)
Maharashtra	4980	1782	888 (50%)	3681 (74%)		679 (13.6%)	188 (3.8%)	19 (0.4%)	77 (1.5%)	83 (1.7%)
Manipur	89	44	32 (73%)	69 (78%)		10 (11.2%)	5 (5.6%)	0 (0.0%)	2 (2.2%)	2 (2.2%)
Meghalaya	119	51	29 (57%)	82 (69%)		20 (16.8%)	9 (7.6%)	0 (0.0%)	1 (0.8%)	3 (2.5%)
Mizoram	238	92	48 (52%)	202 (85%)		12 (5.0%)	3 (1.3%)	1 (0.4%)	2 (0.8%)	12 (5.0%)
Nagaland	254	93	58 (62%)	160 (63%)		17 (6.7%)	2 (0.8%)	3 (1.2%)	3 (1.2%)	55 (21.7%)
Odisha	563	302	153 (51%)	429 (76%)		88 (15.6%)	10 (1.8%)	0 (0.0%)	7 (1.2%)	10 (1.8%)
Puducherry	20	12	7 (58%)	13 (65%)		2 (10.0%)	1 (5.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Punjab	886	535	200 (37%)	575 (65%)		133 (15.0%)	52 (5.9%)	11 (1.2%)	9 (1.0%)	50 (5.6%)
Rajasthan	1136	628	288 (46%)	846 (74%)		113 (9.9%)	47 (4.1%)	9 (0.8%)	9 (0.8%)	24 (2.1%)
Sikkim	6	1	0 (0%)	3 (50%)		3 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Tamil Nadu	2217	1335	648 (49%)	1541 (70%)		383 (17.3%)	54 (2.4%)	9 (0.4%)	63 (2.8%)	34 (1.5%)
Telangana	1706	1171	743 (63%)	1300 (76%)		179 (10.5%)	15 (0.9%)	8 (0.5%)	42 (2.5%)	70 (4.1%)
Tripura	23	9	4 (44%)	15 (65%)		6 (26.1%)	1 (4.3%)	0 (0.0%)	1 (4.3%)	0 (0.0%)
Uttar Pradesh	2057	893	242 (27%)	1367 (66%)		237 (11.5%)	103 (5.0%)	18 (0.9%)	22 (1.1%)	56 (2.7%)
Uttarakhand	198	74	30 (41%)	145 (73%)		27 (13.6%)	11 (5.6%)	0 (0.0%)	3 (1.5%)	7 (3.5%)
West Bengal	716	469	179 (38%)	442 (62%)		110 (15.4%)	21 (2.9%)	4 (0.6%)	6 (0.8%)	53 (7.4%)
INDIA	**30372**	**15451**	**7714 (50%)**	**21496 (71%)**		**4220 (13.9%)**	**1118 (3.7%)**	**178 (0.6%)**	**451 (1.5%)**	**1062 (3.5%)**

3.7 Treatment outcome of TB-HIV patients notified in 2020 (Private)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	0	0	NA	NA		NA	NA	NA	NA	NA
Andhra Pradesh	126	38	25 (66%)	109 (87%)		9 (7.1%)	1 (0.8%)	0 (0.0%)	3 (2.4%)	4 (3.2%)
Arunachal Pradesh	0	0	NA	NA		NA	NA	NA	NA	NA
Assam	11	2	1 (50%)	9 (82%)		1 (9.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (9.1%)
Bihar	205	36	1 (3%)	156 (76%)		26 (12.7%)	6 (2.9%)	1 (0.5%)	2 (1.0%)	9 (4.4%)
Chandigarh	0	0	NA	NA		NA	NA	NA	NA	NA
Chhattisgarh	25	7	3 (43%)	16 (64%)		3 (12.0%)	1 (4.0%)	0 (0.0%)	1 (4.0%)	4 (16.0%)
Dadra and Nagar Haveli and Daman and Diu	0	0	NA	NA		NA	NA	NA	NA	NA
Delhi	74	24	2 (8%)	59 (80%)		8 (10.8%)	2 (2.7%)	0 (0.0%)	1 (1.4%)	2 (2.7%)
Goa	2	0	0 (NA)	2 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Gujarat	234	35	3 (9%)	181 (77%)		32 (13.7%)	9 (3.8%)	1 (0.4%)	3 (1.3%)	7 (3.0%)
Haryana	84	29	8 (28%)	53 (63%)		10 (11.9%)	11 (13.1%)	0 (0.0%)	0 (0.0%)	9 (10.7%)
Himachal Pradesh	0	0	NA	NA		NA	NA	NA	NA	NA
Jammu & Kashmir	1	0	NA	0 (0%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Jharkhand	45	5	0 (0%)	26 (58%)		6 (13.3%)	10 (22.2%)	0 (0.0%)	1 (2.2%)	1 (2.2%)
Karnataka	160	54	10 (19%)	109 (68%)		33 (20.6%)	3 (1.9%)	1 (0.6%)	2 (1.3%)	4 (2.5%)
Kerala	14	3	0 (0%)	5 (36%)		6 (42.9%)	2 (14.3%)	0 (0.0%)	0 (0.0%)	1 (7.1%)
Ladakh	0	0	NA	NA		NA	NA	NA	NA	NA
Lakshadweep	0	0	NA	NA		NA	NA	NA	NA	NA
Madhya Pradesh	74	16	4 (25%)	52 (70%)		7 (9.5%)	7 (9.5%)	0 (0.0%)	0 (0.0%)	7 (9.5%)
Maharashtra	537	166	12 (7%)	400 (74%)		86 (16.0%)	21 (3.9%)	0 (0.0%)	4 (0.7%)	5 (0.9%)
Manipur	16	10	0 (0%)	11 (69%)		3 (18.8%)	2 (12.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Meghalaya	8	2	0 (0%)	7 (88%)		0 (0.0%)	1 (12.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Mizoram	6	2	3 (150%)	6 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Nagaland	14	2	0 (0%)	13 (93%)		0 (0.0%)	1 (7.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Odisha	10	2	3 (150%)	6 (60%)		1 (10.0%)	1 (10.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Puducherry	0	0	NA	NA		NA	NA	NA	NA	NA
Punjab	60	16	3 (19%)	44 (73%)		8 (13.3%)	0 (0.0%)	0 (0.0%)	2 (3.3%)	4 (6.7%)
Rajasthan	97	19	0 (0%)	71 (73%)		10 (10.3%)	8 (8.2%)	0 (0.0%)	0 (0.0%)	4 (4.1%)
Sikkim	0	0	NA	NA		NA	NA	NA	NA	NA
Tamil Nadu	83	53	5 (9%)	51 (61%)		9 (10.8%)	7 (8.4%)	0 (0.0%)	1 (1.2%)	5 (6.0%)
Telangana	125	31	27 (87%)	105 (84%)		14 (11.2%)	0 (0.0%)	0 (0.0%)	2 (1.6%)	3 (2.4%)
Tripura	0	0	NA	NA		NA	NA	NA	NA	NA
Uttar Pradesh	186	26	6 (23%)	138 (74%)		24 (12.9%)	4 (2.2%)	1 (0.5%)	4 (2.2%)	3 (1.6%)
Uttarakhand	18	2	0 (0%)	15 (83%)		2 (11.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
West Bengal	30	7	4 (57%)	19 (63%)		7 (23.3%)	2 (6.7%)	1 (3.3%)	0 (0.0%)	1 (3.3%)
INDIA	**2245**	**587**	**120 (20%)**	**1663 (74%)**		**305 (13.6%)**	**99 (4.4%)**	**5 (0.2%)**	**26 (1.2%)**	**74 (3.3%)**

3.8 Treatment outcome of TB-HIV patients notified in 2020 (Total)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	4	2	2 (100%)	3 (75%)		1 (25.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Andhra Pradesh	3413	2168	1378 (64%)	2691 (79%)		462 (13.5%)	32 (0.9%)	9 (0.3%)	55 (1.6%)	60 (1.8%)
Arunachal Pradesh	5	3	3 (100%)	4 (80%)		1 (20.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Assam	212	71	31 (44%)	140 (66%)		28 (13.2%)	5 (2.4%)	2 (0.9%)	2 (0.9%)	21 (9.9%)
Bihar	1492	661	202 (31%)	933 (63%)		103 (6.9%)	65 (4.4%)	9 (0.6%)	11 (0.7%)	202 (13.5%)
Chandigarh	154	21	6 (29%)	59 (38%)		26 (16.9%)	28 (18.2%)	0 (0.0%)	3 (1.9%)	15 (9.7%)
Chhattisgarh	490	269	144 (54%)	359 (73%)		65 (13.3%)	15 (3.1%)	4 (0.8%)	4 (0.8%)	36 (7.3%)
Dadra and Nagar Haveli and Daman and Diu	13	3	3 (100%)	10 (77%)		3 (23.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Delhi	928	352	130 (37%)	597 (64%)		57 (6.1%)	72 (7.8%)	9 (1.0%)	8 (0.9%)	127 (13.7%)
Goa	49	28	6 (21%)	39 (80%)		6 (12.2%)	0 (0.0%)	0 (0.0%)	1 (2.0%)	0 (0.0%)
Gujarat	2697	1072	591 (55%)	1940 (72%)		426 (15.8%)	121 (4.5%)	31 (1.1%)	26 (1.0%)	22 (0.8%)
Haryana	596	331	160 (48%)	435 (73%)		64 (10.7%)	22 (3.7%)	5 (0.8%)	3 (0.5%)	28 (4.7%)
Himachal Pradesh	108	69	33 (48%)	79 (73%)		20 (18.5%)	1 (0.9%)	1 (0.9%)	2 (1.9%)	3 (2.8%)
Jammu & Kashmir	60	19	6 (32%)	46 (77%)		3 (5.0%)	1 (1.7%)	0 (0.0%)	0 (0.0%)	7 (11.7%)
Jharkhand	301	146	43 (29%)	195 (65%)		24 (8.0%)	19 (6.3%)	3 (1.0%)	5 (1.7%)	12 (4.0%)
Karnataka	4187	2386	1222 (51%)	2826 (67%)		827 (19.8%)	195 (4.7%)	18 (0.4%)	84 (2.0%)	47 (1.1%)
Kerala	245	81	33 (41%)	137 (56%)		71 (29.0%)	9 (3.7%)	2 (0.8%)	1 (0.4%)	9 (3.7%)
Ladakh	1	0	NA	0 (0%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Lakshadweep	0	0	NA	NA		NA	NA	NA	NA	NA
Madhya Pradesh	1264	527	229 (43%)	910 (72%)		155 (12.3%)	63 (5.0%)	6 (0.5%)	12 (0.9%)	62 (4.9%)
Maharashtra	5517	1948	900 (46%)	4081 (74%)		765 (13.9%)	209 (3.8%)	19 (0.3%)	81 (1.5%)	88 (1.6%)
Manipur	105	54	32 (59%)	80 (76%)		13 (12.4%)	7 (6.7%)	0 (0.0%)	2 (1.9%)	2 (1.9%)
Meghalaya	127	53	29 (55%)	89 (70%)		20 (15.7%)	10 (7.9%)	0 (0.0%)	1 (0.8%)	3 (2.4%)
Mizoram	244	94	51 (54%)	208 (85%)		12 (4.9%)	3 (1.2%)	1 (0.4%)	2 (0.8%)	12 (4.9%)
Nagaland	268	95	58 (61%)	173 (65%)		17 (6.3%)	3 (1.1%)	3 (1.1%)	3 (1.1%)	55 (20.5%)
Odisha	573	304	156 (51%)	435 (76%)		89 (15.5%)	11 (1.9%)	0 (0.0%)	7 (1.2%)	10 (1.7%)
Puducherry	20	12	7 (58%)	13 (65%)		2 (10.0%)	1 (5.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Punjab	946	551	203 (37%)	619 (65%)		141 (14.9%)	52 (5.5%)	11 (1.2%)	11 (1.2%)	54 (5.7%)
Rajasthan	1233	647	288 (45%)	917 (74%)		123 (10.0%)	55 (4.5%)	9 (0.7%)	9 (0.7%)	28 (2.3%)
Sikkim	6	1	0 (0%)	3 (50%)		3 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Tamil Nadu	2300	1388	653 (47%)	1592 (69%)		392 (17.0%)	61 (2.7%)	9 (0.4%)	64 (2.8%)	39 (1.7%)
Telangana	1831	1202	770 (64%)	1405 (77%)		193 (10.5%)	15 (0.8%)	8 (0.4%)	44 (2.4%)	73 (4.0%)
Tripura	23	9	4 (44%)	15 (65%)		6 (26.1%)	1 (4.3%)	0 (0.0%)	1 (4.3%)	0 (0.0%)
Uttar Pradesh	2243	919	248 (27%)	1505 (67%)		261 (11.6%)	107 (4.8%)	19 (0.8%)	26 (1.2%)	59 (2.6%)
Uttarakhand	216	76	30 (39%)	160 (74%)		29 (13.4%)	11 (5.1%)	0 (0.0%)	3 (1.4%)	7 (3.2%)
West Bengal	746	476	183 (38%)	461 (62%)		117 (15.7%)	23 (3.1%)	5 (0.7%)	6 (0.8%)	54 (7.2%)
INDIA	**32617**	**16038**	**7834 (49%)**	**23159 (71%)**		**4525 (13.9%)**	**1217 (3.7%)**	**183 (0.6%)**	**477 (1.5%)**	**1136 (3.5%)**

3.9 Treatment outcome of Paediatric TB patients notified in 2020 (Public)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	17	2	0 (0%)	17 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Andhra Pradesh	1441	281	226 (80%)	1344 (93%)		28 (1.9%)	7 (0.5%)	2 (0.1%)	5 (0.3%)	21 (1.5%)
Arunachal Pradesh	273	87	49 (56%)	237 (87%)		6 (2.2%)	10 (3.7%)	3 (1.1%)	7 (2.6%)	3 (1.1%)
Assam	993	357	211 (59%)	841 (85%)		25 (2.5%)	11 (1.1%)	4 (0.4%)	6 (0.6%)	38 (3.8%)
Bihar	2756	901	423 (47%)	2097 (76%)		60 (2.2%)	103 (3.7%)	10 (0.4%)	20 (0.7%)	222 (8.1%)
Chandigarh	221	78	51 (65%)	192 (87%)		7 (3.2%)	6 (2.7%)	0 (0.0%)	6 (2.7%)	2 (0.9%)
Chhattisgarh	861	162	121 (75%)	794 (92%)		21 (2.4%)	11 (1.3%)	2 (0.2%)	1 (0.1%)	19 (2.2%)
Dadra and Nagar Haveli and Daman and Diu	42	14	10 (71%)	41 (98%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Delhi	6986	2450	860 (35%)	5545 (79%)		69 (1.0%)	159 (2.3%)	36 (0.5%)	132 (1.9%)	150 (2.1%)
Goa	51	19	6 (32%)	46 (90%)		3 (5.9%)	0 (0.0%)	0 (0.0%)	1 (2.0%)	1 (2.0%)
Gujarat	3061	570	472 (83%)	2837 (93%)		93 (3.0%)	18 (0.6%)	14 (0.5%)	19 (0.6%)	7 (0.2%)
Haryana	2409	886	521 (59%)	2066 (86%)		28 (1.2%)	30 (1.2%)	6 (0.2%)	20 (0.8%)	70 (2.9%)
Himachal Pradesh	510	212	126 (59%)	457 (90%)		14 (2.7%)	6 (1.2%)	0 (0.0%)	4 (0.8%)	6 (1.2%)
Jammu & Kashmir	472	140	97 (69%)	402 (85%)		11 (2.3%)	2 (0.4%)	1 (0.2%)	0 (0.0%)	29 (6.1%)
Jharkhand	999	343	185 (54%)	861 (86%)		19 (1.9%)	17 (1.7%)	4 (0.4%)	6 (0.6%)	43 (4.3%)
Karnataka	2122	449	304 (68%)	1916 (90%)		62 (2.9%)	30 (1.4%)	2 (0.1%)	21 (1.0%)	18 (0.8%)
Kerala	624	108	70 (65%)	568 (91%)		4 (0.6%)	10 (1.6%)	2 (0.3%)	3 (0.5%)	23 (3.7%)
Ladakh	4	0	NA	4 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Lakshadweep	0	0	NA	NA		NA	NA	NA	NA	NA
Madhya Pradesh	7576	1090	693 (64%)	6838 (90%)		123 (1.6%)	182 (2.4%)	19 (0.3%)	24 (0.3%)	210 (2.8%)
Maharashtra	5108	1456	758 (52%)	4423 (87%)		106 (2.1%)	54 (1.1%)	12 (0.2%)	149 (2.9%)	37 (0.7%)
Manipur	61	14	9 (64%)	50 (82%)		1 (1.6%)	1 (1.6%)	0 (0.0%)	0 (0.0%)	5 (8.2%)
Meghalaya	191	83	49 (59%)	163 (85%)		4 (2.1%)	3 (1.6%)	3 (1.6%)	3 (1.6%)	6 (3.1%)
Mizoram	111	29	17 (59%)	100 (90%)		0 (0.0%)	2 (1.8%)	0 (0.0%)	3 (2.7%)	1 (0.9%)
Nagaland	163	53	41 (77%)	129 (79%)		4 (2.5%)	6 (3.7%)	1 (0.6%)	2 (1.2%)	20 (12.3%)
Odisha	1524	464	383 (83%)	1377 (90%)		58 (3.8%)	20 (1.3%)	7 (0.5%)	3 (0.2%)	15 (1.0%)
Puducherry	44	11	6 (55%)	42 (95%)		1 (2.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Punjab	2180	872	543 (62%)	1928 (88%)		64 (2.9%)	39 (1.8%)	12 (0.6%)	10 (0.5%)	65 (3.0%)
Rajasthan	4004	1117	756 (68%)	3447 (86%)		76 (1.9%)	88 (2.2%)	15 (0.4%)	34 (0.8%)	58 (1.4%)
Sikkim	52	19	12 (63%)	49 (94%)		0 (0.0%)	1 (1.9%)	0 (0.0%)	0 (0.0%)	2 (3.8%)
Tamil Nadu	1627	304	172 (57%)	1514 (93%)		20 (1.2%)	19 (1.2%)	2 (0.1%)	11 (0.7%)	27 (1.7%)
Telangana	1244	389	379 (97%)	1114 (90%)		31 (2.5%)	3 (0.2%)	4 (0.3%)	17 (1.4%)	35 (2.8%)
Tripura	44	22	12 (55%)	33 (75%)		4 (9.1%)	0 (0.0%)	0 (0.0%)	3 (6.8%)	1 (2.3%)
Uttar Pradesh	12438	3448	1947 (56%)	10672 (86%)		290 (2.3%)	271 (2.2%)	46 (0.4%)	129 (1.0%)	107 (0.9%)
Uttarakhand	708	152	82 (54%)	621 (88%)		14 (2.0%)	15 (2.1%)	3 (0.4%)	12 (1.7%)	14 (2.0%)
West Bengal	2152	717	453 (63%)	1817 (84%)		84 (3.9%)	41 (1.9%)	11 (0.5%)	24 (1.1%)	58 (2.7%)
INDIA	**63069**	**17299**	**10044 (58%)**	**54582 (87%)**		**1330 (2.1%)**	**1165 (1.8%)**	**221 (0.4%)**	**675 (1.1%)**	**1313 (2.1%)**

3.10 Treatment outcome of Paediatric TB patients notified in 2020 (Private)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	0	0	NA	NA		NA	NA	NA	NA	NA
Andhra Pradesh	834	53	32 (60%)	804 (96%)		6 (0.7%)	5 (0.6%)	1 (0.1%)	2 (0.2%)	6 (0.7%)
Arunachal Pradesh	3	0	NA	0 (0%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (33.3%)
Assam	120	21	4 (19%)	101 (84%)		2 (1.7%)	1 (0.8%)	0 (0.0%)	0 (0.0%)	9 (7.5%)
Bihar	5938	268	23 (9%)	4743 (80%)		100 (1.7%)	176 (3.0%)	20 (0.3%)	21 (0.4%)	764 (12.9%)
Chandigarh	11	2	0 (0%)	7 (64%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (18.2%)
Chhattisgarh	442	31	48 (155%)	382 (86%)		1 (0.2%)	12 (2.7%)	0 (0.0%)	0 (0.0%)	44 (10.0%)
Dadra and Nagar Haveli and Daman and Diu	7	0	NA	7 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Delhi	1426	425	8 (2%)	1046 (73%)		15 (1.1%)	57 (4.0%)	4 (0.3%)	12 (0.8%)	51 (3.6%)
Goa	5	3	0 (0%)	5 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Gujarat	2843	157	10 (6%)	2711 (95%)		39 (1.4%)	42 (1.5%)	3 (0.1%)	9 (0.3%)	31 (1.1%)
Haryana	1024	242	81 (33%)	831 (81%)		4 (0.4%)	49 (4.8%)	3 (0.3%)	4 (0.4%)	80 (7.8%)
Himachal Pradesh	25	8	5 (63%)	20 (80%)		0 (0.0%)	2 (8.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Jammu & Kashmir	38	4	5 (125%)	35 (92%)		1 (2.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (5.3%)
Jharkhand	1266	55	2 (4%)	1095 (86%)		28 (2.2%)	116 (9.2%)	3 (0.2%)	3 (0.2%)	6 (0.5%)
Karnataka	868	106	37 (35%)	798 (92%)		10 (1.2%)	8 (0.9%)	0 (0.0%)	1 (0.1%)	28 (3.2%)
Kerala	164	24	7 (29%)	151 (92%)		2 (1.2%)	3 (1.8%)	0 (0.0%)	1 (0.6%)	2 (1.2%)
Ladakh	1	0	NA	1 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Lakshadweep	0	0	NA	NA		NA	NA	NA	NA	NA
Madhya Pradesh	2784	159	72 (45%)	2239 (80%)		29 (1.0%)	234 (8.4%)	7 (0.3%)	9 (0.3%)	219 (7.9%)
Maharashtra	3948	1119	95 (8%)	3520 (89%)		52 (1.3%)	58 (1.5%)	10 (0.3%)	44 (1.1%)	20 (0.5%)
Manipur	12	2	2 (100%)	6 (50%)		0 (0.0%)	1 (8.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Meghalaya	65	11	0 (0%)	48 (74%)		0 (0.0%)	7 (10.8%)	0 (0.0%)	1 (1.5%)	5 (7.7%)
Mizoram	6	0	NA	5 (83%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Nagaland	28	3	2 (67%)	23 (82%)		0 (0.0%)	1 (3.6%)	0 (0.0%)	0 (0.0%)	3 (10.7%)
Odisha	238	12	9 (75%)	216 (91%)		4 (1.7%)	5 (2.1%)	0 (0.0%)	0 (0.0%)	8 (3.4%)
Puducherry	0	0	NA	NA		NA	NA	NA	NA	NA
Punjab	672	130	23 (18%)	554 (82%)		21 (3.1%)	8 (1.2%)	1 (0.1%)	1 (0.1%)	54 (8.0%)
Rajasthan	2908	181	109 (60%)	2441 (84%)		25 (0.9%)	212 (7.3%)	48 (1.7%)	9 (0.3%)	92 (3.2%)
Sikkim	4	2	1 (50%)	4 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Tamil Nadu	1351	181	220 (122%)	1262 (93%)		4 (0.3%)	24 (1.8%)	0 (0.0%)	1 (0.1%)	24 (1.8%)
Telangana	688	196	130 (66%)	632 (92%)		11 (1.6%)	4 (0.6%)	2 (0.3%)	4 (0.6%)	15 (2.2%)
Tripura	0	0	NA	NA		NA	NA	NA	NA	NA
Uttar Pradesh	8885	372	249 (67%)	7953 (90%)		167 (1.9%)	270 (3.0%)	28 (0.3%)	46 (0.5%)	131 (1.5%)
Uttarakhand	239	48	7 (15%)	201 (84%)		3 (1.3%)	6 (2.5%)	2 (0.8%)	2 (0.8%)	17 (7.1%)
West Bengal	320	56	16 (29%)	268 (84%)		8 (2.5%)	4 (1.3%)	1 (0.3%)	0 (0.0%)	13 (4.1%)
INDIA	**37163**	**3871**	**1198 (31%)**	**32109 (86%)**		**532 (1.4%)**	**1305 (3.5%)**	**133 (0.4%)**	**170 (0.5%)**	**1627 (4.4%)**

3.11 Treatment outcome of Paediatric TB patients notified in 2020 (Total)

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	17	2	0 (0%)	17 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Andhra Pradesh	2275	334	258 (77%)	2148 (94%)		34 (1.5%)	12 (0.5%)	3 (0.1%)	7 (0.3%)	27 (1.2%)
Arunachal Pradesh	276	87	49 (56%)	237 (86%)		6 (2.2%)	10 (3.6%)	3 (1.1%)	7 (2.5%)	4 (1.4%)
Assam	1113	378	215 (57%)	942 (85%)		27 (2.4%)	12 (1.1%)	4 (0.4%)	6 (0.5%)	47 (4.2%)
Bihar	8694	1169	446 (38%)	6840 (79%)		160 (1.8%)	279 (3.2%)	30 (0.3%)	41 (0.5%)	986 (11.3%)
Chandigarh	232	80	51 (64%)	199 (86%)		7 (3.0%)	6 (2.6%)	0 (0.0%)	6 (2.6%)	4 (1.7%)
Chhattisgarh	1303	193	169 (88%)	1176 (90%)		22 (1.7%)	23 (1.8%)	2 (0.2%)	1 (0.1%)	63 (4.8%)
Dadra and Nagar Haveli and Daman and Diu	49	14	11 (79%)	48 (98%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Delhi	8412	2875	868 (30%)	6591 (78%)		84 (1.0%)	216 (2.6%)	40 (0.5%)	144 (1.7%)	201 (2.4%)
Goa	56	22	6 (27%)	51 (91%)		3 (5.4%)	0 (0.0%)	0 (0.0%)	1 (1.8%)	1 (1.8%)
Gujarat	5904	727	482 (66%)	5548 (94%)		132 (2.2%)	60 (1.0%)	17 (0.3%)	28 (0.5%)	38 (0.6%)
Haryana	3433	1128	602 (53%)	2897 (84%)		32 (0.9%)	79 (2.3%)	9 (0.3%)	24 (0.7%)	150 (4.4%)
Himachal Pradesh	535	220	131 (60%)	477 (89%)		14 (2.6%)	8 (1.5%)	0 (0.0%)	4 (0.7%)	6 (1.1%)
Jammu & Kashmir	510	144	102 (71%)	437 (86%)		12 (2.4%)	2 (0.4%)	1 (0.2%)	0 (0.0%)	31 (6.1%)
Jharkhand	2265	398	187 (47%)	1956 (86%)		47 (2.1%)	133 (5.9%)	7 (0.3%)	9 (0.4%)	49 (2.2%)
Karnataka	2990	555	341 (61%)	2714 (91%)		72 (2.4%)	38 (1.3%)	2 (0.1%)	22 (0.7%)	46 (1.5%)
Kerala	788	132	77 (58%)	719 (91%)		6 (0.8%)	13 (1.6%)	2 (0.3%)	4 (0.5%)	25 (3.2%)
Ladakh	5	0	NA	5 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Lakshadweep	0	0	NA	NA		NA	NA	NA	NA	NA
Madhya Pradesh	10360	1249	765 (61%)	9077 (88%)		152 (1.5%)	416 (4.0%)	26 (0.3%)	33 (0.3%)	429 (4.1%)
Maharashtra	9056	2575	853 (33%)	7943 (88%)		158 (1.7%)	112 (1.2%)	22 (0.2%)	193 (2.1%)	57 (0.6%)
Manipur	73	16	11 (69%)	56 (77%)		1 (1.4%)	2 (2.7%)	0 (0.0%)	0 (0.0%)	5 (6.8%)
Meghalaya	256	94	49 (52%)	211 (82%)		4 (1.6%)	10 (3.9%)	3 (1.2%)	4 (1.6%)	11 (4.3%)
Mizoram	117	29	17 (59%)	105 (90%)		0 (0.0%)	2 (1.7%)	0 (0.0%)	3 (2.6%)	1 (0.9%)
Nagaland	191	56	43 (77%)	152 (80%)		4 (2.1%)	7 (3.7%)	1 (0.5%)	2 (1.0%)	23 (12.0%)
Odisha	1762	476	392 (82%)	1593 (90%)		62 (3.5%)	25 (1.4%)	7 (0.4%)	3 (0.2%)	23 (1.3%)
Puducherry	44	11	6 (55%)	42 (95%)		1 (2.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Punjab	2852	1002	566 (56%)	2482 (87%)		85 (3.0%)	47 (1.6%)	13 (0.5%)	11 (0.4%)	119 (4.2%)
Rajasthan	6912	1298	865 (67%)	5888 (85%)		101 (1.5%)	300 (4.3%)	63 (0.9%)	43 (0.6%)	150 (2.2%)
Sikkim	56	21	13 (62%)	53 (95%)		0 (0.0%)	1 (1.8%)	0 (0.0%)	0 (0.0%)	2 (3.6%)
Tamil Nadu	2978	485	392 (81%)	2776 (93%)		24 (0.8%)	43 (1.4%)	2 (0.1%)	12 (0.4%)	51 (1.7%)
Telangana	1932	585	509 (87%)	1746 (90%)		42 (2.2%)	7 (0.4%)	6 (0.3%)	21 (1.1%)	50 (2.6%)
Tripura	44	22	12 (55%)	33 (75%)		4 (9.1%)	0 (0.0%)	0 (0.0%)	3 (6.8%)	1 (2.3%)
Uttar Pradesh	21323	3820	2196 (57%)	18625 (87%)		457 (2.1%)	541 (2.5%)	74 (0.3%)	175 (0.8%)	238 (1.1%)
Uttarakhand	947	200	89 (45%)	822 (87%)		17 (1.8%)	21 (2.2%)	5 (0.5%)	14 (1.5%)	31 (3.3%)
West Bengal	2472	773	469 (61%)	2085 (84%)		92 (3.7%)	45 (1.8%)	12 (0.5%)	24 (1.0%)	71 (2.9%)
INDIA	**100232**	**21170**	**11242 (53%)**	**86691 (86%)**		**1862 (1.9%)**	**2470 (2.5%)**	**354 (0.4%)**	**845 (0.8%)**	**2940 (2.9%)**

3.12 Treatment outcome of Male TB patients notified in 2020

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	263	167	89 (53%)	216 (82%)		12 (4.6%)	6 (2.3%)	1 (0.4%)	5 (1.9%)	1 (0.4%)
Andhra Pradesh	41020	22496	17318 (77%)	36519 (89%)		1838 (4.5%)	366 (0.9%)	89 (0.2%)	753 (1.8%)	589 (1.4%)
Arunachal Pradesh	1288	720	475 (66%)	1061 (82%)		53 (4.1%)	63 (4.9%)	16 (1.2%)	29 (2.3%)	14 (1.1%)
Assam	23167	11289	6431 (57%)	19208 (83%)		1022 (4.4%)	470 (2.0%)	87 (0.4%)	314 (1.4%)	913 (3.9%)
Bihar	63111	22994	9332 (41%)	48458 (77%)		2189 (3.5%)	2468 (3.9%)	329 (0.5%)	678 (1.1%)	4441 (7.0%)
Chandigarh	1515	777	523 (67%)	1151 (76%)		87 (5.7%)	81 (5.3%)	11 (0.7%)	26 (1.7%)	45 (3.0%)
Chhattisgarh	18493	7860	5750 (73%)	15818 (86%)		1002 (5.4%)	452 (2.4%)	92 (0.5%)	186 (1.0%)	638 (3.4%)
Dadra and Nagar Haveli and Daman and Diu	460	202	187 (93%)	431 (94%)		10 (2.2%)	4 (0.9%)	2 (0.4%)	1 (0.2%)	5 (1.1%)
Delhi	38153	19569	7344 (38%)	26398 (69%)		1290 (3.4%)	2107 (5.5%)	220 (0.6%)	881 (2.3%)	953 (2.5%)
Goa	887	522	216 (41%)	729 (82%)		57 (6.4%)	35 (3.9%)	5 (0.6%)	17 (1.9%)	2 (0.2%)
Gujarat	73866	28177	21461 (76%)	63970 (87%)		4027 (5.5%)	1737 (2.4%)	638 (0.9%)	1378 (1.9%)	481 (0.7%)
Haryana	37986	22530	12194 (54%)	29102 (77%)		1907 (5.0%)	1364 (3.6%)	275 (0.7%)	376 (1.0%)	1634 (4.3%)
Himachal Pradesh	8210	5576	3671 (66%)	7070 (86%)		538 (6.6%)	95 (1.2%)	31 (0.4%)	161 (2.0%)	86 (1.0%)
Jammu & Kashmir	5162	2572	1855 (72%)	4251 (82%)		196 (3.8%)	72 (1.4%)	34 (0.7%)	52 (1.0%)	299 (5.8%)
Jharkhand	31191	13709	7348 (54%)	25783 (83%)		1144 (3.7%)	1648 (5.3%)	113 (0.4%)	224 (0.7%)	996 (3.2%)
Karnataka	39537	24167	15859 (66%)	31243 (79%)		3267 (8.3%)	1137 (2.9%)	271 (0.7%)	1058 (2.7%)	555 (1.4%)
Kerala	13414	8860	6013 (68%)	10720 (80%)		1217 (9.1%)	252 (1.9%)	92 (0.7%)	158 (1.2%)	385 (2.9%)
Ladakh	127	59	22 (37%)	99 (78%)		8 (6.3%)	4 (3.1%)	1 (0.8%)	1 (0.8%)	8 (6.3%)
Lakshadweep	8	4	4 (100%)	7 (88%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (12.5%)
Madhya Pradesh	85532	36444	21232 (58%)	66420 (78%)		3471 (4.1%)	4236 (5.0%)	517 (0.6%)	961 (1.1%)	5965 (7.0%)
Maharashtra	81008	36567	19989 (55%)	67268 (83%)		4614 (5.7%)	2008 (2.5%)	458 (0.6%)	1707 (2.1%)	469 (0.6%)
Manipur	1008	582	364 (63%)	808 (80%)		35 (3.5%)	24 (2.4%)	5 (0.5%)	14 (1.4%)	56 (5.6%)
Meghalaya	2254	1292	739 (57%)	1787 (79%)		122 (5.4%)	93 (4.1%)	17 (0.8%)	51 (2.3%)	51 (2.3%)
Mizoram	1088	576	389 (68%)	962 (88%)		26 (2.4%)	20 (1.8%)	2 (0.2%)	14 (1.3%)	27 (2.5%)
Nagaland	2134	1081	792 (73%)	1718 (81%)		57 (2.7%)	64 (3.0%)	17 (0.8%)	16 (0.7%)	217 (10.2%)
Odisha	30204	17817	14167 (80%)	26649 (88%)		1803 (6.0%)	421 (1.4%)	79 (0.3%)	187 (0.6%)	339 (1.1%)
Puducherry	783	596	411 (69%)	627 (80%)		58 (7.4%)	25 (3.2%)	11 (1.4%)	21 (2.7%)	2 (0.3%)
Punjab	26639	15463	7870 (51%)	20749 (78%)		1769 (6.6%)	745 (2.8%)	122 (0.5%)	293 (1.1%)	1393 (5.2%)
Rajasthan	87795	43763	25859 (59%)	71039 (81%)		3495 (4.0%)	3755 (4.3%)	541 (0.6%)	1060 (1.2%)	1538 (1.8%)
Sikkim	642	397	280 (71%)	575 (90%)		29 (4.5%)	6 (0.9%)	1 (0.2%)	8 (1.2%)	5 (0.8%)
Tamil Nadu	47157	31303	21441 (68%)	38192 (81%)		3109 (6.6%)	1329 (2.8%)	278 (0.6%)	1514 (3.2%)	853 (1.8%)
Telangana	37280	18290	15212 (83%)	32791 (88%)		1356 (3.6%)	267 (0.7%)	153 (0.4%)	745 (2.0%)	993 (2.7%)
Tripura	1593	1104	796 (72%)	1279 (80%)		123 (7.7%)	40 (2.5%)	8 (0.5%)	48 (3.0%)	29 (1.8%)
Uttar Pradesh	212835	84101	46826 (56%)	174676 (82%)		10414 (4.9%)	7394 (3.5%)	1277 (0.6%)	2974 (1.4%)	2514 (1.2%)
Uttarakhand	11595	5241	2727 (52%)	9485 (82%)		539 (4.6%)	377 (3.3%)	64 (0.6%)	231 (2.0%)	346 (3.0%)
West Bengal	52038	35967	25723 (72%)	43509 (84%)		3167 (6.1%)	1135 (2.2%)	335 (0.6%)	798 (1.5%)	914 (1.8%)
INDIA	**1079443**	**522834**	**320909 (61%)**	**880768 (82%)**		**54051 (5.0%)**	**34300 (3.2%)**	**6192 (0.6%)**	**16940 (1.6%)**	**27757 (2.6%)**

3.13 Treatment outcome of Female TB patients notified in 2020

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	171	75	52 (69%)	154 (90%)		4 (2.3%)	0 (0.0%)	2 (1.2%)	3 (1.8%)	0 (0.0%)
Andhra Pradesh	21862	8840	7051 (80%)	20127 (92%)		650 (3.0%)	133 (0.6%)	33 (0.2%)	259 (1.2%)	265 (1.2%)
Arunachal Pradesh	1132	526	340 (65%)	949 (84%)		25 (2.2%)	60 (5.3%)	7 (0.6%)	47 (4.2%)	10 (0.9%)
Assam	11352	4931	2951 (60%)	9667 (85%)		400 (3.5%)	164 (1.4%)	38 (0.3%)	136 (1.2%)	459 (4.0%)
Bihar	36546	11769	5086 (43%)	28995 (79%)		1149 (3.1%)	1277 (3.5%)	187 (0.5%)	389 (1.1%)	2295 (6.3%)
Chandigarh	1309	599	424 (71%)	1123 (86%)		42 (3.2%)	23 (1.8%)	3 (0.2%)	26 (2.0%)	19 (1.5%)
Chhattisgarh	10593	3491	2677 (77%)	9248 (87%)		376 (3.5%)	233 (2.2%)	43 (0.4%)	75 (0.7%)	434 (4.1%)
Dadra and Nagar Haveli and Daman and Diu	275	112	98 (88%)	255 (93%)		7 (2.5%)	1 (0.4%)	0 (0.0%)	1 (0.4%)	3 (1.1%)
Delhi	35181	15249	5909 (39%)	26460 (75%)		716 (2.0%)	1337 (3.8%)	168 (0.5%)	763 (2.2%)	908 (2.6%)
Goa	695	321	132 (41%)	607 (87%)		32 (4.6%)	13 (1.9%)	3 (0.4%)	9 (1.3%)	6 (0.9%)
Gujarat	41423	12671	10150 (80%)	37464 (90%)		1444 (3.5%)	672 (1.6%)	238 (0.6%)	695 (1.7%)	261 (0.6%)
Haryana	25019	11924	6918 (58%)	20380 (81%)		730 (2.9%)	641 (2.6%)	120 (0.5%)	199 (0.8%)	1082 (4.3%)
Himachal Pradesh	5082	3135	2031 (65%)	4567 (90%)		185 (3.6%)	49 (1.0%)	17 (0.3%)	82 (1.6%)	75 (1.5%)
Jammu & Kashmir	3634	1717	1315 (77%)	3036 (84%)		113 (3.1%)	48 (1.3%)	15 (0.4%)	21 (0.6%)	203 (5.6%)
Jharkhand	14460	4889	2749 (56%)	12250 (85%)		424 (2.9%)	730 (5.0%)	56 (0.4%)	85 (0.6%)	409 (2.8%)
Karnataka	22949	11216	7634 (68%)	19481 (85%)		1219 (5.3%)	415 (1.8%)	97 (0.4%)	459 (2.0%)	318 (1.4%)
Kerala	7219	3273	2099 (64%)	6045 (84%)		450 (6.2%)	118 (1.6%)	39 (0.5%)	76 (1.1%)	222 (3.1%)
Ladakh	116	68	34 (50%)	89 (77%)		11 (9.5%)	0 (0.0%)	1 (0.9%)	0 (0.0%)	10 (8.6%)
Lakshadweep	9	4	5 (125%)	8 (89%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (11.1%)
Madhya Pradesh	50151	16765	10664 (64%)	41525 (83%)		1323 (2.6%)	1851 (3.7%)	250 (0.5%)	470 (0.9%)	2987 (6.0%)
Maharashtra	66324	26862	13064 (49%)	56972 (86%)		2370 (3.6%)	1077 (1.6%)	258 (0.4%)	1617 (2.4%)	389 (0.6%)
Manipur	555	269	169 (63%)	436 (79%)		20 (3.6%)	19 (3.4%)	1 (0.2%)	3 (0.5%)	33 (5.9%)
Meghalaya	1606	797	467 (59%)	1318 (82%)		63 (3.9%)	55 (3.4%)	10 (0.6%)	38 (2.4%)	32 (2.0%)
Mizoram	900	405	287 (71%)	811 (90%)		24 (2.7%)	11 (1.2%)	3 (0.3%)	13 (1.4%)	25 (2.8%)
Nagaland	1380	576	439 (76%)	1121 (81%)		39 (2.8%)	26 (1.9%)	9 (0.7%)	8 (0.6%)	150 (10.9%)
Odisha	14766	7147	6130 (86%)	13324 (90%)		703 (4.8%)	163 (1.1%)	28 (0.2%)	61 (0.4%)	184 (1.2%)
Puducherry	436	230	132 (57%)	367 (84%)		22 (5.0%)	3 (0.7%)	3 (0.7%)	16 (3.7%)	1 (0.2%)
Punjab	19811	10441	5812 (56%)	16224 (82%)		892 (4.5%)	427 (2.2%)	81 (0.4%)	201 (1.0%)	981 (5.0%)
Rajasthan	45619	17906	11627 (65%)	38893 (85%)		1120 (2.5%)	1618 (3.5%)	215 (0.5%)	479 (1.1%)	810 (1.8%)
Sikkim	497	273	169 (62%)	447 (90%)		16 (3.2%)	3 (0.6%)	0 (0.0%)	11 (2.2%)	10 (2.0%)
Tamil Nadu	21757	10627	7237 (68%)	18666 (86%)		940 (4.3%)	383 (1.8%)	64 (0.3%)	521 (2.4%)	455 (2.1%)
Telangana	23549	9632	8461 (88%)	21362 (91%)		519 (2.2%)	109 (0.5%)	73 (0.3%)	410 (1.7%)	542 (2.3%)
Tripura	542	307	245 (80%)	458 (85%)		36 (6.6%)	10 (1.8%)	1 (0.2%)	12 (2.2%)	13 (2.4%)
Uttar Pradesh	150653	47621	29007 (61%)	128972 (86%)		4494 (3.0%)	4482 (3.0%)	771 (0.5%)	1989 (1.3%)	1704 (1.1%)
Uttarakhand	8074	2898	1538 (53%)	6917 (86%)		204 (2.5%)	236 (2.9%)	40 (0.5%)	118 (1.5%)	249 (3.1%)
West Bengal	25416	13979	9828 (70%)	21637 (85%)		1151 (4.5%)	421 (1.7%)	131 (0.5%)	423 (1.7%)	507 (2.0%)
INDIA	**671063**	**261545**	**162931 (62%)**	**570355 (85%)**		**21913 (3.3%)**	**16808 (2.5%)**	**3005 (0.4%)**	**9715 (1.4%)**	**16052 (2.4%)**

3.14 Treatment outcome of Transgenders TB patients notified in 2020

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	0	0	NA	NA		NA	NA	NA	NA	NA
Andhra Pradesh	32	13	10 (77%)	29 (91%)		2 (6.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (3.1%)
Arunachal Pradesh	4	1	1 (100%)	4 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Assam	21	5	4 (80%)	21 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Bihar	74	26	11 (42%)	50 (68%)		3 (4.1%)	6 (8.1%)	0 (0.0%)	1 (1.4%)	7 (9.5%)
Chandigarh	5	4	3 (75%)	4 (80%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	0 (0.0%)
Chhattisgarh	18	7	7 (100%)	14 (78%)		2 (11.1%)	0 (0.0%)	2 (11.1%)	0 (0.0%)	0 (0.0%)
Dadra and Nagar Haveli and Daman and Diu	0	0	NA	NA		NA	NA	NA	NA	NA
Delhi	56	25	8 (32%)	35 (63%)		2 (3.6%)	4 (7.1%)	0 (0.0%)	1 (1.8%)	1 (1.8%)
Goa	2	1	0 (0%)	2 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Gujarat	56	19	15 (79%)	50 (89%)		1 (1.8%)	1 (1.8%)	0 (0.0%)	1 (1.8%)	2 (3.6%)
Haryana	31	12	7 (58%)	23 (74%)		1 (3.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (12.9%)
Himachal Pradesh	7	4	2 (50%)	6 (86%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (14.3%)	0 (0.0%)
Jammu & Kashmir	4	2	2 (100%)	3 (75%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
Jharkhand	9	3	0 (0%)	8 (89%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Karnataka	48	26	15 (58%)	32 (67%)		4 (8.3%)	3 (6.3%)	0 (0.0%)	1 (2.1%)	0 (0.0%)
Kerala	8	4	2 (50%)	5 (63%)		1 (12.5%)	1 (12.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Ladakh	0	0	NA	NA		NA	NA	NA	NA	NA
Lakshadweep	0	0	NA	NA		NA	NA	NA	NA	NA
Madhya Pradesh	76	25	16 (64%)	61 (80%)		1 (1.3%)	5 (6.6%)	0 (0.0%)	0 (0.0%)	5 (6.6%)
Maharashtra	88	38	19 (50%)	77 (88%)		4 (4.5%)	3 (3.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Manipur	1	0	NA	1 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Meghalaya	4	1	0 (0%)	4 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Mizoram	0	0	NA	NA		NA	NA	NA	NA	NA
Nagaland	4	1	1 (100%)	2 (50%)		1 (25.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
Odisha	25	12	10 (83%)	22 (88%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (12.0%)
Puducherry	1	1	0 (0%)	0 (0%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Punjab	41	28	12 (43%)	33 (80%)		6 (14.6%)	0 (0.0%)	1 (2.4%)	0 (0.0%)	0 (0.0%)
Rajasthan	46	19	15 (79%)	40 (87%)		1 (2.2%)	2 (4.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Sikkim	0	0	NA	NA		NA	NA	NA	NA	NA
Tamil Nadu	29	18	8 (44%)	27 (93%)		1 (3.4%)	0 (0.0%)	0 (0.0%)	1 (3.4%)	0 (0.0%)
Telangana	28	11	8 (73%)	23 (82%)		1 (3.6%)	0 (0.0%)	0 (0.0%)	1 (3.6%)	2 (7.1%)
Tripura	2	1	2 (200%)	2 (100%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Uttar Pradesh	176	77	47 (61%)	137 (78%)		5 (2.8%)	4 (2.3%)	1 (0.6%)	4 (2.3%)	5 (2.8%)
Uttarakhand	12	3	2 (67%)	10 (83%)		0 (0.0%)	1 (8.3%)	0 (0.0%)	1 (8.3%)	0 (0.0%)
West Bengal	23	15	12 (80%)	19 (83%)		2 (8.7%)	0 (0.0%)	1 (4.3%)	1 (4.3%)	0 (0.0%)
INDIA	**931**	**402**	**239 (59%)**	**744 (80%)**		**38 (4.1%)**	**30 (3.2%)**	**5 (0.5%)**	**14 (1.5%)**	**32 (3.4%)**

3.15 Treatment outcome of Tribal TB patients notified in 2020

State	TB patients Notified	Bacteriologically Confirmed	Cure Rate	Success Rate		Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	82	63	16 (25%)	68 (83%)		6 (7.3%)	(0.0%)	1 (1.2%)	4 (4.9%)	(0.0%)
Andhra Pradesh	8410	5034	3627 (72%)	7601 (90%)		348 (4.1%)	72 (0.9%)	13 (0.2%)	129 (1.5%)	101 (1.2%)
Arunachal Pradesh	2589	1417	780 (55%)	2120 (82%)		86 (3.3%)	150 (5.8%)	25 (1.0%)	80 (3.1%)	43 (1.7%)
Assam	6155	3120	1594 (51%)	5242 (85%)		286 (4.6%)	167 (2.7%)	20 (0.3%)	88 (1.4%)	231 (3.8%)
Bihar	NA	NA	NA	NA		NA	NA	NA	NA	NA
Chandigarh	NA	NA	NA	NA		NA	NA	NA	NA	NA
Chhattisgarh	10681	4691	3150 (67%)	9284 (87%)		507 (4.7%)	206 (1.9%)	53 (0.5%)	60 (0.6%)	478 (4.5%)
Dadra and Nagar Haveli and Daman and Diu	492	211	139 (66%)	440 (89%)		22 (4.5%)	3 (0.6%)	(0.0%)	11 (2.2%)	3 (0.6%)
Delhi	NA	NA	NA	NA		NA	NA	NA	NA	NA
Goa	NA	NA	NA	NA		NA	NA	NA	NA	NA
Gujarat	19661	8674	5875 (68%)	17376 (88%)		986 (5.0%)	455 (2.3%)	166 (0.8%)	328 (1.7%)	59 (0.3%)
Haryana	NA	NA	NA	NA		NA	NA	NA	NA	NA
Himachal Pradesh	315	206	144 (70%)	283 (90%)		9 (2.9%)	3 (1.0%)	(0.0%)	5 (1.6%)	6 (1.9%)
Jammu & Kashmir	42	29	13 (45%)	23 (55%)		4 (9.5%)	(0.0%)	(0.0%)	(0.0%)	15 (35.7%)
Jharkhand	25650	10732	5258 (49%)	21139 (82%)		1044 (4.1%)	1037 (4.0%)	82 (0.3%)	184 (0.7%)	1309 (5.1%)
Karnataka	2577	1651	1048 (63%)	2029 (79%)		221 (8.6%)	76 (2.9%)	16 (0.6%)	74 (2.9%)	52 (2.0%)
Kerala	883	528	358 (68%)	749 (85%)		74 (8.4%)	9 (1.0%)	5 (0.6%)	13 (1.5%)	16 (1.8%)
Ladakh	247	131	53 (40%)	189 (77%)		20 (8.1%)	4 (1.6%)	2 (0.8%)	2 (0.8%)	20 (8.1%)
Lakshadweep	17	8	7 (88%)	15 (88%)		(0.0%)	(0.0%)	(0.0%)	(0.0%)	2 (11.8%)
Madhya Pradesh	21331	8367	4301 (51%)	17895 (84%)		909 (4.3%)	923 (4.3%)	115 (0.5%)	232 (1.1%)	923 (4.3%)
Maharashtra	12721	5952	4092 (69%)	11088 (87%)		592 (4.7%)	248 (1.9%)	57 (0.4%)	252 (2.0%)	63 (0.5%)
Manipur	976	551	346 (63%)	789 (81%)		38 (3.9%)	28 (2.9%)	6 (0.6%)	11 (1.1%)	78 (8.0%)
Meghalaya	4156	2377	1217 (51%)	3268 (79%)		238 (5.7%)	176 (4.2%)	35 (0.8%)	119 (2.9%)	164 (3.9%)
Mizoram	2149	1142	686 (60%)	1851 (86%)		79 (3.7%)	37 (1.7%)	9 (0.4%)	37 (1.7%)	61 (2.8%)
Nagaland	3621	1761	1183 (67%)	2888 (80%)		108 (3.0%)	108 (3.0%)	27 (0.7%)	32 (0.9%)	390 (10.8%)
Odisha	19558	12092	9032 (75%)	17437 (89%)		1238 (6.3%)	272 (1.4%)	45 (0.2%)	78 (0.4%)	270 (1.4%)
Puducherry	NA	NA	NA	NA		NA	NA	NA	NA	NA
Punjab	NA	NA	NA	NA		NA	NA	NA	NA	NA
Rajasthan	16150	10613	5676 (53%)	13652 (85%)		721 (4.5%)	445 (2.8%)	98 (0.6%)	316 (2.0%)	298 (1.8%)
Sikkim	75	55	37 (67%)	60 (80%)		5 (6.7%)	(0.0%)	(0.0%)	3 (4.0%)	4 (5.3%)
Tamil Nadu	474	292	252 (86%)	425 (90%)		27 (5.7%)	2 (0.4%)	2 (0.4%)	8 (1.7%)	7 (1.5%)
Telangana	8087	3720	1789 (48%)	7082 (88%)		259 (3.2%)	80 (1.0%)	49 (0.6%)	166 (2.1%)	355 (4.4%)
Tripura	198	109	96 (88%)	179 (90%)		13 (6.6%)	(0.0%)	2 (1.0%)	(0.0%)	2 (1.0%)
Uttar Pradesh	3456	1768	882 (50%)	3040 (88%)		146 (4.2%)	69 (2.0%)	40 (1.2%)	48 (1.4%)	35 (1.0%)
Uttarakhand	47	36	25 (69%)	35 (74%)		6 (12.8%)	2 (4.3%)	1 (2.1%)	1 (2.1%)	2 (4.3%)
West Bengal	NA	NA	NA	NA		NA	NA	NA	NA	NA
INDIA	**170800**	**85330**	**51676 (61%)**	**146247 (86%)**		**7992 (4.7%)**	**4572 (2.7%)**	**869 (0.5%)**	**2281 (1.3%)**	**4987 (2.9%)**

4.1 PMDT- Infrastructure

State	No. of Nodal DR-TB centres	No. of District DR-TB centres		Out of the total, no. of Nodal/ District DR-TB centers are Airborne Infection control compliant		Total number of beds in Nodal DRTB centre	Number of Medical Colleges	Number of Medical Colleges with DRTB centre established
Andaman & Nicobar	1	3		0	0%	10	1	1
Andhra Pradesh	4	13		6	35%	140	26	10
Arunachal Pradesh	5	10		5	33%	62	1	1
Assam	6	24		10	33%	89	8	5
Bihar	7	31		17	45%	160	15	5
Chandigarh	1	0		0	0%	10	2	1
Chhattisgarh	7	22		7	24%	98	11	5
Dadra & Nagar Haveli Daman & Diu	0	1		1	100%	5	1	0
Delhi	4	25		17	59%	230	14	9
Goa	1	1		1	50%	14	1	1
Gujarat	5	37		37	88%	214	30	29
Haryana	3	22		14	56%	66	12	3
Himachal Pradesh	3	16		9	47%	92	7	5
Jammu & Kashmir	3	9		3	25%	30	10	7
Jharkhand	5	23		16	57%	117	7	2
Karnataka	6	27		16	48%	230	57	22
Kerala	2	14		12	75%	58	32	24
Ladakh	1	1		1	50%	6	0	0
Lakshadweep	Zero DR-TB centre					0	0	0
Madhya Pradesh	10	41		28	55%	259	23	7
Maharashtra	20	47		40	60%	543	55	33
Manipur	1	3		0	0%	13	2	2
Meghalaya	3	6		3	33%	29	1	0
Mizoram	2	7		3	33%	21	1	1
Nagaland	2	5		2	29%	51	0	0
Odisha	3	28		27	87%	124	12	7
Puducherry	1	0		1	100%	14	9	9
Punjab	3	17		12	60%	82	9	4
Rajasthan	7	32		22	56%	218	24	16
Sikkim	1	5		4	67%	50	1	1
Tamil Nadu	7	24		25	81%	273	58	38
Telangana	3	25		13	46%	197	31	9
Tripura	1	1		1	50%	12	2	1
Uttar Pradesh	22	58		42	53%	522	55	25
Uttarakhand	3	3		2	33%	46	7	3
West Bengal	9	33		25	60%	249	29	20
INDIA	**162**	**614**		422	54%	4334	**554**	**306**

4.2 TESTING IN TRUNAAT

State	Number of Truenat Machines	Total MTB Tests performed	Samples with Mycobacterium TB (MTB) Detected	Total RIF tests performed	Samples with RR/ MDR-TB Detected	Paediatric Testing				EP-TB Testing			Private Samples Testing		
						Total Tests performed	Number of Samples with Mycobacterium TB (MTB) Detected		Number of Samples with RR/MDR-TB Detected	Total Tests performed	Number of Samples with Mycobacterium TB (MTB) Detected	Number of Samples with RR/MDR-TB Detected	Total Tests performed	Number of Samples with Mycobacterium TB (MTB) Detected	Number of Samples with RR/MDR-TB Detected
Andaman & Nicobar	5	1296	245	255	31	61	4		1	53	6	0	8	6	1
Andhra Pradesh	315	450394	29927	30205	768	5541	162		98	7168	6122	397	11335	2106	396
Arunachal Pradesh	22	6786	1049	1227	169	235	22		1	444	62	15	7	1	4
Assam	15	4182	1474	1250	66	269	58		5	167	32	5	152	38	0
Bihar	37	85083	20674	21520	1636	3666	792		84	1988	225	24	20460	5623	489
Chandigarh	5	4511	1178	1244	64	150	3		6	149	15	0	6	0	0
Chhattisgarh	158	49556	8483	8835	271	1775	221		199	2954	403	15	4422	919	27
Dadar & Nagar Haveli	1	1523	212	251	14	97	7		1	145	20	1	27	4	0
Daman & Diu	0	0	0	0	0	0	0		0	0	0	0	0	0	0
Delhi	48	28977	8545	6960	399	5664	901		53	4309	892	34	516	164	9
Goa	7	6816	532	573	26	374	23		37	541	26	3	12	4	0
Gujarat	85	121545	34263	35575	1448	3235	408		37	2840	370	18	10298	3765	188
Haryana	45	40941	15597	16739	617	1660	451		65	1625	584	34	4064	1657	44
Himachal Pradesh	28	29219	3695	4031	87	1254	134		5	2602	308	16	1124	374	24
Jammu & Kashmir	25	24475	3742	3856	110	1832	129		23	1207	97	6	289	70	2
Jharkhand	266	44575	10293	9503	407	813	141		255	1046	96	9	3336	918	68
Karnataka	124	192503	24150	25621	1087	7277	392		1666	5924	495	128	12932	2873	142
Kerala	54	102592	6636	7620	141	1032	21		2	138	19	0	5115	640	64
Ladakh	2	151	9	6	0	1	0		0	0	0	0	7	0	0
Lakshadweep	10	981	6	3	0	0	0		0	0	0	0	0	0	0
Madhya Pradesh	70	116255	39442	32292	1732	4209	778		60	4166	790	35	17877	7090	323
Maharashtra	91	57721	12673	12595	1111	1965	231		410	1764	229	304	11912	3246	208
Manipur	5	188	15	15	1	5	0		0	2	0	0	0	0	0
Meghalaya	12	2232	277	355	37	143	0		84	36	6	0	78	3	0
Mizoram	4	0	0	0	0	0	0		0	0	0	0	0	0	0
Nagaland	7	850	83	122	8	4	1		0	1	1	0	2	0	0
Odhisa	56	54973	9671	9354	269	2230	163		55	3820	313	28	6220	5311	15
Pondicherry	5	583	92	27	1	22	0		0	0	0	0	0	0	0
Punjab	35	25752	9581	10546	351	1201	382		100	1547	364	14	1502	534	23
Rajasthan	61	50656	18807	15641	825	873	282		13	420	80	8	4532	792	15
Sikkim	6	1316	151	162	36	148	18		7	115	6	2	1	0	0
Tamil Nadu	147	156457	33306	35572	1174	3203	186		289	4037	555	55	10864	3426	163
Telangana	43	68269	14002	14117	729	1911	261		81	954	153	71	4473	1111	49
Tripura	10	6472	1141	1356	11	204	9		0	328	26	0	114	21	1
Uttar Pradesh	485	323718	107820	109489	6837	12206	3795		723	4890	819	194	19397	7719	840
Uttarakhand	52	16993	4850	5518	239	388	87		1	1123	182	4	358	148	10
West Bengal	186	119216	27683	29746	1225	**3076**	**419**		**67**	**4296**	**524**	**48**	**3855**	**872**	**53**
Grand Total	**2527**	**2197757**	**450304**	**452181**	**21927**	**66724**	**10481**		**4428**	**60799**	**13820**	**1468**	**155295**	**49435**	**3158**

4.3 TESTING IN CBNAAT

State	Number of CBNAAT Machines (Including Mobile Vans)	Total Tests performed	Samples with Mycobacterium TB (MTB) Detected	Samples with RR/ MDR-TB Detected	Paediatric Testing				EP-TB Testing			Private Samples Testing		
					Total Tests performed	Number of Samples with Mycobacterium TB (MTB) Detected		Number of Samples with RR/MDR-TB Detected	Total Tests performed	Number of Samples with Mycobacterium TB (MTB) Detected	Number of Samples with RR/MDR-TB Detected	Total Tests performed	Number of Samples with Mycobacterium TB (MTB) Detected	Number of Samples with RR/MDR-TB Detected
Andaman & Nicobar	5	431	93	9	19	0		0	52	14	1	1	0	0
Andhra Pradesh	50	107520	13757	709	3044	113		7	7222	773	36	12764	3177	135
Arunachal Pradesh	12	3908	571	65	253	24		3	157	41	4	15	0	0
Assam	33	22916	6599	330	1141	215		11	1118	98	7	1568	346	23
Bihar	72	50190	14502	1547	1898	422		44	2390	452	62	13967	4238	414
Chandigarh	3	3435	626	60	785	99		6	1277	163	15	0	0	0
Chhattisgarh	32	34918	6962	186	1257	159		1	2822	359	14	2390	528	12
Dadar & Nagar Haveli	2	1448	184	10	101	8		0	228	53	1	21	5	0
Daman & Diu	3	2504	235	26	74	11		1	45	22	0	3	2	0
Delhi	41	21020	7689	761	2925	661		74	7204	1813	213	598	204	18
Goa	3	8212	851	67	669	41		1	2675	180	17	30	6	0
Gujarat	63	65044	19097	964	3041	582		40	8811	1738	136	8393	3333	202
Haryana	28	39249	15354	813	2026	573		24	2840	681	36	4021	1784	63
Himachal Pradesh	27	39252	6361	175	1882	198		5	5440	644	30	2033	610	19
Jammu & Kashmir	14	14396	2236	204	990	166		110	1201	106	7	575	168	0
Jharkhand	37	40655	12878	753	1059	195		8	1194	159	15	8777	2454	141
Karnataka	72	56706	9536	493	2557	190		13	6396	886	88	6084	1502	69
Kerala	38	49777	6061	231	2463	113		2	12815	1583	62	9826	1267	31
Ladakh	2	2435	246	14	33	3		0	246	64	5	45	17	3
Lakshadweep	1	70	5	0	0	0		0	0	0	0	0	0	0
Madhya Pradesh	75	42806	12913	696	2667	346		11	3270	546	21	5788	2404	247
Maharashtra	138	262395	103243	23307	66416	34911		17011	98443	43831	19523	100665	50478	20690
Manipur	10	6336	1003	64	215	9		1	254	51	1	66	17	3
Meghalaya	8	9610	2078	211	1179	109		11	694	149	24	686	116	9
Mizoram	9	4081	731	72	276	20		2	630	94	15	345	54	5
Nagaland	11	8528	1797	106	285	28		0	356	96	0	604	252	28
Odhisa	48	60415	17122	362	2475	340		12	6667	733	29	2888	566	9
Pondicherry	3	8048	1280	62	357	9		0	3931	395	13	16	0	0
Punjab	35	37336	14391	490	1746	715		149	3867	824	35	1799	697	26
Rajasthan	62	49849	21954	1324	2995	552		21	6740	1015	62	5935	2595	142
Sikkim	8	5570	949	276	593	105		26	761	124	32	32	8	4
Tamil Nadu	73	65219	13924	600	2978	102		1	8148	1091	25	5095	1479	31
Telangana	39	46713	8751	524	1516	146		14	2125	306	22	4764	1276	45
Tripura	7	4182	713	18	105	7		0	131	16	0	43	7	0
Uttar Pradesh	150	173292	68564	6368	9070	2248		215	14526	2558	342	24342	10013	1041
Uttarakhand	15	7926	3773	268	382	114		8	1151	226	17	451	213	19
West Bengal	79	77732	26392	1328	**2634**	**393**		**31**	**8306**	**1387**	**105**	**4153**	**1007**	**66**
Grand Total	**1308**	**1434124**	**423421**	**43493**	**122106**	**43927**		**17863**	**224133**	**63271**	**21015**	**228783**	**90823**	**23495**

4.4 Testing in line probe assay (LPA)

State	First Line Line Probe Assay						Second Line Line Probe Assay					
	Samples Tested	Susceptible to both isoniazid & Rifampicin	Resistant to both isoniazid & Rifampicin	Resistant TO Rifampicin	Resistant TO Isoniazid		Samples Tested	Susceptible to both FQ & SLI	Resistant to both FQ & SLI	Resistant TO FQ	Resistant TO SLI	Resistant to Mono low level Kanamycin
Andaman&Nicobar	248	130 (52%)	58 (23%)	25 (10%)	13 (5%)		157	100 (64%)	3 (2%)	36 (23%)	2 (1%)	0 (%)
Andhra Pradesh	12741	11009 (86%)	288 (2%)	146 (1%)	1052 (8%)		1481	1204 (81%)	4 (%)	143 (10%)	10 (1%)	0 (%)
Arunachal Pradesh	614	399 (65%)	97 (16%)	3 (%)	34 (6%)		164	92 (56%)	3 (2%)	33 (20%)	2 (1%)	0 (%)
Assam	6376	5128 (80%)	296 (5%)	78 (1%)	495 (8%)		910	601 (66%)	13 (1%)	174 (19%)	9 (1%)	1 (%)
Bihar	6324	4584 (72%)	944 (15%)	138 (2%)	376 (6%)		1798	841 (47%)	95 (5%)	635 (35%)	13 (1%)	0 (%)
Chandigarh	675	597 (88%)	37 (5%)	6 (1%)	35 (5%)		37	27 (73%)	0 (%)	10 (27%)	0 (%)	0 (%)
Chattisgarh	5785	5248 (91%)	126 (2%)	40 (1%)	311 (5%)		503	426 (85%)	10 (2%)	65 (13%)	2 (%)	0 (%)
Dadar and Nagar Haveli	22	16 (73%)	1 (5%)	1 (5%)	1 (5%)		5	1 (20%)	0 (%)	1 (20%)	2 (40%)	0 (%)
Daman & Diu	1325	678 (51%)	296 (22%)	74 (6%)	108 (8%)		711	319 (45%)	25 (4%)	194 (27%)	19 (3%)	6 (1%)
Delhi	23710	19362 (82%)	2054 (9%)	230 (1%)	1397 (6%)		3983	2330 (58%)	149 (4%)	1175 (30%)	15 (%)	33 (1%)
Goa	1241	1046 (84%)	65 (5%)	14 (1%)	44 (4%)		105	56 (53%)	8 (8%)	31 (30%)	1 (1%)	1 (1%)
Gujarat	10921	8319 (76%)	715 (7%)	273 (2%)	797 (7%)		3267	1683 (52%)	110 (3%)	845 (26%)	38 (1%)	19 (1%)
Haryana	13145	11236 (85%)	268 (2%)	92 (1%)	836 (6%)		1446	1036 (72%)	18 (1%)	158 (11%)	13 (1%)	1 (%)
Himachal Pradesh	4526	3956 (87%)	79 (2%)	20 (%)	156 (3%)		241	189 (78%)	4 (2%)	36 (15%)	0 (%)	0 (%)
Jammu & Kashmir	2503	1808 (72%)	120 (5%)	13 (1%)	88 (4%)		252	163 (65%)	6 (2%)	63 (25%)	1 (%)	2 (1%)
Jharkhand	1174	973 (83%)	70 (6%)	14 (1%)	29 (2%)		87	40 (46%)	5 (6%)	38 (44%)	0 (%)	4 (5%)
Karnataka	24196	19917 (82%)	682 (3%)	276 (1%)	1298 (5%)		3945	2727 (69%)	54 (1%)	522 (13%)	36 (1%)	2 (%)
Kerala	2378	1830 (77%)	121 (5%)	22 (1%)	111 (5%)		246	194 (79%)	3 (1%)	38 (15%)	3 (1%)	1 (%)
Ladakh	18	15 (83%)	3 (17%)	0 (%)	0 (%)		3	2 (67%)	0 (%)	0 (%)	0 (%)	0 (%)
Lakshdweep	741	522 (70%)	24 (3%)	6 (1%)	46 (6%)		69	55 (80%)	1 (1%)	12 (17%)	1 (1%)	0 (%)
Madhya Pradesh	17127	14201 (83%)	781 (5%)	301 (2%)	1094 (6%)		2748	1615 (59%)	65 (2%)	822 (30%)	18 (1%)	7 (%)
Maharashtra	55797	40884 (73%)	7740 (14%)	1168 (2%)	3178 (6%)		14373	7226 (50%)	1051 (7%)	4859 (34%)	201 (1%)	381 (3%)
Manipur	392	265 (68%)	11 (3%)	4 (1%)	58 (15%)		62	38 (61%)	0 (%)	8 (13%)	3 (5%)	0 (%)
Meghalaya	1278	1041 (81%)	102 (8%)	9 (1%)	68 (5%)		211	131 (62%)	7 (3%)	51 (24%)	4 (2%)	1 (%)
Mizoram	175	126 (72%)	4 (2%)	0 (%)	15 (9%)		26	14 (54%)	0 (%)	5 (19%)	0 (%)	0 (%)
Nagaland	331	268 (81%)	11 (3%)	13 (4%)	11 (3%)		38	22 (58%)	1 (3%)	7 (18%)	2 (5%)	0 (%)
Odhisa	9879	9225 (93%)	85 (1%)	28 (%)	179 (2%)		607	478 (79%)	3 (%)	60 (10%)	2 (%)	0 (%)
Puducherry	913	741 (81%)	12 (1%)	2 (%)	41 (4%)		47	40 (85%)	1 (2%)	4 (9%)	1 (2%)	0 (%)
Punjab	6819	5709 (84%)	349 (5%)	61 (1%)	397 (6%)		825	555 (67%)	22 (3%)	228 (28%)	10 (1%)	2 (%)
Rajasthan	30226	24755 (82%)	1171 (4%)	359 (1%)	1598 (5%)		4588	2914 (64%)	86 (2%)	946 (21%)	26 (1%)	7 (%)
Sikkim	139	101 (73%)	30 (22%)	2 (1%)	6 (4%)		53	32 (60%)	0 (%)	17 (32%)	0 (%)	3 (6%)
Tamil Naidu	25582	21861 (85%)	501 (2%)	299 (1%)	1708 (7%)		2803	2257 (81%)	27 (1%)	281 (10%)	23 (1%)	10 (%)
Telangana	9166	4679 (51%)	175 (2%)	107 (1%)	402 (4%)		889	278 (31%)	10 (1%)	49 (6%)	14 (2%)	1 (%)
Tripura	1059	922 (87%)	11 (1%)	7 (1%)	60 (6%)		83	63 (76%)	1 (1%)	5 (6%)	1 (1%)	0 (%)
Uttar Pradesh	34164	23956 (70%)	4119 (12%)	881 (3%)	2822 (8%)		9480	4082 (43%)	679 (7%)	3315 (35%)	149 (2%)	43 (%)
Uttrakhand	1184	1042 (88%)	56 (5%)	11 (1%)	75 (6%)		113	81 (72%)	5 (4%)	27 (24%)	0 (%)	0 (%)
West Bengal	15821	11447 (72%)	703 (4%)	95 (1%)	**771 (5%)**		**1899**	1076 (57%)	**81 (4%)**	**392 (21%)**	**28 (1%)**	**13 (1%)**
India	**328715**	**257996 (78%)**	**22205 (7%)**	**4818 (1%)**	**19710 (6%)**		**58255**	**32988 (57%)**	**2550 (4%)**	**15285 (26%)**	**649 (1%)**	**538 (1%)**

4.5 Testing in culture and DST (CDST)

State	SL-DST							Culture			
	Samples tested	Susceptible to FQ & SLI	MDR + FQ resistance detected	MDR + SLI resistance detected	XDR detected*		MDR + Mox (2) resistance detected	Samples tested	MTB +ve	Non-Tuberculous Mycobacterium detected	Culture -ve
Andaman & Nicobar Islands	9	0 (%)	3 (33%)	0 (%)	0 (%)		1 (11%)	423	34 (8%)	0 (%)	203 (48%)
Andhra Pradesh	43	14 (33%)	6 (14%)	0 (%)	1 (2%)		6 (14%)	9021	932 (10%)	0 (%)	2996 (33%)
Arunachal Pradesh	7	4 (57%)	1 (14%)	0 (%)	0 (%)		2 (29%)	18	0 (%)	0 (%)	3 (17%)
Assam	45	8 (18%)	16 (36%)	0 (%)	0 (%)		3 (7%)	4030	233 (6%)	0 (%)	2025 (50%)
Bihar	8	6 (75%)	0 (%)	0 (%)	0 (%)		0 (%)	9061	1640 (18%)	9 (%)	3202 (35%)
Chandigarh	0	NA	NA	NA	NA		NA	1554	226 (15%)	1 (%)	751 (48%)
Chhattisgarh	37	22 (59%)	4 (11%)	4 (11%)	0 (%)		5 (14%)	4462	586 (13%)	3 (%)	1491 (33%)
Dadra & Nagar Haveli	1	0 (%)	0 (%)	0 (%)	0 (%)		0 (%)	39	3 (8%)	0 (%)	26 (67%)
Daman & Diu	1	1 (100%)	1 (100%)	0 (%)	0 (%)		1 (100%)	16	2 (13%)	0 (%)	8 (50%)
Delhi	1851	1185 (64%)	88 (5%)	13 (1%)	32 (2%)		225 (12%)	36404	8914 (24%)	270 (1%)	16976 (47%)
Goa	33	17 (52%)	8 (24%)	0 (%)	3 (9%)		2 (6%)	1424	122 (9%)	13 (1%)	600 (42%)
Gujarat	787	244 (31%)	318 (40%)	0 (%)	59 (7%)		58 (7%)	13059	2283 (17%)	80 (1%)	5088 (39%)
Haryana	0	NA	NA	NA	NA		NA	2536	51 (2%)	0 (%)	1617 (64%)
Himachal Pradesh	8	4 (50%)	0 (%)	0 (%)	0 (%)		1 (13%)	10	4 (40%)	5 (50%)	1 (10%)
Jammu & Kashmir	4	1 (25%)	0 (%)	0 (%)	0 (%)		2 (50%)	112	17 (15%)	4 (4%)	25 (22%)
Jharkhand	3	1 (33%)	0 (%)	0 (%)	0 (%)		2 (67%)	2830	211 (7%)	0 (%)	479 (17%)
Karnataka	1014	511 (50%)	110 (11%)	18 (2%)	10 (1%)		36 (4%)	20689	3965 (19%)	27 (%)	7692 (37%)
Kerala	37	2 (5%)	1 (3%)	0 (%)	0 (%)		0 (%)	2674	135 (5%)	8 (%)	1476 (55%)
Ladakh	0	NA	NA	NA	NA		NA	2	0 (%)	0 (%)	1 (50%)
Lakshdweep	0	NA	NA	NA	NA		NA	0	NA	NA	NA
Madhya Pradesh	416	249 (60%)	39 (9%)	18 (4%)	10 (2%)		39 (9%)	14015	3005 (21%)	32 (%)	5677 (41%)
Maharashtra	8913	1867 (21%)	1376 (15%)	342 (4%)	417 (5%)		1269 (14%)	82455	14567 (18%)	153 (%)	38055 (46%)
Manipur	1	0 (%)	0 (%)	0 (%)	0 (%)		0 (%)	133	7 (5%)	1 (1%)	89 (67%)
Meghalaya	1	1 (100%)	0 (%)	0 (%)	0 (%)		0 (%)	639	49 (8%)	10 (2%)	264 (41%)
Mizoram	1	1 (100%)	0 (%)	0 (%)	0 (%)		0 (%)	0	NA	NA	NA
Nagaland	2	0 (%)	1 (50%)	0 (%)	0 (%)		1 (50%)	0	NA	NA	NA
Odisha	51	33 (65%)	8 (16%)	0 (%)	0 (%)		4 (8%)	3745	653 (17%)	8 (%)	1719 (46%)
Puducherry	11	5 (45%)	4 (36%)	1 (9%)	0 (%)		3 (27%)	289	73 (25%)	0 (%)	117 (40%)
Punjab	32	20 (63%)	4 (13%)	0 (%)	0 (%)		0 (%)	6868	1167 (17%)	10 (%)	3285 (48%)
Rajasthan	742	428 (58%)	57 (8%)	54 (7%)	14 (2%)		66 (9%)	22817	7053 (31%)	48 (%)	10730 (47%)
Sikkim	22	3 (14%)	0 (%)	0 (%)	0 (%)		3 (14%)	939	86 (9%)	0 (%)	515 (55%)
Tamil Nadu	459	222 (48%)	44 (10%)	24 (5%)	3 (1%)		33 (7%)	22792	3250 (14%)	96 (%)	12404 (54%)
Telangana	0	NA	NA	NA	NA		NA	3687	282 (8%)	0 (%)	1452 (39%)
Tripura	1	1 (100%)	0 (%)	0 (%)	0 (%)		0 (%)	462	29 (6%)	0 (%)	325 (70%)
Uttar Pradesh	235	15 (6%)	31 (13%)	16 (7%)	12 (5%)		8 (3%)	30411	2240 (7%)	3 (%)	12197 (40%)
Uttarakhand	0	NA	NA	NA	NA		NA	0	NA	NA	NA
West Bengal	111	11 (10%)	58 (52%)	0 (%)	**6 (5%)**		3 (3%)	**10066**	1485 (15%)	**56 (1%)**	**3803 (38%)**
India	**14886**	**4876 (33%)**	**2178 (15%)**	**490 (3%)**	**567 (4%)**		**1773 (12%)**	**307682**	**53304 (17%)**	**837 (0.3%)**	**135292 (44%)**

XDR Detected* - MDR/RR + FQ + SLI Resistance

4.6 Public Sector Laboratory

S.No	State	Name of the Culture & DST Laboratory	Liquid culture	FL LCDST	SL LCDST	FL LPA	SL LPA
1	Andhra Pradesh	IRL, Visakhaptnam	Available	Certified	Certified	Certified	Certified
2	Andhra Pradesh	C&DST Laboratory, SMC, Vijayawada	Available	Not Certified	Not Certified	Not Certified	Not Certified
3	Andhra Pradesh	C&DST Laboratory, DTRC(DFIT),Nellore,A.P	Not Available	Not Certified	Not Certified	Certified	Certified
4	Andhra Pradesh	C&DST Laboratory, RDT Hospital, Bathalapalli	Available	Certified	Not Certified	Certified	Certified
5	Assam	IRL Guwahati	Available	Certified	Certified	Certified	Certified
6	Bihar	C&DST Laboratory, JLNMCH Bhagalpur	Available	Certified	Certified	Certified	Certified
7	Bihar	IRL, Patna	Available	Certified	Certified	Certified	Certified
8	Bihar	C&DST Laboratory,IGIMS, Patna	Available	Certified	Not Certified	Not Certified	Not Certified
9	Bihar	DFIT Darbhanga	Available	Not Certified	Not Certified	Certified	Certified
10	Chhattisgarh	IRL, STDC Raipur	Available	Certified	Certified	Certified	Certified
11	Chhattisgarh	C&DST Laboratory, AIIMS, Raipur	Not Available	Not Certified	Not Certified	Certified	Not Certified
12	Chandigarh	IRL, PGIMER Chandigarh	Available	Certified	Certified	Certified	Certified
13	Delhi	IRL, New Delhi TB Centre (NDTB), Delhi	Available	Certified	Certified	Certified	Certified
14	Delhi	IRL, AIIMS (Medicine), Delhi	Available	Certified	Certified	Certified	Certified
15	Delhi	NRL, NITRD, Delhi	Available	Certified	Certified	Certified	Certified
16	Delhi	C&DST Laboratory,RBIMPT, Delhi	Available	Not Certified	Not Certified	Not Certified	Not Certified
17	Goa	IRL Goa	Available	Certified	Not Certified	Not Certified	Not Certified
18	Gujarat	IRL , STDC-Ahmedabad	Available	Certified	Certified	Certified	Certified
19	Gujarat	C&DST Laboratory, MPSMS, Jamnagar	Available	Certified	Certified	Certified	Certified
20	Gujarat	C&DST Laboratory,GMC Surat	Available	Certified	Certified	Not Certified	Not Certified
21	Himachal Pradesh	IRL Dharampur	Not Available	Not Certified	Not Certified	Certified	Certified
22	Himachal Pradesh	C&DST Laboratory, IGIMS Shimla	Available	Not Certified	Not Certified	Not Certified	Not Certified
23	Haryana	IRL Karnal	Available	Not Certified	Not Certified	Certified	Certified
24	Jharkhand	IRL, Ranchi	Available	Certified	Certified	Certified	Certified
25	Jammu & Kashmir	IRL Srinagar	Not Available	Not Certified	Not Certified	Certified	Certified
26	Karnataka	IRL Bangalore	Available	Certified	Certified	Certified	Certified
27	Karnataka	C&DST Laboratory,KIMS, Hubli	Available	Certified	Certified	Certified	Certified
28	Karnataka	C&DST Laboratory, RIMS, Raichur	Available	Certified	Certified	Certified	Certified
29	Karnataka	NRL NTI, Bangalore	Available	Certified	Certified	Certified	Certified
30	Kerala	IRL Trivandrum	Available	Certified	Certified	Certified	Certified
31	Kerala	C&DST Laboratory, GMC, Kozhikode	Available	Not Certified	Not Certified	Certified	Certified
32	Maharashtra	IRL Nagpur	Available	Certified	Certified	Certified	Certified
33	Maharashtra	IRL Pune	Available	Certified	Certified	Certified	Certified
34	Maharashtra	C&DST Laboratory, JJ Hospital, Mumbai	Available	Certified	Certified	Certified	Certified
35	Maharashtra	B J Medical College, Pune	Available	Certified	Certified	Not Certified	Not Certified
36	Maharashtra	C&DST Laboratory, GMC, Aurangabad	Available	Certified	Certified	Certified	Certified
37	Maharashtra	IRL, GTB Hospital, Sewree, Mumbai	Available	Certified	Certified	Certified	Certified
38	Maharashtra	Military Hospital, Pune	Not Available	Not Certified	Not Certified	Certified	Not Certified
39	Maharashtra	C&DST Laboratory, KEM Hospital and Medical College, Mumbai	Available	Certified	Certified	Not Certified	Not Certified
40	Madhya Pradesh	C&DST Laboratory,NIRTH, Jabalpur	Available	Certified	Certified	Certified	Certified
41	Madhya Pradesh	IRL, STDC Indore	Available	Certified	Certified	Certified	Certified
42	Madhya Pradesh	NRL, BMHRC ,Bhopal	Available	Certified	Certified	Certified	Certified
43	Madhya Pradesh	C&DST Laboratory, GRMC, Gwalior	Not Available	Not Certified	Not Certified	Certified	Certified
44	Madhya Pradesh	IRL STDC Bhopal	Available	Not Certified	Not Certified	Certified	Certified
45	Madhya Pradesh	C&DST Laboratory, AIIMS, Bhopal	Available	Not Certified	Not Certified	Certified	Certified
46	Odisha	IRL Cuttack,	Available	Certified	Certified	Certified	Certified
47	Odisha	NRL RMRC, Bhubaneswar	Available	Certified	Certified	Certified	Certified
48	Punjab	IRL, Patiala	Available	Certified	Certified	Certified	Certified
49	Punjab	C&DST Laboratory,Guru Gobind Singh Medical College, Faridkot	Available	Not Certified	Not Certified	Not Certified	
50	Puducherry	IRL Puducherry	Available	Certified	Certified	Certified	Certified
51	Rajasthan	IRL Ajmer	Available	Certified	Certified	Certified	Certified
52	Rajasthan	C&DST Laboratory, SMS Medical College, Jaipur	Available	Certified	Certified	Certified	Certified
53	Rajasthan	C&DST Laboratory, SNMC Jodhpur	Available	Certified	Not Certified	Certified	Certified
54	Rajasthan	C&DST Laboratory, AIIMS, Jodhpur	Not Available	Not Certified	Not Certified	Certified	Certified

S.No	State	Name of the Culture & DST Laboratory	Liquid culture	FL LCDST	SL LCDST	FL LPA	SL LPA
55	Sikkim	IRL, Gangtok	Available	Not Certified	Not Certified	Not Certified	Not Certified
56	Tamil Nadu	IRL STDC CHENNAI	Available	Certified	Certified	Certified	Certified
57	Tamil Nadu	IRL GMC MADURAI	Available	Certified	Certified	Certified	Certified
58	Tamil Nadu	C&DST Laboratory, Coimbatore Medical College Hospital,	Available	Not Certified	Not Certified	Not Certified	Not Certified
59	Tamil Nadu	C&DST Laboratory, GHTM Tambaram, Chennai	Available	Not Certified	Not Certified	Certified	Certified
60	Tamil Nadu	C&DST Laboratory, K.A.P.V. Government Medical College, Trichy	Available	Not Certified	Not Certified	Not Certified	Not Certified
61	Tamil Nadu	NRL NIRT, Chennai	Available	Certified	Certified	Certified	Certified
62	Tripura	C&DST Laboratory, GMC, Agartala	Available	Certified	Not Certified	Not Certified	Not Certified
63	Telangana	IRL Hyderabad	Available	Certified	Certified	Certified	Certified
64	Telangana	Rajiv Gandhi Institute of Medical Sciences (RGIMS), Adilabad	Available	Not Certified	Not Certified	Not Certified	Not Certified
65	Telangana	C&DST Laboratory, BPHRC Hyderabad	Available	Certified	Certified	Certified	Not Certified
66	Uttarakhand	IRL Dehradun	Not Available	Not Certified	Not Certified	Certified	Certified
67	Uttar Pradesh	IRL KGMU, Lucknow	Available	Certified	Certified	Certified	Certified
68	Uttar Pradesh	NRL, ICMR0NJIL&OMD, AGRA	Available	Certified	Certified	Certified	Certified
69	Uttar Pradesh	C&DST Laboratory, JNMC, AMU, Alligarh	Not Available	Not Certified	Not Certified	Certified	Certified
70	Uttar Pradesh	IRL Agra	Available	Certified	Certified	Certified	Certified
71	Uttar Pradesh	C&DST Laboratory, BHU, Varanasi	Available	Certified	Certified	Certified	Certified
72	Uttar Pradesh	C&DST Laboratory, LLRM Meerut, Uttar Pradesh	Available	Certified	Not Certified	Certified	Not Certified
73	Uttar Pradesh	C&DST Laboratory, Dr.RMLIMS, Lucknow	Available	Not Certified	Not Certified	Not Certified	Not Certified
74	Uttar Pradesh	C&DST Laboratory, UPUMS, Safai, Etawah	Not Available	Not Certified	Not Certified	Certified	Not Certified
75	Uttar Pradesh	C&DST Laboratory, BRD Medical College, Gorakhpur	Available	Not Certified	Not Certified	Certified	Not Certified
76	West Bengal	IRL, Kolkata West Bengal	Available	Certified	Certified	Certified	Certified
77	West Bengal	C&DST Laboratory, NBMC, West Bengal	Available	Certified	Not Certified	Certified	Certified
78	West Bengal	C&DST Laboratory, Burdwan Medical College, Burdwan	Available	Not Certified	Not Certified	Not Certified	Not Certified
79	West Bengal	C&DST Laboratory, Murshidabad Medical College and Hospital, Murshidabad	Available	Not Certified	Not Certified	Not Certified	Not Certified

Private Sector Laboratory

S.No	State	Name of the Culture & DST Laboratory	Liquid culture	FL LCDST	SL LCDST	FL LPA	SL LPA
1	Gujarat	Schamaka TeKnology, Vadodara	Not Available	Not Certified	Not Certified	Certified	Not Certified
2	Gujarat	Microcare laboratory, Surat	Not Available	Not Certified	Not Certified	Certified	Not Certified
3	Karnataka	Kasturba Medical College, Manipal	Not Available	Not Certified	Not Certified	Certified	Not Certified
4	Meghalaya	Nazerath Hospital, Shilong	Not Available	Not Certified	Not Certified	Certified	Certified
5	Maharashtra	Thyrocare, Mumbai	Available	Certified	Certified	Certified	Certified
6	Maharashtra	P D Hinduja Hospital, Mumbai	Available	Certified	Certified	Certified	Certified
7	Maharashtra	SRL Diagnostics, Mumbai	Available	Certified	Certified	Not Certified	Not Certified
8	Maharashtra	Metropolis, Mumbai	Available	Certified	Certified	Certified	Not Certified
9	Maharashtra	INFEXN Laboratory, Thane	Available	Certified	Certified	Certified	Certified
10	Maharashtra	Aspira Path Lab, Navi Mumbai	Available	Certified	Not Certified	Certified	Not Certified
11	Manipur	Babina Diagnostics, Imphal	Available	Not Certified	Not Certified	Not Certified	Not Certified
12	Tamil Nadu	Christian Medical College,Vellore	Available	Certified	Not Certified	Certified	Certified
13	Tamil Nadu	Vision Research Fondation laboratory, Shakar Nethralaya, Chennai	Available	Certified	Not Certified	Not Certified	Not Certified
14	Uttar Pradesh	Subharti Medical College, Meerut	Not Available	Not Certified	Not Certified	Certified	Not Certified
15	Uttar Pradesh	Shri Ram Murti Smarak Institutions, Bareilly	Available	Not Certified	Not Certified	Not Certified	Not Certified
16	West Bengal	SRL Diagnsotics, Kolkata	Available	Certified	Not Certified	Not Certified	Not Certified
17	West Bengal	AMRI Hospital, Dhakuria, Kolkata	Available	Not Certified	Not Certified	Not Certified	Not Certified

4.7 MDR/RR TB DIAGNOSED IN 2021

State	Tested for Rifampicin Resistance^			MDR/RR patient diagnosed (2021)#				MDR/ RR Initiated on treatment (%)#	MDR/ RR initiated on Shorter MDR-TB (Inj containing) regimen	MDR/ RR initiated on Shorter MDR/RR-TB (oral) regimen	Total No. of MDR/RR patients put on longer oral M/XDR-TB regimen
	Public	Private	Total	Public Sector	Private Sector	Total					
Andaman & Nicobar Islands	292 (56.7%)	0 (.0%)	292 (56.6%)	41	0	41		39 (95%)	18 (46%)	0 (%)	13 (33%)
Andhra Pradesh	56678 (89.4%)	19283 (79.1%)	75961 (86.6%)	1427	86	1513		1442 (95%)	1059 (73%)	92 (6%)	241 (17%)
Arunachal Pradesh	1641 (57.1%)	NA	1641 (57.1%)	222	0	222		185 (83%)	146 (79%)	2 (1%)	33 (18%)
Assam	11020 (32.8%)	747 (18.1%)	11767 (31.2%)	405	43	448		400 (89%)	277 (69%)	3 (1%)	101 (25%)
Bihar	33357 (52.1%)	23902 (33.4%)	57259 (42.3%)	2515	725	3240		2862 (88%)	2302 (80%)	87 (3%)	285 (10%)
Chandigarh	1776 (56.9%)	31 (25.6%)	1807 (55.7%)	57	15	72		65 (90%)	4 (6%)	0 (%)	59 (91%)
Chhattisgarh	15598 (61.4%)	1792 (24.9%)	17390 (53.3%)	351	25	376		334 (89%)	286 (86%)	0 (%)	30 (9%)
Dadra & Nagar Haveli Daman & Diu	587 (82.3%)	24 (48.0%)	611 (80.1%)	40	0	40		36 (90%)	7 (19%)	1 (3%)	27 (75%)
Delhi	27463 (40.6%)	6827 (40.7%)	34290 (40.6%)	1460	120	1580		1400 (89%)	579 (41%)	119 (9%)	679 (49%)
Goa	1384 (83.6%)	97 (25.3%)	1481 (72.7%)	52	2	54		47 (87%)	14 (30%)	0 (%)	33 (70%)
Gujarat	62989 (62.5%)	14372 (35.5%)	77361 (54.8%)	2408	259	2667		2465 (92%)	851 (35%)	519 (21%)	976 (40%)
Haryana	31078 (59.3%)	8554 (45.4%)	39632 (55.6%)	1193	90	1283		1219 (95%)	813 (67%)	13 (1%)	287 (24%)
Himachal Pradesh	11410 (80.2%)	426 (73.8%)	11836 (80.0%)	201	6	207		193 (93%)	70 (36%)	61 (32%)	60 (31%)
Jammu & Kashmir	6986 (67.5%)	379 (58.1%)	7365 (66.9%)	145	4	149		132 (89%)	41 (31%)	31 (23%)	47 (36%)
Jharkhand	18467 (50.5%)	7193 (43.3%)	25660 (48.3%)	805	91	896		797 (89%)	588 (74%)	16 (2%)	167 (21%)
Karnataka	40461 (68.1%)	4957 (41.3%)	45418 (63.6%)	1114	134	1248		1096 (88%)	464 (42%)	251 (23%)	330 (30%)
Kerala	12502 (66.1%)	1694 (54.4%)	14196 (64.5%)	168	18	186		179 (96%)	66 (37%)	0 (%)	113 (63%)
Ladakh	220 (74.6%)	10 (41.7%)	230 (72.1%)	4	0	4		4 (100%)	0 (%)	3 (75%)	1 (25%)
Lakshadweep	15 (75.0%)	NA	15 (75.0%)	No patients diagnosed							
Madhya Pradesh	45181 (37.5%)	12174 (25.5%)	57355 (34.1%)	2047	312	2359		1956 (83%)	1526 (78%)	9 (%)	326 (17%)
Maharashtra	105473 (83.4%)	46964 (67.0%)	152437 (77.5%)	7291	2317	9608		9017 (94%)	1588 (18%)	535 (6%)	6187 (69%)
Manipur	1164 (69.2%)	84 (44.2%)	1248 (66.6%)	64	11	75		55 (73%)	24 (44%)	5 (9%)	15 (27%)
Meghalaya	2895 (75.5%)	106 (29.7%)	3001 (71.6%)	228	7	235		218 (93%)	127 (58%)	2 (1%)	71 (33%)
Mizoram	1095 (68.9%)	150 (78.1%)	1245 (69.9%)	122	0	122		120 (98%)	64 (53%)	0 (%)	51 (43%)
Nagaland	2200 (69.7%)	83 (15.6%)	2283 (61.9%)	104	0	104		101 (97%)	67 (66%)	0 (%)	26 (26%)
Odisha	38399 (79.7%)	2443 (61.9%)	40842 (78.3%)	432	7	439		421 (96%)	281 (67%)	6 (1%)	128 (30%)
Puducherry	1085 (77.1%)	NA	1085 (77.1%)	18	1	19		18 (95%)	4 (22%)	0 (%)	10 (56%)
Punjab	21846 (56.9%)	3470 (25.3%)	25316 (48.6%)	617	21	638		574 (90%)	314 (55%)	22 (4%)	226 (39%)
Rajasthan	47661 (44.3%)	8718 (20.0%)	56379 (37.3%)	2380	94	2474		2045 (83%)	1249 (61%)	9 (%)	617 (30%)
Sikkim	1059 (79.1%)	80 (80.8%)	1139 (79.2%)	217	26	243		236 (97%)	153 (65%)	4 (2%)	65 (28%)
Tamil Nadu	53394 (77.2%)	8555 (54.1%)	61949 (72.9%)	1174	143	1317		1182 (90%)	809 (68%)	0 (%)	353 (30%)
Telangana	30206 (68.5%)	8926 (53.0%)	39132 (64.2%)	1071	81	1152		1082 (94%)	569 (53%)	110 (10%)	338 (31%)
Tripura	2581 (93.4%)	7 (53.8%)	2588 (93.2%)	20	0	20		16 (80%)	5 (31%)	0 (%)	11 (69%)
Uttar Pradesh	197439 (56.5%)	33013 (28.6%)	230452 (49.6%)	10873	1466	12339		10890 (88%)	9360 (86%)	27 (%)	1317 (12%)
Uttarakhand	9918 (51.6%)	1003 (23.1%)	10921 (46.3%)	463	27	490		453 (92%)	180 (40%)	4 (1%)	250 (55%)
West Bengal	57428 (69.8%)	4125 (44.7%)	61553 (67.3%)	2252	120	2372		2101 (89%)	1330 (63%)	8 (%)	683 (33%)
India	**952948 (60.4%)**	**220189 (39.4%)**	**1173137 (54.9%)**	**41981**	**6251**	**48232**		**43380 (90%)**	**25235 (58%)**	**1939 (4%)**	**14156 (33%)**

4.8 MDR/RR-TB DIAGNOSED WITH ADDITIONAL RESISTANCE

STATE	MDR/RR-TB + only SLI resistant diagnosed	MDR/RR-TB + InhA & KatG mutation detected	No. of MDR/RR + Z resistance detected		MDR/RR + only SLI / Z resistant and/or InhA & KatG mutation detected	MDR/RR + SLI resistance, Z resistant and/or InhA & KatG mutation detected put on treatment irrespective of the type of regimen	MDR/RR + SLI resistance, Z resistant and/or InhA & KatG mutation detected put on longer oral M/XDR-TB regimen
Andaman & Nicobar	0	13	0		13	10 (77%)	9 (90%)
Andhra Pradesh	19	94	0		94	42 (45%)	40 (95%)
Arunachal Pradesh	1	9	0		5	1 (20%)	1 (100%)
Assam	3	60	0		47	35 (74%)	28 (80%)
Bihar	9	99	1		60	41 (68%)	32 (78%)
Chandigarh	No patients diagnosed						
Chhattisgarh	1	21	0		13	9 (69%)	4 (44%)
Dadra & Nagar Haveli Daman & Diu	2	4	2		8	8 (100%)	7 (88%)
Delhi	7	68	12		84	73 (87%)	68 (93%)
Goa	1	9	3		13	13 (100%)	13 (100%)
Gujarat	34	49	52		125	117 (94%)	92 (79%)
Haryana	9	50	2		28	28 (100%)	28 (100%)
Himachal Pradesh	0	19	3		15	15 (100%)	12 (80%)
Jammu & Kashmir	0	3	0		3	2 (67%)	2 (100%)
Jharkhand	3	2	0		3	2 (67%)	2 (100%)
Karnataka	8	63	5		62	47 (76%)	35 (74%)
Kerala	3	16	0		13	6 (46%)	4 (67%)
Ladakh	No patients diagnosed						
Lakshadweep	No patients diagnosed						
Madhya Pradesh	10	53	0		61	33 (54%)	21 (64%)
Maharashtra	103	1405	881		1951	1751 (90%)	1571 (90%)
Manipur	3	21	1		5	4 (80%)	2 (50%)
Meghalaya	1	3	1		4	3 (75%)	2 (67%)
Mizoram	No patients diagnosed						
Nagaland	1	6	0		7	6 (86%)	3 (50%)
Odisha	6	2	0		8	1 (13%)	1 (100%)
Puducherry	0	1	1		2	2 (100%)	2 (100%)
Punjab	1	17	10		27	23 (85%)	21 (91%)
Rajasthan	15	225	0		235	111 (47%)	36 (32%)
Sikkim	3	5	0		2	2 (100%)	0 (%)
Tamil Nadu	14	47	0		61	41 (67%)	37 (90%)
Telangana	13	14	0		23	16 (70%)	15 (94%)
Tripura	1	2	0		2	0 (%)	0 (%)
Uttar Pradesh	56	376	11		424	275 (65%)	254 (92%)
Uttarakhand	1	32	0		32	23 (72%)	12 (52%)
West Bengal	3	50	1		54	39 (72%)	29 (74%)
India	**331**	**2840**	**986**		**3484**	**2779 (80%)**	**2383 (86%)**

4.9 PRE-XDR TB, XDR TB & H-MONO/POLY RESISTANCE TB DIAGNOSED IN 2021

State	Pre-XDR-TB* diagnosed	Pre-XDR put on treatment irrespective of the type of regimen	Pre-XDR put on longer oral M/XDR-TB regimen	XDR TB* diagnosed		XDR TB patients initiated on treatment irrespective of type of regimen	XDR TB patients initiated on all oral longer regimen	H mono/poly DR-TB diagnosed (Public+Private)	H mono/poly DR-TB initiated on treatment
Andaman & Nicobar	4	4 (100%)	4 (100%)	No patients diagnosed				3	2 (67%)
Andhra Pradesh	76	58 (76%)	55 (95%)	4		4 (100%)	2 (50%)	1259	1182 (94%)
Arunachal Pradesh	4	1 (25%)	1 (100%)	1		1 (100%)	0 (%)	10	9 (90%)
Assam	50	44 (88%)	43 (98%)	3		3 (100%)	3 (100%)	193	175 (91%)
Bihar	363	318 (88%)	314 (99%)	6		6 (100%)	6 (100%)	127	90 (71%)
Chandigarh	8	8 (100%)	8 (100%)			No patients diagnosed		45	44 (98%)
Chhattisgarh	45	36 (80%)	36 (100%)	1		1 (100%)	1 (100%)	260	248 (95%)
Dadra & Nagar Haveli Daman & Diu	8	8 (100%)	7 (88%)	No patients diagnosed					4 (100%)
Delhi	351	319 (91%)	317 (99%)	No patients diagnosed					771 (92%)
Goa	14	13 (93%)	12 (92%)	No patients diagnosed					27 (90%)
Gujarat	641	601 (94%)	538 (90%)	19		17 (89%)	17 (100%)	563	513 (91%)
Haryana	78	75 (96%)	73 (97%)	1		1 (100%)	1 (100%)	300	291 (97%)
Himachal Pradesh	25	23 (92%)	22 (96%)	1		1 (100%)	1 (100%)	156	149 (96%)
Jammu & Kashmir	8	8 (100%)	6 (75%)	No patients diagnosed					35 (97%)
Jharkhand	55	45 (82%)	45 (100%)	No patients diagnosed					16 (73%)
Karnataka	273	230 (84%)	227 (99%)	2		2 (100%)	2 (100%)	1174	1103 (94%)
Kerala	28	28 (100%)	28 (100%)	No patients diagnosed				144	140 (97%)
Ladakh	1	1 (100%)	1 (100%)	No patients diagnosed				2	2 (100%)
Lakshadweep	No patients diagnosed								
Madhya Pradesh	255	217 (85%)	217 (100%)	15		15 (100%)	12 (80%)	578	494 (85%)
Maharashtra	3163	3037 (96%)	2758 (91%)	254		221 (87%)	176 (80%)	2226	1908 (86%)
Manipur	3	3 (100%)	3 (100%)	No patients diagnosed					33 (87%)
Meghalaya	57	56 (98%)	56 (100%)	1		1 (100%)	0 (%)	76	66 (87%)
Mizoram	1	1 (100%)	1 (100%)	No patients diagnosed				5	5 (100%)
Nagaland	8	8 (100%)	8 (100%)	No patients diagnosed				7	7 (100%)
Odisha	44	43 (98%)	43 (100%)	8		8 (100%)	7 (88%)	77	73 (95%)
Puducherry	4	4 (100%)	4 (100%)	No patients diagnosed				24	24 (100%)
Punjab	48	42 (88%)	37 (88%)	2		2 (100%)	2 (100%)	358	328 (92%)
Rajasthan	462	371 (80%)	338 (91%)	6		5 (83%)	2 (40%)	1162	890 (77%)
Sikkim	30	29 (97%)	28 (97%)	No patients diagnosed				10	10 (100%)
Tamil Nadu	71	57 (80%)	54 (95%)	1		0 (%)	0 (%)	1346	1253 (93%)
Telangana	39	35 (90%)	32 (91%)	8		7 (88%)	4 (57%)	365	333 (91%)
Tripura	2	0 (%)	0 (%)	No patients diagnosed				53	48 (91%)
Uttar Pradesh	2067	1704 (82%)	1634 (96%)	38		35 (92%)	32 (91%)	1566	1162 (74%)
Uttarakhand	47	41 (87%)	39 (95%)	3		2 (67%)	2 (100%)	108	86 (80%)
WEST BENGAL	122	94 (77%)	90 (96%)	2		1 (50%)	1 (100%)	563	487 (87%)
INDIA	**8455**	**7562 (89%)**	**7079 (94%)**	**376**		**333 (89%)**	**271 (81%)**	**13724**	**12008 (87%)**

4.10 Treatment Outcome of MDR/ RR TB Patients initiated on Shorter MDR-TB regimen (Inj containing) during 2020

State	Registered	Cure Rate	Success Rate	Death Rate		Failure (%)	Loss to follow up (%)	Regimen Change (%)	Not Evaluated (%)
Andaman & Nicobar	35	0 (0%)	16 (46%)	10 (29%)		4 (11%)	1 (3%)	4 (11%)	0 (0%)
Andhra Pradesh	1026	470 (46%)	725 (71%)	137 (13%)		9 (1%)	66 (6%)	63 (6%)	25 (2%)
Arunachal Pradesh	117	11 (9%)	87 (74%)	5 (4%)		2 (2%)	16 (14%)	4 (3%)	1 (1%)
Assam	501	77 (15%)	224 (45%)	48 (10%)		17 (3%)	50 (10%)	137 (27%)	18 (4%)
Bihar	2032	314 (15%)	828 (41%)	214 (11%)		39 (2%)	240 (12%)	456 (22%)	163 (8%)
Chandigarh	18	12 (67%)	12 (67%)	0 (0%)		0 (0%)	0 (0%)	6 (33%)	0 (0%)
Chhattisgarh	232	54 (23%)	134 (58%)	22 (9%)		2 (1%)	27 (12%)	23 (10%)	16 (7%)
Dadra & Nagar Haveli Daman & Diu	16	4 (25%)	5 (31%)	2 (13%)		0 (0%)	2 (13%)	7 (44%)	0 (0%)
Delhi	1269	365 (29%)	612 (48%)	72 (6%)		36 (3%)	184 (14%)	352 (28%)	4 (0%)
Goa	21	6 (29%)	8 (38%)	3 (14%)		1 (5%)	3 (14%)	6 (29%)	0 (0%)
Gujarat	1618	547 (34%)	749 (46%)	156 (10%)		100 (6%)	102 (6%)	497 (31%)	7 (0%)
Haryana	1038	291 (28%)	690 (66%)	125 (12%)		15 (1%)	96 (9%)	89 (9%)	19 (2%)
Himachal Pradesh	149	51 (34%)	93 (62%)	10 (7%)		0 (0%)	6 (4%)	39 (26%)	1 (1%)
Jammu & Kashmir	89	33 (37%)	46 (52%)	10 (11%)		3 (3%)	6 (7%)	14 (16%)	5 (6%)
Jharkhand	609	167 (27%)	380 (62%)	58 (10%)		10 (2%)	92 (15%)	30 (5%)	25 (4%)
Karnataka	930	310 (33%)	499 (54%)	133 (14%)		17 (2%)	92 (10%)	177 (19%)	10 (1%)
Kerala	94	31 (33%)	54 (57%)	7 (7%)		3 (3%)	6 (6%)	23 (24%)	0 (0%)
Madhya Pradesh	2400	471 (20%)	1363 (57%)	287 (12%)		48 (2%)	332 (14%)	246 (10%)	104 (4%)
Maharashtra	2822	672 (24%)	1223 (43%)	302 (11%)		45 (2%)	218 (8%)	939 (33%)	32 (1%)
Manipur	34	14 (41%)	22 (65%)	4 (12%)		0 (0%)	5 (15%)	0 (0%)	3 (9%)
Meghalaya	148	26 (18%)	90 (61%)	9 (6%)		7 (5%)	15 (10%)	27 (18%)	0 (0%)
Mizoram	74	28 (38%)	49 (66%)	7 (9%)		4 (5%)	3 (4%)	9 (12%)	2 (3%)
Nagaland	81	18 (22%)	43 (53%)	7 (9%)		1 (1%)	17 (21%)	8 (10%)	4 (5%)
Odisha	364	111 (30%)	240 (66%)	27 (7%)		8 (2%)	44 (12%)	37 (10%)	1 (0%)
Puducherry	6	3 (50%)	3 (50%)	0 (0%)		2 (33%)	1 (17%)	0 (0%)	0 (0%)
Punjab	395	118 (30%)	240 (61%)	40 (10%)		3 (1%)	42 (11%)	55 (14%)	8 (2%)
Rajasthan	2296	768 (33%)	1264 (55%)	255 (11%)		38 (2%)	269 (12%)	390 (17%)	67 (3%)
Sikkim	135	22 (16%)	78 (58%)	9 (7%)		0 (0%)	5 (4%)	38 (28%)	2 (1%)
Tamil Nadu	1025	370 (36%)	545 (53%)	129 (13%)		37 (4%)	151 (15%)	150 (15%)	10 (1%)
Telangana	963	430 (45%)	572 (59%)	109 (11%)		7 (1%)	61 (6%)	137 (14%)	64 (7%)
Tripura	21	10 (48%)	14 (67%)	1 (5%)		0 (0%)	1 (5%)	5 (24%)	0 (0%)
Uttar Pradesh	8742	1580 (18%)	4992 (57%)	1164 (13%)		132 (2%)	922 (11%)	1362 (16%)	94 (1%)
Uttarakhand	219	51 (23%)	124 (57%)	14 (6%)		2 (1%)	20 (9%)	47 (21%)	8 (4%)
West Bengal	1466	394 (27%)	997 (68%)	182 (12%)		41 (3%)	108 (7%)	108 (7%)	25 (2%)
India	**30985**	**7829 (25%)**	**17021 (55%)**	**3558 (11%)**		**633 (2%)**	**3203 (10%)**	**5485 (18%)**	**718 (2%)**

4.11 Treatment Outcome of H-Mono/Poly Resistance TB Patients initiated on treatment during 2020

State	Registered	Cure Rate	Success Rate	Death Rate		Failure (%)	Loss to follow up (%)	Regimen Change (%)	Not Evaluated (%)
Andhra Pradesh	792	447 (56%)	697 (88%)	45 (6%)		5 (1%)	25 (3%)	8 (1%)	12 (2%)
Arunachal Pradesh	4	2 (50%)	4 (100%)	0 (0%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Assam	202	98 (49%)	173 (86%)	9 (4%)		4 (2%)	10 (5%)	1 (0%)	5 (2%)
Bihar	149	66 (44%)	106 (71%)	4 (3%)		3 (2%)	15 (10%)	8 (5%)	9 (6%)
Chandigarh	25	16 (64%)	18 (72%)	2 (8%)		0 (0%)	3 (12%)	1 (4%)	1 (4%)
Chhattisgarh	157	80 (51%)	133 (85%)	3 (2%)		2 (1%)	4 (3%)	2 (1%)	11 (7%)
Delhi	821	489 (60%)	665 (81%)	25 (3%)		18 (2%)	82 (10%)	29 (4%)	2 (0%)
Goa	13	7 (54%)	11 (85%)	1 (8%)		0 (0%)	1 (8%)	0 (0%)	0 (0%)
Gujarat	601	361 (60%)	422 (70%)	59 (10%)		57 (9%)	32 (5%)	27 (4%)	4 (1%)
Haryana	171	96 (56%)	151 (88%)	6 (4%)		2 (1%)	3 (2%)	2 (1%)	5 (3%)
Himachal Pradesh	172	105 (61%)	160 (93%)	7 (4%)		0 (0%)	2 (1%)	1 (1%)	0 (0%)
Jammu & Kashmir	31	15 (48%)	24 (77%)	1 (3%)		2 (6%)	0 (0%)	2 (6%)	1 (3%)
Jharkhand	16	8 (50%)	12 (75%)	1 (6%)		0 (0%)	2 (13%)	0 (0%)	0 (0%)
Karnataka	1160	764 (66%)	992 (86%)	75 (6%)		15 (1%)	52 (4%)	20 (2%)	5 (0%)
Kerala	119	71 (60%)	101 (85%)	5 (4%)		3 (3%)	6 (5%)	2 (2%)	1 (1%)
Madhya Pradesh	602	235 (39%)	487 (81%)	27 (4%)		16 (3%)	46 (8%)	16 (3%)	4 (1%)
Maharashtra	1353	672 (50%)	1101 (81%)	74 (5%)		21 (2%)	78 (6%)	47 (3%)	21 (2%)
Manipur	9	6 (67%)	7 (78%)	1 (11%)		0 (0%)	0 (0%)	1 (11%)	0 (0%)
Meghalaya	61	20 (33%)	47 (77%)	3 (5%)		1 (2%)	6 (10%)	2 (3%)	2 (3%)
Mizoram	2	1 (50%)	2 (100%)	0 (0%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Nagaland	4	0 (0%)	3 (75%)	0 (0%)		0 (0%)	1 (25%)	0 (0%)	0 (0%)
Odisha	128	62 (48%)	109 (85%)	8 (6%)		3 (2%)	4 (3%)	3 (2%)	1 (1%)
Puducherry	36	30 (83%)	31 (86%)	1 (3%)		0 (0%)	3 (8%)	1 (3%)	0 (0%)
Punjab	264	104 (39%)	215 (81%)	7 (3%)		6 (2%)	21 (8%)	7 (3%)	7 (3%)
Rajasthan	877	406 (46%)	717 (82%)	43 (5%)		16 (2%)	39 (4%)	24 (3%)	31 (4%)
Sikkim	5	2 (40%)	4 (80%)	1 (20%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Tamil Nadu	1757	1133 (64%)	1467 (83%)	101 (6%)		30 (2%)	122 (7%)	31 (2%)	5 (0%)
Telangana	991	638 (64%)	824 (83%)	54 (5%)		7 (1%)	23 (2%)	30 (3%)	51 (5%)
Tripura	51	31 (61%)	43 (84%)	3 (6%)		3 (6%)	2 (4%)	0 (0%)	0 (0%)
Uttar Pradesh	588	202 (34%)	496 (84%)	23 (4%)		7 (1%)	30 (5%)	16 (3%)	9 (2%)
Uttarakhand	109	55 (50%)	97 (89%)	2 (2%)		0 (0%)	5 (5%)	2 (2%)	2 (2%)
West Bengal	255	126 (49%)	225 (88%)	10 (4%)		2 (1%)	10 (4%)	3 (1%)	3 (1%)
India	**11525**	**6348 (55%)**	**9544 (83%)**	**601 (5%)**		**223 (2%)**	**627 (5%)**	**286 (2%)**	**192 (2%)**

4.12 Treatment Outcome of MDR/ RR TB Patients initiated on Longer oral M/XDR-TB regimen during 2019

State	Registered	Cure Rate	Success Rate	Death Rate		Failure (%)	Loss to follow up (%)	Regimen Change (%)	Not Evaluated (%)
Andaman & Nicobar	2	0 (0%)	1 (50%)	1 (50%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Andhra Pradesh	63	21 (33%)	32 (51%)	21 (33%)		0 (0%)	5 (8%)	2 (3%)	1 (2%)
Arunachal Pradesh	1	0 (0%)	1 (100%)	0 (0%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Bihar	44	10 (23%)	29 (66%)	4 (9%)		1 (2%)	4 (9%)	2 (5%)	0 (0%)
Dadra & Nagar Haveli Daman & Diu	3	1 (33%)	1 (33%)	1 (33%)		0 (0%)	1 (33%)	0 (0%)	0 (0%)
Delhi	182	82 (45%)	136 (75%)	22 (12%)		1 (1%)	20 (11%)	2 (1%)	0 (0%)
Gujarat	482	254 (53%)	341 (71%)	73 (15%)		29 (6%)	35 (7%)	3 (1%)	0 (0%)
Haryana	16	2 (13%)	10 (63%)	1 (6%)		0 (0%)	4 (25%)	0 (0%)	0 (0%)
Himachal Pradesh	2	1 (50%)	1 (50%)	0 (0%)		0 (0%)	1 (50%)	0 (0%)	0 (0%)
Jharkhand	1	0 (0%)	0 (0%)	0 (0%)		0 (0%)	0 (0%)	1 (100%)	0 (0%)
Karnataka	147	70 (48%)	101 (69%)	27 (18%)		4 (3%)	12 (8%)	2 (1%)	1 (1%)
Kerala	25	16 (64%)	21 (84%)	4 (16%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Ladakh	1	0	0	0		0	0	0	0
Madhya Pradesh	27	3 (11%)	16 (59%)	3 (11%)		0 (0%)	3 (11%)	2 (7%)	1 (4%)
Maharashtra	175	45 (26%)	117 (67%)	17 (10%)		6 (3%)	16 (9%)	12 (7%)	1 (1%)
Manipur	9	0 (0%)	9 (100%)	0 (0%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Mizoram	1	0 (0%)	1 (100%)	0 (0%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Puducherry	3	2 (67%)	3 (100%)	0 (0%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Punjab	48	14 (29%)	35 (73%)	3 (6%)		0 (0%)	6 (13%)	1 (2%)	0 (0%)
Rajasthan	42	15 (36%)	28 (67%)	5 (12%)		1 (2%)	1 (2%)	1 (2%)	3 (7%)
Sikkim	9	6 (67%)	8 (89%)	1 (11%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)
Tamil Nadu	94	34 (36%)	68 (72%)	10 (11%)		4 (4%)	10 (11%)	2 (2%)	0 (0%)
Telangana	19	8 (42%)	12 (63%)	1 (5%)		0 (0%)	0 (0%)	1 (5%)	3 (16%)
Uttar Pradesh	52	10 (19%)	37 (71%)	2 (4%)		0 (0%)	6 (12%)	5 (10%)	0 (0%)
Uttarakhand	2	0 (0%)	0 (0%)	1 (50%)		0 (0%)	1 (50%)	0 (0%)	0 (0%)
West Bengal	25	2 (8%)	19 (76%)	3 (12%)		0 (0%)	2 (8%)	1 (4%)	0 (0%)
India	1475	596 (40%)	1028 (70%)	200 (14%)		46 (3%)	127 (9%)	37 (3%)	10 (1%)

4.13 Treatment Outcome of MDR/ RR TB patients with/ without additional resistance - 2019 cohort (excluding XDR-TB and H-mono/poly DR-TB)

State	No. of MDR/RR-TB patients initiated on treatment during 2019 (includes all regimen) (c)	Cure Rate	Success Rate		Death Rate	Failure (%)	Loss to follow up (%)	Regimen hanged (%)	Not evaluated (%)	Still on treatment (%)
Andaman & Nicobar	45	2 (4%)	29 (64%)		4 (9%)	7 (16%)	2 (4%)	3 (7%)	0 (0%)	0 (0%)
Andhra Pradesh	2081	860 (41%)	1298 (62%)		305 (15%)	12 (1%)	215 (10%)	227 (11%)	13 (1%)	11 (1%)
Arunachal Pradesh	180	27 (15%)	100 (56%)		18 (10%)	4 (2%)	39 (22%)	16 (9%)	2 (1%)	1 (1%)
Assam	860	215 (25%)	518 (60%)		91 (11%)	20 (2%)	133 (15%)	84 (10%)	3 (0%)	11 (1%)
Bihar	3327	850 (26%)	1724 (52%)		361 (11%)	55 (2%)	495 (15%)	456 (14%)	43 (1%)	193 (6%)
Chandigarh	59	22 (37%)	37 (63%)		9 (15%)	2 (3%)	6 (10%)	5 (8%)	0 (0%)	0 (0%)
Chhattisgarh	365	98 (27%)	207 (57%)		56 (15%)	6 (2%)	51 (14%)	43 (12%)	1 (0%)	1 (0%)
Dadra and Nagar Haveli and Daman and Diu	32	98 (27%)	207 (57%)		56 (15%)	6 (2%)	51 (14%)	43 (12%)	1 (0%)	1 (0%)
Delhi	2592	846 (33%)	1409 (54%)		206 (8%)	74 (3%)	393 (15%)	493 (19%)	2 (0%)	15 (1%)
Goa	40	13 (33%)	18 (45%)		4 (10%)	0 (0%)	6 (15%)	11 (28%)	0 (0%)	1 (3%)
Gujarat	3780	1492 (39%)	2116 (56%)		487 (13%)	244 (6%)	374 (10%)	541 (14%)	12 (0%)	6 (0%)
Haryana	1541	375 (24%)	998 (65%)		203 (13%)	17 (1%)	237 (15%)	70 (5%)	12 (1%)	4 (0%)
Himachal Pradesh	336	176 (52%)	241 (72%)		32 (10%)	3 (1%)	24 (7%)	33 (10%)	2 (1%)	1 (0%)
Jammu & Kashmir	148	78 (53%)	98 (66%)		15 (10%)	10 (7%)	8 (5%)	12 (8%)	0 (0%)	5 (3%)
Jharkhand	967	220 (23%)	550 (57%)		109 (11%)	15 (2%)	182 (19%)	72 (7%)	10 (1%)	29 (3%)
Karnataka	1884	736 (39%)	1068 (57%)		303 (16%)	59 (3%)	248 (13%)	190 (10%)	14 (1%)	2 (0%)
Kerala	236	103 (44%)	159 (67%)		29 (12%)	5 (2%)	14 (6%)	27 (11%)	1 (0%)	1 (0%)
Madhya Pradesh	3521	722 (21%)	2092 (59%)		443 (13%)	62 (2%)	587 (17%)	301 (9%)	26 (1%)	10 (0%)
Maharashtra	10501	2312 (22%)	5440 (52%)		1306 (12%)	177 (2%)	1406 (13%)	1957 (19%)	38 (0%)	177 (2%)
Manipur	55	26 (47%)	46 (84%)		3 (5%)	1 (2%)	3 (5%)	0 (0%)	2 (4%)	0 (0%)
Meghalaya	275	52 (19%)	154 (56%)		40 (15%)	14 (5%)	42 (15%)	22 (8%)	1 (0%)	2 (1%)
Mizoram	117	37 (32%)	77 (66%)		10 (9%)	1 (1%)	17 (15%)	10 (9%)	0 (0%)	2 (2%)
Nagaland	110	42 (38%)	73 (66%)		10 (9%)	1 (1%)	18 (16%)	6 (5%)	0 (0%)	2 (2%)
Orissa	610	189 (31%)	400 (66%)		72 (12%)	3 (0%)	67 (11%)	55 (9%)	2 (0%)	11 (2%)
Puducherry	16	8 (50%)	9 (56%)		3 (19%)	2 (13%)	1 (6%)	1 (6%)	0 (0%)	0 (0%)
Punjab	851	233 (27%)	472 (55%)		123 (14%)	14 (2%)	119 (14%)	106 (12%)	1 (0%)	16 (2%)
Rajasthan	4050	1308 (32%)	2248 (56%)		610 (15%)	50 (1%)	560 (14%)	483 (12%)	18 (0%)	81 (2%)
Sikkim	255	77 (30%)	166 (65%)		32 (13%)	6 (2%)	17 (7%)	26 (10%)	2 (1%)	6 (2%)
Tamil Nadu	1755	612 (35%)	972 (55%)		238 (14%)	45 (3%)	323 (18%)	163 (9%)	14 (1%)	0 (0%)
Telangana	1842	919 (50%)	1254 (68%)		227 (12%)	19 (1%)	140 (8%)	174 (9%)	6 (0%)	22 (1%)
Tripura	32	10 (31%)	18 (56%)		2 (6%)	1 (3%)	7 (22%)	4 (13%)	0 (0%)	0 (0%)
Uttar Pradesh	14935	2631 (18%)	8405 (56%)		2173 (15%)	194 (1%)	1888 (13%)	2096 (14%)	49 (0%)	130 (1%)
Uttarakhand	533	111 (21%)	271 (51%)		71 (13%)	4 (1%)	79 (15%)	87 (16%)	6 (1%)	15 (3%)
West Bengal	2942	799 (27%)	1852 (63%)		385 (13%)	81 (3%)	326 (11%)	260 (9%)	9 (0%)	29 (1%)
India	**60873**	**16212 (27%)**	**34535 (57%)**		**7988 (13%)**	**1208 (2%)**	**8028 (13%)**	**8041 (13%)**	**289 (0%)**	**784 (1%)**

4.14 Treatment Outcome of XDR-TB patients (2019 cohort)

State	No. of XDR-TB patients initiated on treatment during 2019 (d)	Cure Rate	Success Rate		Death Rate	Failure (%)	Loss to follow up (%)	Regimen Changed (%)	Not evaluated (%)	Still on treatment (%)
Andaman & Nicobar Islands	1	1 (100%)	1 (100%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Andhra Pradesh	45	12 (27%)	24 (53%)		11 (24%)	0 (0%)	7 (16%)	2 (4%)	1 (2%)	0 (0%)
Arunachal Pradesh	1	0 (0%)	1 (100%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Assam	7	0 (0%)	3 (43%)		2 (29%)	0 (0%)	1 (14%)	0 (0%)	0 (0%)	1 (14%)
Bihar	148	25 (17%)	68 (46%)		34 (23%)	4 (3%)	15 (10%)	9 (6%)	4 (3%)	14 (9%)
Chandigarh	2	0 (0%)	1 (50%)		1 (50%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Chhattisgarh	15	3 (20%)	7 (47%)		3 (20%)	1 (7%)	2 (13%)	2 (13%)	0 (0%)	0 (0%)
Dadra and Nagar Haveli and Daman and Diu	2	3 (20%)	7 (47%)		3 (20%)	1 (7%)	2 (13%)	0 (0%)	0 (0%)	0 (0%)
Delhi	151	39 (26%)	88 (58%)		27 (18%)	2 (1%)	23 (15%)	10 (7%)	0 (0%)	1 (1%)
Goa	1	0 (0%)	0 (0%)		0 (0%)	0 (0%)	1 (100%)	0 (0%)	0 (0%)	0 (0%)
Gujarat	198	80 (40%)	113 (57%)		44 (22%)	9 (5%)	18 (9%)	13 (7%)	1 (1%)	0 (0%)
Haryana	54	10 (19%)	31 (57%)		10 (19%)	0 (0%)	6 (11%)	6 (11%)	1 (2%)	0 (0%)
Himachal Pradesh	10	2 (20%)	5 (50%)		3 (30%)	1 (10%)	0 (0%)	1 (10%)	0 (0%)	0 (0%)
Jammu & Kashmir	5	3 (60%)	3 (60%)		1 (20%)	0 (0%)	0 (0%)	1 (20%)	0 (0%)	0 (0%)
Jharkhand	31	4 (13%)	18 (58%)		5 (16%)	0 (0%)	4 (13%)	2 (6%)	1 (3%)	1 (3%)
Karnataka	40	10 (25%)	19 (48%)		9 (23%)	1 (3%)	7 (18%)	2 (5%)	1 (3%)	1 (3%)
Kerala	12	4 (33%)	8 (67%)		1 (8%)	0 (0%)	2 (17%)	1 (8%)	0 (0%)	0 (0%)
Madhya Pradesh	109	21 (19%)	60 (55%)		25 (23%)	1 (1%)	14 (13%)	5 (5%)	0 (0%)	4 (4%)
Maharashtra	1066	264 (25%)	554 (52%)		202 (19%)	35 (3%)	119 (11%)	121 (11%)	2 (0%)	33 (3%)
Meghalaya	37	10 (27%)	22 (59%)		8 (22%)	1 (3%)	5 (14%)	0 (0%)	1 (3%)	0 (0%)
Nagaland	3	0 (0%)	0 (0%)		0 (0%)	0 (0%)	3 (100%)	0 (0%)	0 (0%)	0 (0%)
Odisha	12	3 (25%)	6 (50%)		4 (33%)	1 (8%)	1 (8%)	0 (0%)	0 (0%)	0 (0%)
Puducherry	2	2 (100%)	2 (100%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Punjab	20	6 (30%)	15 (75%)		2 (10%)	0 (0%)	1 (5%)	1 (5%)	0 (0%)	1 (5%)
Rajasthan	118	30 (25%)	60 (51%)		30 (25%)	4 (3%)	15 (13%)	4 (3%)	0 (0%)	5 (4%)
Sikkim	8	3 (38%)	6 (75%)		1 (13%)	0 (0%)	0 (0%)	0 (0%)	1 (13%)	0 (0%)
Tamil Nadu	63	20 (32%)	28 (44%)		15 (24%)	2 (3%)	13 (21%)	4 (6%)	1 (2%)	0 (0%)
Telangana	68	29 (43%)	40 (59%)		12 (18%)	1 (1%)	7 (10%)	3 (4%)	4 (6%)	1 (1%)
Tripura	1	1 (100%)	1 (100%)		0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Uttar Pradesh	636	137 (22%)	344 (54%)		158 (25%)	4 (1%)	78 (12%)	33 (5%)	1 (0%)	18 (3%)
Uttarakhand	36	9 (25%)	14 (39%)		14 (39%)	1 (3%)	6 (17%)	0 (0%)	0 (0%)	1 (3%)
West Bengal	123	23 (19%)	73 (59%)		23 (19%)	2 (2%)	14 (11%)	3 (2%)	0 (0%)	8 (7%)
India	3025	751 (25%)	1615 (53%)		647 (21%)	70 (2%)	362 (12%)	223 (7%)	19 (1%)	89 (3%)
West Bengal	2942	799 (27%)	1852 (63%)		385 (13%)	81 (3%)	326 (11%)	260 (9%)	9 (0%)	29 (1%)
India	**60873**	**16212 (27%)**	**34535 (57%)**		**7988 (13%)**	**1208 (2%)**	**8028 (13%)**	**8041 (13%)**	**289 (0%)**	**784 (1%)**

5.1 Private Health Facilities Registration Status

State	Hospitals	Laboratories	Chemists	Health Facilities Registered
Andaman & Nicobar Islands	11	0	0	11
Andhra Pradesh	7623	2013	18349	27985
Arunachal Pradesh	44	8	33	85
Assam	1403	416	1366	3185
Bihar	7589	459	289	8337
CHANDIGARH	118	53	16	187
Chhattisgarh	2212	426	3881	6519
Dadra and Nagar Haveli and Daman and Diu	113	21	67	201
Delhi	4355	410	53	4818
Goa	573	43	327	943
Gujarat	10673	626	6518	17817
Haryana	2653	669	3233	6555
Himachal Pradesh	511	244	14	769
Jammu & Kashmir	777	444	111	1332
Jharkhand	2442	215	977	3634
Karnataka	18244	2422	11979	32645
Kerala	6581	1540	10	8131
Ladakh	40	7	3	50
Lakshadweep	0	0	0	0
Madhya Pradesh	7208	598	897	8703
Maharashtra	40343	3596	5995	49934
Manipur	77	48	190	315
Meghalaya	89	24	27	140
Mizoram	34	17	411	462
Nagaland	53	21	74	148
Odisha	2284	380	892	3556
Puducherry	33	4	10	47
Punjab	2444	444	170	3058
Rajasthan	2801	379	772	3952
Sikkim	69	22	168	259
Tamil Nadu	17553	3022	4197	24772
Telangana	5189	818	1690	7697
TRIPURA	64	163	30	257
Uttar Pradesh	18849	1799	1620	22268
Uttarakhand	548	130	219	897
West Bengal	8468	2967	4977	16412
INDIA	**172068**	**24448**	**69565**	**266081**

5.2 Private Health Facilities that have notified at least ONE TB patient during the year 2021

State	Hospitals	Laboratories	Chemists	Total Health Facilities notifying TB case
Andaman & Nicobar Islands	2	0	0	2
Andhra Pradesh	1572	441	47	2060
Arunachal Pradesh	1	1	0	2
Assam	442	269	41	752
Bihar	2736	71	23	2830
CHANDIGARH	24	33	3	60
Chhattisgarh	645	144	34	823
Dadra and Nagar Haveli and Daman and Diu	11	3	0	14
Delhi	781	66	3	850
Goa	37	6	0	43
Gujarat	3757	293	9	4059
Haryana	1047	307	23	1377
Himachal Pradesh	86	43	1	130
Jammu & Kashmir	128	105	18	251
Jharkhand	671	47	9	727
Karnataka	2191	802	124	3117
Kerala	261	262	0	523
Ladakh	5	0	0	5
Madhya Pradesh	2385	286	29	2700
Maharashtra	6319	1698	146	8163
MANIPUR	15	21	0	36
Meghalaya	24	14	0	38
Mizoram	15	10	0	25
Nagaland	23	20	5	48
Odisha	522	177	68	767
Puducherry	4	2	0	6
Punjab	861	170	57	1088
Rajasthan	1427	204	15	1646
Sikkim	5	3	0	8
Tamil Nadu	2159	657	43	2859
Telangana	1341	329	231	1901
Tripura	5	22	0	27
Uttar Pradesh	5677	595	92	6364
Uttarakhand	184	70	3	257
West Bengal	983	1556	25	2564
Grand Total	36346	8727	1049	46122
INDIA	**172068**	**24448**	**69565**	**266081**

6 Active Case Finding

State	Estimated Population (Lakhs)	Vulnerable Population Mapped (%)		Population screened amongst mapped vulnerable population (%)	Presumptive TB cases tested out of those screened (%)	TB cases diagnosed among tested (%)
Andaman & Nicobar Islands	3.9	314615 (80.5%)		284916 (90.6%)	2370 (0.8%)	65 (2.7%)
Andhra Pradesh	528.9	6063664 (11.5%)		3487832 (57.5%)	94610 (2.7%)	3147 (3.3%)
Arunachal Pradesh	16.7	132362 (7.9%)		99903 (75.5%)	2302 (2.3%)	83 (3.6%)
Assam	354.8	384744 (1.1%)		138770 (36.1%)	10400 (7.5%)	259 (2.5%)
Bihar	1270.9	15322461 (12.1%)		1771794 (11.6%)	31485 (1.8%)	2912 (9.2%)
Chandigarh	11.9	145297 (12.2%)		6962 (4.8%)	703 (10.1%)	36 (5.1%)
Chhattisgarh	305.3	30298657 (99.2%)		26373567 (87.0%)	33338 (0.1%)	2300 (6.9%)
Dadra and Nagar Haveli and Daman and Diu	8.3	977909 (118.0%)		921614 (94.2%)	3092 (0.3%)	32 (1.0%)
Delhi	193.0	3312162 (17.2%)		286859 (8.7%)	5857 (2.0%)	1256 (21.4%)
Goa	15.5	898290 (57.9%)		127771 (14.2%)	576 (0.5%)	9 (1.6%)
Gujarat	708.1	99989514 (141.2%)		30289260 (30.3%)	288571 (1.0%)	2716 (0.9%)
Haryana	299.1	39803861 (133.1%)		10179622 (25.6%)	37449 (0.4%)	945 (2.5%)
Himachal Pradesh	75.7	7421723 (98.1%)		5721350 (77.1%)	22270 (0.4%)	1273 (5.7%)
Jammu & Kashmir	147.5	4503638 (30.5%)		2945140 (65.4%)	99447 (3.4%)	691 (0.7%)
Jharkhand	402.1	12768377 (31.8%)		11044041 (86.5%)	13329 (0.1%)	2005 (15.0%)
Karnataka	693.3	15522352 (22.4%)		11092777 (71.5%)	40358 (0.4%)	689 (1.7%)
Kerala	345.6	1097851 (3.2%)		525907 (47.9%)	18512 (3.5%)	435 (2.3%)
Ladakh	3.5	12170 (3.5%)		7721 (63.4%)	232 (3.0%)	0 (0.0%)
Lakshadweep	0.7	70000 (105.3%)		971 (1.4%)	495 (51.0%)	0 (0.0%)
Madhya Pradesh	856.7	17819555 (20.8%)		6084648 (34.1%)	91797 (1.5%)	9732 (10.6%)
Maharashtra	1272.3	17284535 (13.6%)		16246964 (94.0%)	210575 (1.3%)	5443 (2.6%)
Manipur	31.7	1121811 (35.4%)		142693 (12.7%)	4365 (3.1%)	134 (3.1%)
Meghalaya	37.4	1283328 (34.3%)		977234 (76.1%)	3662 (0.4%)	142 (3.9%)
Mizoram	12.8	405869 (31.7%)		245261 (60.4%)	3504 (1.4%)	36 (1.0%)
Nagaland	20.8	179241 (8.6%)		34381 (19.2%)	2145 (6.2%)	75 (3.5%)
Odisha	468.1	6249087 (13.4%)		4617869 (73.9%)	122314 (2.6%)	5259 (4.3%)
Puducherry	15.2	202 (0.0%)		202 (100.0%)	30 (14.9%)	0 (0.0%)
Punjab	309.9	4010451 (12.9%)		2533329 (63.2%)	10981 (0.4%)	513 (4.7%)
Rajasthan	811.7	9795177 (12.1%)		6573206 (67.1%)	50601 (0.8%)	1771 (3.5%)
Sikkim	6.7	49913 (7.5%)		33412 (66.9%)	802 (2.4%)	10 (1.2%)
Tamil Nadu	824.3	2588207 (3.1%)		1397431 (54.0%)	55852 (4.0%)	1887 (3.4%)
Telangana	381.9	3049293 (8.0%)		698133 (22.9%)	63700 (9.1%)	2665 (4.2%)
Tripura	39.9	374457 (9.4%)		254856 (68.1%)	3041 (1.2%)	39 (1.3%)
Uttar Pradesh	2360.9	75678835 (32.1%)		67589474 (89.3%)	232920 (0.3%)	25080 (10.8%)
Uttarakhand	118.0	2592292 (22.0%)		301447 (11.6%)	3612 (1.2%)	278 (7.7%)
West Bengal	1008.6	27756627 (27.5%)		10842545 (39.1%)	187606 (1.7%)	1855 (1.0%)
India	**13961.6**	**409278527 (29.3%)**		**223879862 (54.7%)**	**1752903 (0.8%)**	**73772 (4.2%)**

7.1 Contact Tracing for Pulmonary Bacteriologically Confirmed TB (PBCT) 2021

States	Notified PBCT	No. of Notified PBCT visited for contact tracing (%)	No. of HHC <5years enumerated during contact tracing visit among notified PBCT	Average no. of HHC per notified PBCT visited		No. of HHC ≥5years enumerated during contact tracing visit among notified PBCT	Average no. of HHC per notified PBCT visited	No. of HHC (any age) enumerated during contact tracing visit among notified PBCT	Average no. of HHC per notified PBCT visited	No. of Notified PBCT with "0" HHC <5years reported during visits (%)	No. of Notified PBCT with "0" HHC ≥5years reported during visits (%)	No. of Notified PBCT with "0" HHC (any age) reported during visits (%)
ANDAMAN & NICOBAR ISLANDS	222.0	208 (94%)	49	0.2		673.0	3.2	722.0	3.5	135 (65%)	25 (12%)	24 (12%)
ANDHRA PRADESH	39362.0	34432 (87%)	2087	0.1		55927.0	1.6	58014.0	1.7	24113 (70%)	6846 (20%)	6806 (20%)
ARUNACHAL PRADESH	1125.0	845 (75%)	360	0.4		1956.0	2.3	2316.0	2.7	447 (53%)	241 (29%)	235 (28%)
ASSAM	14501.0	10224 (71%)	1556	0.2		20159.0	2.0	21715.0	2.1	6060 (59%)	3182 (31%)	3158 (31%)
BIHAR	32087.0	18295 (57%)	7546	0.4		49542.0	2.7	57088.0	3.1	9276 (51%)	6093 (33%)	5992 (33%)
CHANDIGARH	1408.0	1329 (94%)	245	0.2		3675.0	2.8	3920.0	2.9	203 (15%)	32 (2%)	32 (2%)
CHHATTISGARH	13198.0	10238 (78%)	2651	0.3		24017.0	2.3	26668.0	2.6	5179 (51%)	2620 (26%)	2577 (25%)
DADRA AND NAGAR HAVELI AND DAMAN AND DIU	258.0	258 (100%)	77	0.3		845.0	3.3	922.0	3.6	44 (17%)	2 (1%)	2 (1%)
DELHI	23924.0	17679 (74%)	2662	0.2		32175.0	1.8	34837.0	2.0	6663 (38%)	2359 (13%)	2335 (13%)
GOA	903.0	791 (88%)	47	0.1		1462.0	1.8	1509.0	1.9	528 (67%)	143 (18%)	143 (18%)
GUJARAT	44421.0	43153 (97%)	10553	0.2		144575.0	3.4	155128.0	3.6	14877 (34%)	1993 (5%)	1954 (5%)
HARYANA	32640.0	28052 (86%)	7029	0.3		70881.0	2.5	77910.0	2.8	10006 (36%)	2961 (11%)	2826 (10%)
HIMACHAL PRADESH	8564.0	8426 (98%)	1608	0.2		28611.0	3.4	30219.0	3.6	3175 (38%)	281 (3%)	281 (3%)
JAMMU & KASHMIR	4695.0	4154 (88%)	1030	0.2		11450.0	2.8	12480.0	3.0	2106 (51%)	917 (22%)	903 (22%)
JHARKHAND	21153.0	12745 (60%)	4283	0.3		27389.0	2.1	31672.0	2.5	6271 (49%)	4072 (32%)	3973 (31%)
KARNATAKA	34394.0	33186 (96%)	6207	0.2		89385.0	2.7	95592.0	2.9	13522 (41%)	1962 (6%)	1953 (6%)
KERALA	10985.0	10172 (93%)	1400	0.1		17432.0	1.7	18832.0	1.9	4763 (47%)	1786 (18%)	1752 (17%)
LADAKH	175.0	135 (77%)	67	0.5		385.0	2.9	452.0	3.3	38 (28%)	10 (7%)	10 (7%)
LAKSHADWEEP	8.0	7 (88%)	1	0.1		22.0	3.1	23.0	3.3	5 (71%)	3 (43%)	3 (43%)
MADHYA PRADESH	48158.0	40564 (84%)	13821	0.3		107348.0	2.6	121169.0	3.0	14624 (36%)	6628 (16%)	6537 (16%)
MAHARASHTRA	54821.0	49878 (91%)	7145	0.1		113216.0	2.3	120361.0	2.4	25056 (50%)	6631 (13%)	6585 (13%)
MANIPUR	986.0	741 (75%)	221	0.3		2309.0	3.1	2530.0	3.4	329 (44%)	83 (11%)	78 (11%)
MEGHALAYA	1954.0	1708 (87%)	813	0.5		5391.0	3.2	6204.0	3.6	540 (32%)	257 (15%)	257 (15%)
MIZORAM	817.0	754 (92%)	260	0.3		1438.0	1.9	1698.0	2.3	362 (48%)	210 (28%)	200 (27%)
NAGALAND	1739.0	1315 (76%)	211	0.2		2384.0	1.8	2595.0	2.0	693 (53%)	296 (23%)	284 (22%)
ODISHA	26212.0	24673 (94%)	4167	0.2		52336.0	2.1	56503.0	2.3	14132 (57%)	6890 (28%)	6826 (28%)
PUDUCHERRY	749.0	746 (100%)	83	0.1		1888.0	2.5	1971.0	2.6	356 (48%)	24 (3%)	24 (3%)
PUNJAB	22652.0	20535 (91%)	3393	0.2		42766.0	2.1	46159.0	2.2	10084 (49%)	4773 (23%)	4670 (23%)
RAJASTHAN	55161.0	43625 (79%)	8202	0.2		107038.0	2.5	115240.0	2.6	22650 (52%)	7631 (17%)	7521 (17%)
SIKKIM	573.0	493 (86%)	64	0.1		1180.0	2.4	1244.0	2.5	239 (48%)	27 (5%)	27 (5%)
TAMIL NADU	45161.0	43097 (95%)	3721	0.1		78857.0	1.8	82578.0	1.9	27508 (64%)	5906 (14%)	5858 (14%)
TELANGANA	26488.0	24506 (93%)	2369	0.1		48534.0	2.0	50903.0	2.1	15213 (62%)	3392 (14%)	3358 (14%)
TRIPURA	1543.0	1509 (98%)	182	0.1		5097.0	3.4	5279.0	3.5	658 (44%)	16 (1%)	16 (1%)
UTTAR PRADESH	148916.0	116511 (78%)	32669	0.3		299983.0	2.6	332652.0	2.9	54772 (47%)	31389 (27%)	30798 (26%)
UTTARAKHAND	9110.0	6342 (70%)	1716	0.3		14497.0	2.3	16213.0	2.6	2988 (47%)	1602 (25%)	1580 (25%)
WEST BENGAL	53172.0	50081 (94%)	9920	0.2		109694.0	2.2	119614.0	2.4	23891 (48%)	10890 (22%)	10714 (21%)
INDIA	**782235.0**	**661407 (85%)**	**138415**	**0.2**		**1574517.0**	**2.4**	**1712932.0**	**2.6**	**321506 (49%)**	**122173 (18%)**	**120292 (18%)**

7.2 TB Preventive Treatment (TPT) among eligible children <5years household contact (HHC) of Pulmonary Bacteriologically Confirmed TB (PBCT) [2021]

State	No. of HHC <5years of PBCT	Screening, diagnosis and treatment of TB				Screening, diagnosis and treatment of TB		Ruling out active TB and TPT initiation	
		No. of HHC <5years of PBCT screened for TB (%)	No. of HHC <5years of PBCT symptomatic for TB (%)	No. of HHC <5years of PBCT evaluated for TB (%)		No. of HHC <5years of PBCT diagnosed with TB (%)	No. of HHC <5years of PBCT put on TB treatment (%)	No. of HHC <5years of PBCT not diagnosed TB and eligible for TPT	No. of HHC <5years of PBCT initiated TPT (%)
ANDAMAN & NICOBAR ISLANDS	49.0	49 (100%)	1 (2%)	1 (100%)		1 (100%)	1 (100%)	48.0	41 (85%)
ANDHRA PRADESH	2087.0	1971 (94%)	22 (1%)	13 (59%)		10 (77%)	9 (90%)	2077.0	1258 (61%)
ARUNACHAL PRADESH	360.0	311 (86%)	27 (9%)	27 (100%)		27 (100%)	27 (100%)	333.0	80 (24%)
ASSAM	1556.0	1211 (78%)	21 (2%)	13 (62%)		8 (62%)	7 (88%)	1548.0	497 (32%)
BIHAR	7546.0	6134 (81%)	64 (1%)	37 (58%)		23 (62%)	17 (74%)	7523.0	1882 (25%)
CHANDIGARH	245.0	243 (99%)	1 (0%)	1 (100%)		0 (0%)	#DIV/0!	245.0	210 (86%)
CHHATTISGARH	2651.0	2151 (81%)	54 (3%)	42 (78%)		33 (79%)	26 (79%)	2618.0	903 (34%)
DADRA AND NAGAR HAVELI AND DAMAN AND DIU	77.0	77 (100%)	0 (0%)	#DIV/0!		#DIV/0!	#DIV/0!	77.0	76 (99%)
DELHI	2662.0	1720 (65%)	46 (3%)	38 (83%)		30 (79%)	21 (70%)	2632.0	1083 (41%)
GOA	47.0	47 (100%)	1 (2%)	0 (0%)		#DIV/0!	#DIV/0!	47.0	38 (81%)
GUJARAT	10553.0	10464 (99%)	404 (4%)	375 (93%)		24 (6%)	23 (96%)	10529.0	8506 (81%)
HARYANA	7029.0	6352 (90%)	63 (1%)	49 (78%)		35 (71%)	36 (103%)	6994.0	3305 (47%)
HIMACHAL PRADESH	1608.0	1596 (99%)	98 (6%)	91 (93%)		30 (33%)	30 (100%)	1578.0	1347 (85%)
JAMMU & KASHMIR	1030.0	916 (89%)	24 (3%)	21 (88%)		13 (62%)	11 (85%)	1017.0	666 (65%)
JHARKHAND	4283.0	3223 (75%)	112 (3%)	103 (92%)		98 (95%)	95 (97%)	4185.0	1213 (29%)
KARNATAKA	6207.0	5803 (93%)	196 (3%)	170 (87%)		89 (52%)	86 (97%)	6118.0	3561 (58%)
KERALA	1400.0	1114 (80%)	68 (6%)	60 (88%)		29 (48%)	25 (86%)	1371.0	553 (40%)
LADAKH	67.0	65 (97%)	0 (0%)	#DIV/0!		#DIV/0!	#DIV/0!	67.0	59 (88%)
LAKSHADWEEP	1.0	1 (100%)	0 (0%)	#DIV/0!		#DIV/0!	#DIV/0!	1.0	1 (100%)
MADHYA PRADESH	13821.0	10877 (79%)	240 (2%)	166 (69%)		106 (64%)	101 (95%)	13715.0	6649 (48%)
MAHARASHTRA	7145.0	6320 (88%)	212 (3%)	170 (80%)		56 (33%)	48 (86%)	7089.0	3912 (55%)
MANIPUR	221.0	190 (86%)	2 (1%)	0 (0%)		#DIV/0!	#DIV/0!	221.0	101 (46%)
MEGHALAYA	813.0	782 (96%)	3 (0%)	3 (100%)		2 (67%)	2 (100%)	811.0	562 (69%)
MIZORAM	260.0	188 (72%)	1 (1%)	1 (100%)		1 (100%)	1 (100%)	259.0	89 (34%)
NAGALAND	211.0	177 (84%)	4 (2%)	1 (25%)		1 (100%)	1 (100%)	210.0	102 (49%)
ODISHA	4167.0	3949 (95%)	70 (2%)	62 (89%)		59 (95%)	60 (102%)	4108.0	2408 (59%)
PUDUCHERRY	83.0	83 (100%)	6 (7%)	6 (100%)		3 (50%)	3 (100%)	80.0	74 (93%)
PUNJAB	3393.0	2678 (79%)	44 (2%)	37 (84%)		12 (32%)	11 (92%)	3381.0	1403 (41%)
RAJASTHAN	8202.0	7470 (91%)	100 (1%)	78 (78%)		27 (35%)	24 (89%)	8175.0	3188 (39%)
SIKKIM	64.0	43 (67%)	2 (5%)	2 (100%)		1 (50%)	1 (100%)	63.0	50 (79%)
TAMIL NADU	3721.0	3440 (92%)	195 (6%)	182 (93%)		33 (18%)	26 (79%)	3688.0	2328 (63%)
TELANGANA	2369.0	2228 (94%)	136 (6%)	117 (86%)		33 (28%)	15 (45%)	2336.0	1230 (53%)
TRIPURA	182.0	173 (95%)	3 (2%)	3 (100%)		1 (33%)	0 (0%)	181.0	110 (61%)
UTTAR PRADESH	32669.0	28987 (89%)	357 (1%)	223 (62%)		199 (89%)	146 (73%)	32470.0	12862 (40%)
UTTARAKHAND	1716.0	1480 (86%)	35 (2%)	9 (26%)		7 (78%)	6 (86%)	1709.0	551 (32%)
WEST BENGAL	9920.0	9333 (94%)	123 (1%)	89 (72%)		35 (39%)	21 (60%)	9885.0	5567 (56%)
INDIA	**138415.0**	**121846 (88%)**	**2735 (2%)**	**2190 (80%)**		**1026 (47%)**	**880 (86%)**	**137389.0**	**66465 (48%)**

7.3 TB Preventive Treatment (TPT) in eligible children >/=5years, adolescent and adult household contact (HHC) of Pulmonary Bacteriologically Confirmed TB (PBCT) [Jul to Dec 2021]

States/UTs	No. of HHC ≥5years of PBCT	Screening, diagnosis and tratment of TB						Ruling out active TB, TBI testing and TPT initiation				
		No. of HHC ≥5years of PBCT screened for TB (%)	No. of HHC ≥5years of PBCT symptomatic for TB (%)	No. of HHC ≥5years of PBCT evaluated for TB (%)	No. of HHC ≥5years of PBCT diagnosed with TB (%)		No. of HHC of PBCT put on TB tNo. of HHC ≥5years of PBCT put on TB treatment (%)	No. of HHC ≥5years of PBCT and TB not diagnosed (B-F)	No. of HHC ≥5years of PBCT tested for TB infection	No. of HHC ≥5years of PBCT postives for TB infection	No. of HHC ≥5years of PBCT eligible for TPT (TBI positives + testing not done among TB not diagnosed {J+[H-I]})	No. of HHC ≥5years of PBCT initiated TPT (%)
ANDAMAN & NICOBAR ISLANDS	410	403 (98%)	9 (2%)	8 (89%)	2 (25%)		2 (100%)	408 (100%)	0 (0%)	---	408	1 (0%)
ANDHRA PRADESH	27921	26816 (96%)	182 (1%)	63 (35%)	47 (75%)		24 (51%)	27874 (100%)	0 (0%)	---	27874	2582 (9%)
ARUNACHAL PRADESH	1100	1035 (94%)	87 (8%)	81 (93%)	81 (100%)		81 (100%)	1019 (93%)	0 (0%)	---	1019	11 (1%)
ASSAM	10073	8519 (85%)	135 (2%)	95 (70%)	61 (64%)		49 (80%)	10012 (99%)	0 (0%)	---	10012	238 (2%)
BIHAR	22948	20165 (88%)	165 (1%)	92 (56%)	38 (41%)		36 (95%)	22910 (100%)	0 (0%)	---	22910	360 (2%)
CHANDIGARH	1997	1962 (98%)	14 (1%)	13 (93%)	5 (38%)		5 (100%)	1992 (100%)	0 (0%)	---	1992	155 (8%)
CHHATTISGARH	14467	12698 (88%)	462 (4%)	376 (81%)	249 (66%)		157 (63%)	14218 (98%)	0 (0%)	---	14218	652 (5%)
DADRA AND NAGAR HAVELI AND DAMAN AND DIU	519	519 (100%)	37 (7%)	37 (100%)	1 (3%)		1 (100%)	518 (100%)	426 (82%)	131 (31%)	223	120 (54%)
DELHI	18691	14361 (77%)	278 (2%)	162 (58%)	104 (64%)		37 (36%)	18587 (99%)	24 (0%)	1 (4%)	18564	858 (5%)
GOA	934	934 (100%)	3 (0%)	3 (100%)	0 (0%)		---	934 (100%)	0 (0%)	---	934	2 (0%)
GUJARAT	84448	83601 (99%)	2722 (3%)	2531 (93%)	234 (9%)		134 (57%)	84214 (100%)	2588 (3%)	1197 (46%)	82823	501 (1%)
HARYANA	35838	33470 (93%)	212 (1%)	111 (52%)	72 (65%)		64 (89%)	35766 (100%)	1017 (3%)	500 (49%)	35249	652 (2%)
HIMACHAL PRADESH	15240	15184 (100%)	57 (0%)	46 (81%)	15 (33%)		11 (73%)	15225 (100%)	0 (0%)	---	15225	515 (3%)
JAMMU & KASHMIR	6014	5341 (89%)	153 (3%)	134 (88%)	102 (76%)		96 (94%)	5912 (98%)	0 (0%)	---	5912	783 (13%)
JHARKHAND	15419	12623 (82%)	396 (3%)	361 (91%)	321 (89%)		265 (83%)	15098 (98%)	0 (0%)	---	15098	2161 (14%)
KARNATAKA	52300	50057 (96%)	918 (2%)	705 (77%)	183 (26%)		120 (66%)	52117 (100%)	1543 (3%)	477 (31%)	51051	1522 (3%)
KERALA	10033	9252 (92%)	282 (3%)	209 (74%)	28 (13%)		21 (75%)	10005 (100%)	2264 (23%)	574 (25%)	8315	171 (2%)
LADAKH	204	183 (90%)	2 (1%)	1 (50%)	2 (200%)		1 (50%)	202 (99%)	0 (0%)	---	202	21 (10%)
LAKSHADWEEP	0	---	---	---	---		---	---	---	---	0	---
MADHYA PRADESH	58212	53594 (92%)	1308 (2%)	963 (74%)	314 (33%)		262 (83%)	57898 (99%)	1207 (2%)	398 (33%)	57089	17051 (30%)
MAHARASHTRA	63783	58499 (92%)	1513 (3%)	1227 (81%)	226 (18%)		169 (75%)	63557 (100%)	3646 (6%)	639 (18%)	60550	4770 (8%)
MANIPUR	1268	1130 (89%)	3 (0%)	3 (100%)	0 (0%)		---	1268 (100%)	0 (0%)	---	1268	6 (0%)
MEGHALAYA	3028	2948 (97%)	18 (1%)	10 (56%)	9 (90%)		9 (100%)	3019 (100%)	0 (0%)	---	3019	16 (1%)
MIZORAM	639	606 (95%)	3 (0%)	2 (67%)	2 (100%)		1 (50%)	637 (100%)	0 (0%)	---	637	26 (4%)
NAGALAND	1057	997 (94%)	3 (0%)	3 (100%)	2 (67%)		2 (100%)	1055 (100%)	0 (0%)	---	1055	152 (14%)
ODISHA	28406	27292 (96%)	385 (1%)	313 (81%)	140 (45%)		131 (94%)	28266 (100%)	0 (0%)	---	28266	2030 (7%)
PUDUCHERRY	1071	1071 (100%)	115 (11%)	115 (100%)	2 (2%)		2 (100%)	1069 (100%)	0 (0%)	---	1069	2 (0%)
PUNJAB	16866	15014 (89%)	95 (1%)	65 (68%)	53 (82%)		51 (96%)	16813 (100%)	0 (0%)	---	16813	2561 (15%)
RAJASTHAN	57355	54897 (96%)	823 (1%)	735 (89%)	91 (12%)		54 (59%)	57264 (100%)	0 (0%)	---	57264	1036 (2%)
SIKKIM	557	335 (60%)	21 (6%)	19 (90%)	9 (47%)		9 (100%)	548 (98%)	0 (0%)	---	548	38 (7%)
TAMIL NADU	45363	43997 (97%)	1006 (2%)	864 (86%)	60 (7%)		44 (73%)	45303 (100%)	765 (2%)	207 (27%)	44745	1313 (3%)
TELANGANA	26760	25694 (96%)	1233 (5%)	1178 (96%)	171 (15%)		135 (79%)	26589 (99%)	0 (0%)	---	26589	1546 (6%)
TRIPURA	2776	2594 (93%)	66 (3%)	61 (92%)	1 (2%)		0 (0%)	2775 (100%)	0 (0%)	---	2775	2 (0%)
UTTAR PRADESH	157164	151725 (97%)	1280 (1%)	652 (51%)	452 (69%)		384 (85%)	156712 (100%)	0 (0%)	---	156712	1276 (1%)
UTTARAKHAND	8604	7958 (92%)	272 (3%)	108 (40%)	67 (62%)		61 (91%)	8537 (99%)	0 (0%)	---	8537	372 (4%)
WEST BENGAL	**59089**	**56887 (96%)**	**2375 (4%)**	**2171 (91%)**	**207 (10%)**		**152 (73%)**	**58882 (100%)**	**0 (0%)**	**---**	**58882**	**10201 (17%)**
INDIA	**850554**	**802361 (94%)**	**16633 (2%)**	**13517 (81%)**	**3351 (25%)**		**2570 (77%)**	**847203 (100%)**	**13480 (2%)**	**4124 (31%)**	**837847**	**53703 (6%)**

7.4 TB Preventive Treatment (TPT) in eligible household contact (HHC) of PBCT

TPT among eligible HHC children <5year [2021 Nikshay] plus eligible HHC >/=5year [Jul to Dec 2021 Nikshay]

State	No. of HHC of PBCT	Screening, diagnosis and tratment of TB						Ruling out active TB, TBI testing and TPT initiation			
		No. of HHC of PBCT screened for TB (%)	No. of HHC of PBCT symptomatic for TB (%)	No. of HHC of PBCT evaluated for TB (%)	No. of HHC of PBCT diagnosed with TB (%)		No. of HHC of PBCT put on TB treatment (%)	No. of HHC ≥5years of PBCT tested for TB infection	No. of HHC ≥5years of PBCT postives for TB infection	No. of HHC of PBCT eligible* for TPT	No. of HHC of PBCT provided TPT (%)
ANDAMAN & NICOBAR ISLANDS	459.0	452 (98%)	10 (2%)	9 (90%)	3 (33%)		3 (100%)	0.0	0.0	456.0	42 (9%)
ANDHRA PRADESH	30008.0	28787 (96%)	204 (1%)	76 (37%)	57 (75%)		33 (58%)	0.0	0.0	29951.0	3840 (13%)
ARUNACHAL PRADESH	1460.0	1346 (92%)	114 (8%)	108 (95%)	108 (100%)		108 (100%)	0.0	0.0	1352.0	91 (7%)
ASSAM	11629.0	9730 (84%)	156 (2%)	108 (69%)	69 (64%)		56 (81%)	0.0	0.0	11560.0	735 (6%)
BIHAR	30494.0	26299 (86%)	229 (1%)	129 (56%)	61 (47%)		53 (87%)	0.0	0.0	30433.0	2242 (7%)
CHANDIGARH	2242.0	2205 (98%)	15 (1%)	14 (93%)	5 (36%)		5 (100%)	0.0	0.0	2237.0	365 (16%)
CHHATTISGARH	17118.0	14849 (87%)	516 (3%)	418 (81%)	282 (67%)		183 (65%)	0.0	0.0	16836.0	1555 (9%)
DADRA AND NAGAR HAVELI AND DAMAN AND DIU	596.0	596 (100%)	37 (6%)	37 (100%)	1 (3%)		1 (100%)	426.0	131.0	300.0	196 (65%)
DELHI	21353.0	16081 (75%)	324 (2%)	200 (62%)	134 (67%)		58 (43%)	24.0	1.0	21196.0	1941 (9%)
GOA	981.0	981 (100%)	4 (0%)	3 (75%)	0 (0%)		#DIV/0!	0.0	0.0	981.0	40 (4%)
GUJARAT	95001.0	94065 (99%)	3126 (3%)	2906 (93%)	258 (9%)		157 (61%)	2588.0	1197.0	93352.0	9007 (10%)
HARYANA	42867.0	39822 (93%)	275 (1%)	160 (58%)	107 (67%)		100 (93%)	1017.0	500.0	42243.0	3957 (9%)
HIMACHAL PRADESH	16848.0	16780 (100%)	155 (1%)	137 (88%)	45 (33%)		41 (91%)	0.0	0.0	16803.0	1862 (11%)
JAMMU & KASHMIR	7044.0	6257 (89%)	177 (3%)	155 (88%)	115 (74%)		107 (93%)	0.0	0.0	6929.0	1449 (21%)
JHARKHAND	19702.0	15846 (80%)	508 (3%)	464 (91%)	419 (90%)		360 (86%)	0.0	0.0	19283.0	3374 (17%)
KARNATAKA	58507.0	55860 (95%)	1114 (2%)	875 (79%)	272 (31%)		206 (76%)	1543.0	477.0	57169.0	5083 (9%)
KERALA	11433.0	10366 (91%)	350 (3%)	269 (77%)	57 (21%)		46 (81%)	2264.0	574.0	9686.0	724 (7%)
LADAKH	271.0	248 (92%)	2 (1%)	1 (50%)	2 (200%)		1 (50%)	0.0	0.0	269.0	80 (30%)
LAKSHADWEEP	1.0	1 (100%)	0 (0%)	#DIV/0!	#DIV/0!		#DIV/0!	0.0	0.0	1.0	1 (100%)
MADHYA PRADESH	72033.0	64471 (90%)	1548 (2%)	1129 (73%)	420 (37%)		363 (86%)	1207.0	398.0	70804.0	23700 (33%)
MAHARASHTRA	70928.0	64819 (91%)	1725 (3%)	1397 (81%)	282 (20%)		217 (77%)	3646.0	639.0	67639.0	8682 (13%)
MANIPUR	1489.0	1320 (89%)	5 (0%)	3 (60%)	0 (0%)		#DIV/0!	0.0	0.0	1489.0	107 (7%)
MEGHALAYA	3841.0	3730 (97%)	21 (1%)	13 (62%)	11 (85%)		11 (100%)	0.0	0.0	3830.0	578 (15%)
MIZORAM	899.0	794 (88%)	4 (1%)	3 (75%)	3 (100%)		2 (67%)	0.0	0.0	896.0	115 (13%)
NAGALAND	1268.0	1174 (93%)	7 (1%)	4 (57%)	3 (75%)		3 (100%)	0.0	0.0	1265.0	254 (20%)
ODISHA	32573.0	31241 (96%)	455 (1%)	375 (82%)	199 (53%)		191 (96%)	0.0	0.0	32374.0	4438 (14%)
PUDUCHERRY	1154.0	1154 (100%)	121 (10%)	121 (100%)	5 (4%)		5 (100%)	0.0	0.0	1149.0	76 (7%)
PUNJAB	20259.0	17692 (87%)	139 (1%)	102 (73%)	65 (64%)		62 (95%)	0.0	0.0	20194.0	3964 (20%)
RAJASTHAN	65557.0	62367 (95%)	923 (1%)	813 (88%)	118 (15%)		78 (66%)	0.0	0.0	65439.0	4224 (6%)
SIKKIM	621.0	378 (61%)	23 (6%)	21 (91%)	10 (48%)		10 (100%)	0.0	0.0	611.0	88 (14%)
TAMIL NADU	49084.0	47437 (97%)	1201 (3%)	1046 (87%)	93 (9%)		70 (75%)	765.0	207.0	48433.0	3641 (8%)
TELANGANA	29129.0	27922 (96%)	1369 (5%)	1295 (95%)	204 (16%)		150 (74%)	0.0	0.0	28925.0	2776 (10%)
TRIPURA	2958.0	2767 (94%)	69 (2%)	64 (93%)	2 (3%)		0 (0%)	0.0	0.0	2956.0	112 (4%)
UTTAR PRADESH	189833.0	180712 (95%)	1637 (1%)	875 (53%)	651 (74%)		530 (81%)	0.0	0.0	189182.0	14138 (7%)
UTTARAKHAND	10320.0	9438 (91%)	307 (3%)	117 (38%)	74 (63%)		67 (91%)	0.0	0.0	10246.0	923 (9%)
WEST BENGAL	69009.0	66220 (96%)	2498 (4%)	2260 (90%)	242 (11%)		173 (71%)	0.0	0.0	68767.0	15768 (23%)
INDIA	**988969.0**	**924207 (93%)**	**19368 (2%)**	**15707 (81%)**	**4377 (28%)**		**3450 (79%)**	**13480.0**	**4124.0**	**975236.0**	**120168 (12%)**

8.1 State Level - Programme Staffing Status in 2021

State	State TB Officer	State TB Officer	Epidemiologist (APO)	Epidemiologist (APO)	MO – State TB Cell	MO – State TB Cell	TB-HIV Coordinator	TB-HIV Coordinator	PPM Coordinator	PPM Coordinator	DR TB Coordinator	DR TB Coordinator	State IEC Officer		State IEC Officer	State Accountant	State Accountant	Technical Officer-Proc. and Logistics	Technical Officer-Proc. and Logistics	Data Analyst	Data Analyst	DEO-STC	DEO-STC	Pharmacist - SDS	Pharmacist - SDS	Secretarial asst.	Secretarial asst.	Store Assistant - SDS	Store Assistant - SDS
	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned		In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place
Andaman & Nicobar	1	1	0	0	1	0	1	0	0	0	0	0	1		1	1	1	0	0	1	0	1	1	1	1	1	1	1	1
Andhra Pradesh	1	1	1	1	1	0	1	0	1	1	1	1	1		1	1	1	1	1	1	1	1	0	1	1	1	0	1	1
Arunachal Pradesh	1	1	1	1	1	0	0	0	0	0	0	0	1		1	1	1	1	0	0	0	1	1	1	0	1	1	1	1
Assam	1	1	1	0	1	0	1	1	0	0	0	0	1		1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Bihar	1	1	1	1	1	0	1	0	1	0	1	1	1		1	1	0	1	1	0	0	1	1	2	0	1	0	2	1
Chandigarh	1	1	0	0	1	0	1	1	0	0	0	0	1		1	1	1	0	0	0	0	1	1	1	1	1	1	1	1
Chattisgarh	1	1	1	0	1	1	0	0	1	1	0	0	1		1	1	1	0	0	0	0	1	1	1	1	1	0	1	1
Dadra Nagar & Haveli Daman & Diu	1	1	2	2	2	2	1	1	0	0	0	0	2		1	2	2	0	0	0	0	2	2	2	2	1	1	1	0
Delhi	1	1	1	1	1	1	1	1	1	0	1	1	1		1	1	1	1	0	1	1	1	1	2	0	1	1	2	0
Goa	1	1	1	0	1	1	1	0	0	0	0	0	1		1	1	1	1	1	0	0	1	1	1	1	1	1	1	1
Gujarat	1	1	1	1	1	1	1	1	1	0	1	1	1		1	1	1	1	0	0	0	1	1	1	0	1	1	1	1
Haryana	1	1	1	0	1	0	1	0	1	1	1	0	1		1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
Himachal Pradesh	1	1	1	1	0	0	0	0	0	0	0	0	1		1	1	1	0	0	0	0	1	1	1	0	1	0	1	1
Jammu	0	0	1	0	1	1	1	1	1	1	1	0	1		1	1	1	1	0	0	0	1	1	1	1	1	1	1	1
Kashmir	0	1	1	1	1	1	1	1	1	1	0	0	1		1	1	1	1	1			1	1	1	1	1	1	1	1
Ladakh	0	1	0	0	0	0	0	0	0	0	0	0	0		0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Jharkhand	1	1	1	1	1	1	1	0	1	1	1	0	1		1	2	1	1	1	1	0	1	1	2	1	1	0	2	1
Karnataka	1	1	1	0	1	0	1	0	1	0	1	0	1		0	2	2	1	1	1	0	2	2	1	0	1	0	1	0
Kerala	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	0	0	0	0	1	1	1	1	1	1	1	1
Lakshdweep	1	1	0	0	0	0	0	0	0	0	0	0	1		1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Maharashtra	1	1	2	2	1	0	1	1	1	1	1	0	1		1	3	3	1	0	2	2	2	2	50	42	2	2	8	8
Manipur	1	1	1	1	1	1	1	0	1	1	1	0	1		1	1	1	0	0	0	0	1	1	1	1	1	1	1	1
Mizoram	1	1	0	0	1	1	1	1	1	1	0	0	1		1	1	1	0	0	0	0	1	1	1	1	1	1	1	1
Meghalaya	1	1	0	1	1	0	1	0	1	1	1	1	0		0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Madhya Pradesh	1	1	1	0	1	1	1	0	1	0	1	0	0		0	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Nagaland	1	1	1	1	1	1	0	0	1	1	0	0	1		1	1	1	1	1	0	0	1	1	1	1	1	1	1	1
Odisha	1	1	1	1	1	1	1	1	1	1	1	1	1		0	1	1	0	0	0	0	1	1	1	0	1	1	1	0
Puducherry	1	1	0	0	1	1	1	1	0	0	0	0	1		1	1	1	0	0	0	0	1	1	1	1	1	1	1	1
Punjab	1	1	1	0	1	0	1	1	0	0	0	0	0		0	1	1	0	0	0	0	1	1	0	0	0	0	0	0
Rajasthan	1	1	1	0	1	0	1	0	1	1	1	0	1		1	1	1	1	1	1	1	2	1	3	2	1	1	4	0
Sikkim	1	1	1	1	1	0	1	0	1	1	1	0	1		0	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Telangana	0	1	1	0	1	0	1	0	1	0	1	0	1		1	1	1	1	0	1	1	1	0	1	1	0	0	1	1
Tamil Nadu	1	1	0	0	1	1	1	0	1	1	1	0	1		1	2	1	1	1	1	0	2	0	1	2	2	0	3	2
Tripura	1	1	1	1	1	1	0	0	1	0	0	0	1		1	1	1	1	0	1	1	1	0	1	1	1	1	1	0
Uttar Pradesh	1	1	2	1	2	0	2	1	2	1	2	0	2		2	2	2	2	2	2	1	2	2	4	4	1	1	8	5
Uttarakhand	1	1	1	1	1	1 (PMC)	0	0	0	0	1	0	1		1	1	1	0	0	0	0	1	1	2	2	1	0	2	1
West Bengal	1	1	2	1	1	0	2	0	2	2	2	1	2		1	2	2	1	0	2	2	2	1	2	1	1	1	4	2

8.2 STDC - Programme Staffing Status in 2021

State	Director (STDC)	Director (STDC)	MO - STDC	MO - STDC	Epidemiologist		Epidemiologist	NIKSHAY Operator	NIKSHAY Operator	Secretarial assistant-STDC	Secretarial assistant-STDC
	Sanctioned	In Place	Sanctioned	In Place	Sanctioned		In Place	Sanctioned	In Place	Sanctioned	In Place
Andaman & Nicobar	0	0	0	0	0		0	0	0	0	0
Andhra Pradesh	0	0	0	0				1	1	0	0
Arunachal Pradesh	0	0	0	0							
Assam	0	0	0	0							
Bihar	2	2	14	8	1		0	0	0	0	0
Chandigarh	0	0	0	0	0		0	0	0	0	0
Chattisgarh	0	0	2	0	1		0	1	0	0	0
Dadra Nagar & Haveli Daman & Diu	0	0	0	0	0		0	0	0	0	0
Delhi	1	1	1	1	1		1				
Goa	0	0	0	0	0		0	0	0	0	0
Gujarat	2	2	4	4	0		0	1	1	0	0
Haryana			Infrastructure ready, HR Projected in supp PIP 2021-22	0	Infrastructure ready, HR Projected in supp PIP 2021-22		0	Infrastructure ready, HR Projected in supp PIP 2021-22	0	Infrastructure ready, HR Projected in supp PIP 2021-22	0
Himachal Pradesh	1	1	1	1	1		1	1	1	1	1
Jammu	0	0	0	0							
Kashmir	1	1									
Ladakh	0	0	0		0		0	0	0	0	0
Jharkhand	1	1	1	1	1		0	1	0	0	0
Karnataka	1	1	0	0	0		0	0	0	0	0
Kerala	1	1	2	2	0		0	0	0	0	0
Lakshdweep	0	0	0	0						0	
Maharashtra	3	2	2	2	2		2	0	0	0	0
Manipur	1	1	0	0	0		0	0	0	0	0
Mizoram	0	0	0	0	0		0	0	0	0	0
Meghalaya	0	0	0	0	0		0	7	7	0	0
Madhya Pradesh	1	1	1	1	0		0	0	0	0	0
Nagaland	NA	NA	NA	NA	0		0	0	0	0	0
Odisha	1	1	1	1	1		1	1	1	1	1
Puducherry	1	1	5	5	0		0	0	0	0	0
Punjab	1	1	1	1	1		1	0	0	0	0
Rajasthan	1	1	3	3	1		0	1	1	1	1
Sikkim	1	1	1	0	1		0	1	0	1	0
Telangana	1	1	1	2	2		1	1	0	0	0
Tamil Nadu	1	1	0	0	1		0	0	0	0	0
Tripura	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
Uttar Pradesh	1	1	3	1	0		0	0	0	0	0
Uttarakhand	0	0	1	0							
West Bengal	1	1	3	2	1		1	1	1	0	0

8.3 IRL- Programme Staffing Status in 2021

State	Microbiologist (C-DST)	Microbiologist (C-DST)	Technical Officer	Technical Officer	Senior Lab. Tech.		Senior Lab. Tech.	Data Entry Operator	Data Entry Operator	Lab technicians	Lab technicians	Lab Attendant	Lab Attendant
	Sanctioned	In Place	Sanctioned	In Place	Sanctioned		In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place
Andaman & Nicobar	0	0	0	0	0		0	0	0	0	0	0	0
Andhra Pradesh	2	2	0	0	10		7	2	2	6	4	2	2
Arunachal Pradesh	1	1	0	0	1		1	0	0	0	0	4	4
Assam	1	0	0	0	0		0	0	0	0	0	0	0
Bihar	4	0	0	0	15		0	4	0	0	0	0	0
Chandigarh	1	1	0	0	0		0	1	1	3	3	2	2
Chattisgarh	1	1	0	0	0		0	1	0	2	0	0	0
Dadra Nagar & Haveli Daman & Diu	0	0	0	0	0		0	0	0	0	0	0	0
Delhi	1	1	0	0	5		0	1	0	0	0	0	0
Goa	0	0	0	0	0		0	0	0	0	0	0	0
Gujarat	2	2	0	0	0		0	1	1	10	10	8	8
Haryana	Infrastructure almost ready, HR Projected in supp PIP 2021-22	0	Infrastructure ready, HR Projected in supp PIP 2021-22	0	Infrastructure ready, HR Projected in supp PIP 2021-22		0	Infrastructure ready , HR Projected in supp PIP 2021-22	0	1 (Sr. Lab Technician-EQA) approved	0	1	0
Himachal Pradesh	2	2	0	0	5		3	0	0	4	2	0	0
Jammu													
Kashmir													
Ladakh	0	0	0	0	0		0		0	0	0	0	0
Jharkhand	1	1	1	0	2		0	1	0	2	0	1	0
Karnataka	3	3	0	0	0		0	2	2	1	0	4	4
Kerala	1	1	0	0	0		0	1	1	2	2	2	2
Lakshdweep	0	0	0	0	0		0	0	0	0	0	0	0
Maharashtra	11	5	0	0	30		15	6	8	8	2	0	0
Manipur	0	0	0	0	0		0	0	0	0	0	0	0
Mizoram	1	0	0	0	2		2	1	1	2	2	0	0
Meghalaya	0	0	0	0	0		0	0	0	0	0	0	0
Madhya Pradesh	4	3	1	1	1		1	3	3	14	9	4	4
Nagaland	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA
Odisha	1	1	0	0	0		0	0	0	0	0	0	0
Puducherry	1	1	0	0	0		0	1	1	4	4	1	1
Punjab	0	0	0	0	0		0	0	0	0	0	0	0
Rajasthan	4	4	2	2	3		3	3	2	19	16	2 (FIND)	2 (FIND)
Sikkim	1	1	0	0	0		0	0	0	0	0	0	0
Telangana	1	0	0	0	0		0	1	0	2	0	1	0
Tamil Nadu	1	1	0	0	1		1	1	0	0	0	0	0
Tripura	1	1	0	0	1		1	1	1	0	1 (FIND)	0	2 (FIND)
Uttar Pradesh	8	3	0	0	24		1	6	3	4	2	6	3
Uttarakhand	0	0	0	0	0		0	0	0	0	0	0	0
West Bengal	5	1	0	0	16		4	1	0	4	3	0	0

8.4 CDST - Programme Staffing Status in 2021

State	Microbiologist (C-DST)	Microbiologist (C-DST)	Technical Officer	Technical Officer	Senior Lab. Tech.		Senior Lab. Tech.	Data Entry Operator	Data Entry Operator	Lab technicians	Lab technicians	Lab Attendant	Lab Attendant
	Sanctioned	In Place	Sanctioned	In Place	Sanctioned		In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place
Andaman & Nicobar	0	0	0	0	0		0	0	0	0	0	0	0
Andhra Pradesh	2	2	0	0	10		7	2	2	6	4	2	2
Arunachal Pradesh	1	1	0	0	1		1	0	0	0	0	4	4
Assam	1	0	0	0	0		0	0	0	0	0	0	0
Bihar	4	0	0	0	15		0	4	0	0	0	0	0
Chandigarh	1	1	0	0	0		0	1	1	3	3	2	2
Chattisgarh	1	1	0	0	0		0	1	0	2	0	0	0
Dadra Nagar & Haveli Daman & Diu	0	0	0	0	0		0	0	0	0	0	0	0
Delhi	1	1	0	0	5		0	1	0	0	0	0	0
Goa	0	0	0	0	0		0	0	0	0	0	0	0
Gujarat	2	2	0	0	0		0	1	1	10	10	8	8
Haryana	Infrastructure almost ready, HR Projected in supp PIP 2021-22	0	Infrastructure ready, HR Projected in supp PIP 2021-22	0	Infrastructure ready, HR Projected in supp PIP 2021-22		0	Infrastructure ready , HR Projected in supp PIP 2021-22	0	1 (Sr. Lab Technician-EQA) approved	0	1	0
Himachal Pradesh	2	2	0	0	5		3	0	0	4	2	0	0
Jammu													
Kashmir													
Ladakh	0	0	0	0	0		0		0	0	0	0	0
Jharkhand	1	1	1	0	2		0	1	0	2	0	1	0
Karnataka	3	3	0	0	0		0	2	2	1	0	4	4
Kerala	1	1	0	0	0		0	1	1	2	2	2	2
Lakshdweep	0	0	0	0	0		0	0	0	0	0	0	0
Maharashtra	11	5	0	0	30		15	6	8	8	2	0	0
Manipur	0	0	0	0	0		0	0	0	0	0	0	0
Mizoram	1	0	0	0	2		2	1	1	2	2	0	0
Meghalaya	0	0	0	0	0		0	0	0	0	0	0	0
Madhya Pradesh	4	3	1	1	1		1	3	3	14	9	4	4
Nagaland	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA
Odisha	1	1	0	0	0		0	0	0	0	0	0	0
Puducherry	1	1	0	0	0		0	1	1	4	4	1	1
Punjab	0	0	0	0	0		0	0	0	0	0	0	0
Rajasthan	4	4	2	2	3		3	3	2	19	16	2 (FIND)	2 (FIND)
Sikkim	1	1	0	0	0		0	0	0	0	0	0	0
Telangana	1	0	0	0	0		0	1	0	2	0	1	0
Tamil Nadu	1	1	0	0	1		1	1	0	0	0	0	0
Tripura	1	1	0	0	1		1	1	1	0	1 (FIND)	0	2 (FIND)
Uttar Pradesh	8	3	0	0	24		1	6	3	4	2	6	3
Uttarakhand	0	0	0	0	0		0	0	0	0	0	0	0
West Bengal	5	1	0	0	16		4	1	0	4	3	0	0

8.5 DRTB Centre level – Programme Staffing Status 2021

State	Senior MO – DR TB Centre	Senior MO – DR TB Centre	Counselor – DR TB Centre		Counselor – DR TB Centre	SA – DR TB Centre	SA – DR TB Centre
	Sanctioned	In Place	Sanctioned		In Place	Sanctioned	In Place
Andaman & Nicobar	1	0	1		0	1	1
Andhra Pradesh	9	4	13		11	13	12
Arunachal Pradesh	2	1	0		0	2	2
Assam	5	3	5		2	5	3
Bihar	9	1	46		0	9	6
Chandigarh	1	0	0		0	1	1
Chattisgarh	4	2	4		3	4	4
Dadra Nagar & Haveli Daman & Diu	0	0	0		0	0	0
Delhi	4	2	14		0	4	4
Goa	1	1	1		1	1	1
Gujarat	5	4	5		5	5	5
Haryana	2	1	3		2	3	1
Himachal Pradesh	3	1	3		2	2	1
Jammu	1	1	1		1	1	1
Kashmir	1	1				1	1
Ladakh	1	1	0		0	1	1
Jharkhand	5	2	5		2	5	4
Karnataka	7	6	6		5	6	6
Kerala	2	2	0		0	2	2
Lakshdweep	0	0	0		0	0	0
Maharashtra	19	15	20		15	22	20
Manipur	1	0	1		1	2	2
Mizoram	1	1	1		1	1	1
Meghalaya	2	1	2		2	2	2
Madhya Pradesh	12	6	13		3	13	0
Nagaland	2	2	2		2	2	2
Odisha	4	2	4		3	4	2
Puducherry	1	0	0		0	1	1
Punjab	3	1	0		0	2	1
Rajasthan	7	2	7		6	7	6
Sikkim	1	0	1		0	1	1
Telangana	2	2	4		1	7	6
Tamil Nadu	8	6	13		8	8	8
Tripura	1	1 (On Duputation)	1		1	1	1
Uttar Pradesh	23	13	23		17	23	18
Uttarakhand	2	1	2		2	2	2
West Bengal	9	5	9		9	9	8

8.6 District level - Programme Staffing Status in 2021

State	District TB Officers	District TB Officers	District Program Coordinator	District Program Coordinator	MO – DTC	MO – DTC	MO-TC	MO-TC	Senior DR TB – TBHIV supervisor	Senior DR TB – TBHIV supervisor	District PPM Coordinator	District PPM Coordinator	Accountant	Accountant	Senior Treatment Supervisor (STS)	Senior Treatment Supervisor (STS)	Senior TB Lab Supervisor (STLS)	Senior TB Lab Supervisor (STLS)	Lab. Techs. (LT) – RNTCP Contractual	Lab. Techs. (LT) – RNTCP Contractual	MO – PHI	MO – PHI	TBHV	TBHV
	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place
Andaman & Nicobar	3	3	3	3	3	2	6	6	3	3	0	0	3	3	9	9	4	4	4	4	146	113	4	4
Andhra Pradesh	13	10	13	12	5	2	225	225	13	11	13	12	13	12	239	228	134	108	209	193	1600	1589	161	135
Arunachal Pradesh	15	15	0	0	14	6	14	6	17	15	0	0	15	15	20	20	18	18	12	12	830	800	11	11
Assam	27	27	0	0	16	0	350	156	27	26	27	22	27	23	153	139	78	75	88	82	4283	1816	30	30
Bihar	38	38	38	24	38	20	544	480	38	24	0	0	0	0	534	311	223	158	436	355	2686	860	110	29
Chandigarh	1	1	0	0	1	0	4	4	1	1	0	0	0	0	4	3	5	5	17	11	54	54	14	7
Chattisgarh	28	28	27	25	13	11	155	155	27	24	27	23	27	25	155	151	69	65	146	101	3672	1312	46	40
Dadra Nagar & Haveli Daman & Diu	0	0	1	1	1	1	0	0	2	2	0	0	1	1	6	3	3	3	5	4	0	0	3	2
Delhi	25	25	25	0	12	11	38	20	27	23	25	0	25	0	72	31	38	31	186	168	286	286	189	172
Goa	2	2	2	0	0	0	6	6	2	2	2	2	1	1	6	4	5	5	8	7	225	210	9	8
Gujarat	41	41	35	33	24	22	306	306	38	38	35	33	36	35	321	298	168	148	189	175	4816	4180	243	239
Haryana	22	22	21	17	0	0	0	0	21	18	21	16	21	20	119	114	52	48	72	71	0	0	99	86
Himachal Pradesh	12	12	10	9	5	1	75	75	12	11	0	0	14	11	95	82	53	47	106	91	547	498	22	10
Jammu	6	6	6	4	9	5	41	40	6	6	6	3	6	4	47	39	18	18	0	0	831	346	10	7
Kashmir	6	6	6	6			57	57	6	6	3	3	6	6	57	57	21	21						
Ladakh	2	2	2	2	2	2	0	0	2	2	0	0	2	1	5	5	5	4	2	2			1	1
Jharkhand	24	24	24	18	8	1	202	202	24	20	24	19	24	16	207	150	101	75	168	135	1920	1297	74	52
Karnataka	31	31	34	32	6	4	0	0	33	33	33	33	30	28	284	269	149	142	224	211	0	0	298	264
Kerala	14	14	0	0	14	14	73	72	14	13	6	4	14	14	85	72	74	74	79	65			55	54
Lakshdweep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	3	0	0	0	0	0
Maharashtra	80	80	34	27	86	66	384	381	84	80	79	75	79	77	617	506	318	304	344	278	5340	4363	520	470
Manipur	16	13	0	0	1	1	13	13	9	9	9	8	9	8	27	19	19	16	23	19	0	0	8	8
Mizoram	8	8	0	0	0	0	1	0	8	8	8	6	8	8	14	12	9	9	7	7	0	0	4	4
Meghalaya	7	7	7	7	1	1	24	21	7	7	4	2	7	7	24	24	15	14	20	19	620	613	7	6
Madhya Pradesh	51	51	50	19	51	28	303	191	50	36	0	0	0	0	367	143	315	249	433	243	1799	1416	275	205
Nagaland	11	10	0	0	2	2	0	0	11	11	2	2	2	2	22	22	13	13	13	13	0	0	7	7
Odisha	31	31	31	27	9	4	245	244	31	30	31	28	31	30	318	300	109	85	156	90	1459	1260	64	61
Puducherry	1	1			1	1	7	6	1	1	0	0	1	0	7	5	5	5	4	4	123	121	9	8
Punjab	22	22	0	0	3	3	134	134	22	20	0	0	0	0	134	105	59	46	149	87	3169	3135	102	62
Rajasthan	34	34	34	23	36	32	283	263	34	28	34	29	34	24	338	242	152	118	67	22	4908	3950	90	43
Sikkim	5	5	5	4	0	0	5	5	5	4	5	4	5	5	5	5	5	5	5	5	43	43	1	1
Telangana	11	8	8	8	0	0	171	135	11	11	19	19	3	3	171	157	96	90	150	150	750	100	100	100
Tamil Nadu	31	31	36	27	22	14	461	461	38	35	38	33	36	32	462	434	146	114	491	267	2977	1860	375	343
Tripura	8	8	0	0	1	1	0	0	0	0	0	0	8	6	20	19	13	10	9	9	0	0	3	3
Uttar Pradesh	75	75	75	66	10	8	1168	1152	89	80	89	76	76	67	1197	814	584	368	1045	874	4448	2693	562	438
Uttarakhand	13	13	13	12	13	13	95	95	13	13	0	0	13	10	110	104	31	30	72	64	450	450	34	28
West Bengal	37	37	28	27	28	28	464	464	48	41	35	26	28	27	484	431	204	164	386	350	3950	2780	373	232

8.7 Medical College - Programme Staffing Status in 2021

State	TBHV-Medical College	TBHV-Medical College	LT – DMC (All sources)	LT – DMC (All sources)		MO – Medical College	MO – Medical College	LT – Medical College	LT – Medical College	Data Entry Opertaor	Data Entry Opertaor
	Sanctioned	In Place	Sanctioned	In Place		Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place
Andaman & Nicobar	1	1	26	26		0	0	0	0	0	0
Andhra Pradesh	23	21	610	512		22	6	25	18	13	13
Arunachal Pradesh	0	0	35	35		0	0	1	0	15	15
Assam	6	6	350	253		6	3	6	6	1	1
Bihar	11	5	858	585		11	2	11	2	38	33
Chandigarh	2	1	17	11		2	2	2	1	0	0
Chattisgarh	9	7	9	6		9	6	9	6	27	23
Dadra Nagar & Haveli Daman & Diu	0	0	11	11		0	0	0	0	0	0
Delhi	14	8	215	189		14	7	14	6	26	25
Goa	1	1	24	24		1	1	1	1	2	2
Gujarat	26	20	2097	2043		17	13	26	25	38	36
Haryana	9	8				9	4	5	5	21	21
Himachal Pradesh	7	7	218	198		567	490	120	85	12	12
Jammu	4	2	151	146		26	7	9	9	6	5
Kashmir										6	6
Ladakh	0	0	2	2		0	0	0	0	2	2
Jharkhand	3	3	415	365		3	3	3	3	24	24
Karnataka	0	0	0	0		37	34	0	0	31	31
Kerala	24	24				19	16	25	25	14	14
Lakshdweep	0	0	4	3		0	0	0	0		
Maharashtra	39	35	68	53		41	30	58	39	90	71
Manipur	2	2	23	19		2	1	2	2	9	9
Mizoram	0	0	0	0		0	0	0	0	8	8
Meghalaya	1	1	70	70		1	1	1	1	7	7
Madhya Pradesh	22	13	1177	944		27	8	50	43	51	51
Nagaland	0	0				NA	NA	NA	NA	11	11
Odisha	7	7	584	551		6	4	7	4	31	17
Puducherry	10	5	28	28		4	3	9	8	0	0
Punjab	9	8	268	208		9	8	9	8	22	18
Rajasthan	18	5	1415	1310		6	2	8	4	42	32
Sikkim	1	1	43	43		1	1 (Manipal)	1	1	1	0
Telangana	0	0	750	618		8	5	16	13		
Tamil Nadu	53	36	738	376		41	27	50	32	0	0
Tripura	2	2		59		2	1	2	1	8	7
Uttar Pradesh	36	26	2604	1869		36	16	40	23	89	81
Uttarakhand	4	4	153	138		0	0	4	4	13	12
West Bengal	27	14	945	896		15	9	27	13	38	34

9 NIKSHAY POSHAN YOJANA

STATES	TOTAL NOTIFICATION	BANK DETAILS AVAILABLE OF TOTAL NOTIFIED	BENEFICIARIES PAID AT LEAST ONE BENEFIT OF TOTAL NOTIFIED
Andaman & Nicobar Islands	516	510 (98.8%)	472 (91.5%)
Andhra Pradesh	87761	85701 (97.7%)	76593 (87.3%)
Arunachal Pradesh	2872	2635 (91.7%)	1032 (35.9%)
Assam	37732	32299 (85.6%)	26808 (71.0%)
Bihar	135485	107493 (79.3%)	62115 (45.8%)
CHANDIGARH	3243	3014 (92.9%)	202 (6.2%)
Chhattisgarh	32616	29066 (89.1%)	25120 (77.0%)
Dadra and Nagar Haveli and Daman and Diu	763	774 (101.4%)	729 (95.5%)
Delhi	84367	56734 (67.2%)	25504 (30.2%)
Goa	2038	1521 (74.6%)	1307 (64.1%)
Gujarat	141290	126315 (89.4%)	112156 (79.4%)
Haryana	71251	60107 (84.4%)	46094 (64.7%)
Himachal Pradesh	14797	15075 (101.9%)	14468 (97.8%)
Jammu & Kashmir	11005	9896 (89.9%)	6217 (56.5%)
Jharkhand	53177	43907 (82.6%)	21319 (40.1%)
Karnataka	71443	64503 (90.3%)	37542 (52.5%)
Kerala	22023	19591 (89.0%)	16075 (73.0%)
Ladakh	319	257 (80.6%)	211 (66.1%)
Lakshadweep	20	19 (95.0%)	18 (90.0%)
Madhya Pradesh	168247	158020 (93.9%)	144753 (86.0%)
Maharashtra	196620	155147 (78.9%)	91694 (46.6%)
Manipur	1873	1441 (76.9%)	79 (4.2%)
Meghalaya	4193	3096 (73.8%)	995 (23.7%)
Mizoram	1781	1738 (97.6%)	1052 (59.1%)
Nagaland	3687	2879 (78.1%)	1532 (41.6%)
Odisha	52148	50423 (96.7%)	47170 (90.5%)
Puducherry	1408	1214 (86.2%)	95 (6.7%)
Punjab	52077	41655 (80.0%)	16564 (31.8%)
Rajasthan	151034	126228 (83.6%)	84368 (55.9%)
Sikkim	1438	1273 (88.5%)	865 (60.2%)
Tamil Nadu	84933	77662 (91.4%)	70833 (83.4%)
Telangana	60929	52938 (86.9%)	42531 (69.8%)
Tripura	2776	2483 (89.4%)	1234 (44.5%)
Uttar Pradesh	464894	365561 (78.6%)	272837 (58.7%)
Uttarakhand	23574	20825 (88.3%)	13272 (56.3%)
West Bengal	91500	82668 (90.3%)	62450 (68.3%)
INDIA	**2135830**	**1804668 (84.5%)**	**1326306 (62.1%)**

10 Key Program Reviews done from the National level in the year 2021

Activity	Page
State Review under the Chair of AS(H)	02-10-2021
IDDS Project Review	02-12-2021
Review for Jan Andolan Activities under Hon'ble HFM	03/02/2021, 24/02/2021, 24/06/2021
TB Mukt Bharat Review under AS(H)	09/04/2021, 07/09/2021
Monthly progress review meeting of research projects under GFATM	28/05/2021
Review meeting to assess preparedness regarding implementation of Shorter oral BDQ-containing regimen	25/06/2021
World Bank Virtual Review Mission	08/07/2021, 09/07/2021,12/07/2021
Review of the States Performance	06/07/2021,11/08/2021,03/09/2021,14/10/2021,28/12/2021
Review meeting on setting of Milestones for SDG Indicators under Chairpersonship of AS&MD on 23rd July 2021-DDG & JD(RR)	23/07/2021
Review on Partnerships & PIP-MP	08-06-2021
NTEP performance Review under the Chairmanship of Hon'ble HFM	09-02-2021
Joint Supportive Supervision Mission Sensitization Meeting followed by State Visits	13/09/2021, 21/09/2021
Review & Orientation of STSU	16/09/2021, 17/09/2021
NTEP Review under the Chairpersonship of AS(H)	10-07-2021
Monthly Review of STSU	10-08-2021
NTEP Review under Hon'ble Minister of State for Health	13/10/2021
Hybrid Meeting - Review of Nikshay Aushadhi under the chairpersonship of DDG (TB)	28/12/2021

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