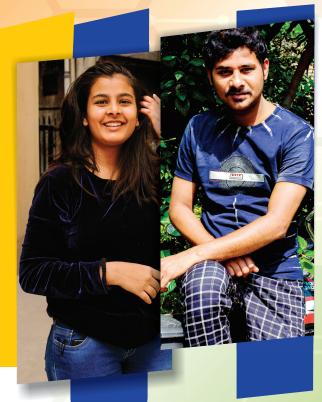


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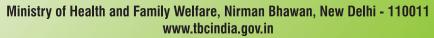




NATIONAL TUBERCULOSIS ELIMINATION PROGRAMME ANNUAL REPORT



## **Central TB Division**





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सबका साथ, सबका विकास, सबका विश्वास Sabka Saath, Sabka Vikas, Sabka Vishwas

## डॉ हर्ष वर्धन

## **Dr Harsh Vardhan**

रवास्थ्य एंव परिवार कल्याण, विज्ञान और प्रौद्योगिकी व पृथ्वी विज्ञान मंत्री, भारत सरकार

Union Minister for Health & Family Welfare, Science & Technology and Earth Science Government of India



## **FOREWORD**

It gives me great pleasure to note that annual India tuberculosis report 2021" is being released on 'World TB Day' the 24th of March 2021. The report highlights activities and progress made by "National Tuberculosis Elimination Program" (NTEP) - till date.

The NTEP is committed to provide free quality TB diagnosis through rapid molecular tests and free treatment with quality assured drugs to all TB and Drug Resistance-TB patients. The 'Nikshay Poshan Yojana' provides financial and nutritional support to TB patients and their families thereby preventing catastrophe during their fight against the disease.

In 2020 during the unprecedented pandemic of COVID-19 whole world witnessed unique unforeseen challenges but, we, in India, converted them into opportunities and the bi-directional screening for COVID-19 and TB emerged as a good initiative to capture TB cases during the pandemic.

The private sector is a critical partner in the fight against TB and has worked tremendously in provision of high-quality people-cantered care. We are using technology, adherence systems and knowledge sharing to improve this engagement and strengthen monitoring and surveillance.

With Zeal to eliminate Tb, we have initiated Jan-Andolan that needs innovative thinking and support from all stakeholders and I am confident that, every stakeholder will play a leadership role. All other Ministries and Departments within the Government are extending support for the cause.

I extend my good wishes and hope the information contained in the report will be useful to all engaged in Tuberculosis Elimination to End TB from India by 2025. Let's unite together to End TB!

(Dr. Harsh Vardhan)

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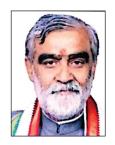


## अश्विनी कुमार चौबे Ashwini Kumar Choubey



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### संदेश

हर्ष का विषय है कि मैं आपके समक्ष वर्ष 2021 के लिए इंडिया टीबी रिपोर्ट पेश कर रहा हूँ। पिछले साल भारत को एक नहीं, दो महामारियों से लड़ना पड़ा है—टीबी और कोरोना। लेकिन कोरोना से लड़ते हुए भी टीबी से लड़ाई में हमारे हौंसले बुलन्द है। माननीय प्रधानमंत्री जी के मार्गदर्शन में भारत सरकार ने वर्ष 2024 तक भारत में टीबी को समाप्त करने का लक्ष्य निर्धारित किया है। इस लक्ष्य को पाने के लिए सिर्फ सरकार और डॉक्टर नहीं, बल्कि हर नागरिक का समर्थन चाहिए।

समाज और मरीजों की राष्ट्रीय क्षय रोग कार्यक्रम में भागीदारी बढ़ाने के लिए हमने पिछले साल नेशनल टीबी फोरम की स्थापना भी की है। कोरोना ने टीबी देखभाल में जो चुनौतियां पैदा की हैं हम उनसे भी लड़ेंगे। इसके लिए हम टीबी सेवाओं की आधारभूत संरचना को सशक्त और विकसित बनाएंगे। इसमें सभी भागीदारों—सरकार, मरीज, टीबी विजेता, समाज निजी क्षेत्र, मीडिया आदि का योगदान जरूरी है।

हम सभी प्रकार की टीबी के लिए गुणवत्तापूर्ण, संवेदनशील निदान और उपचार की सुविधा समाज के हर व्यक्ति तक पहुचाएंगे, खास तौर से उन पिछड़े इलाकों में जहां टीबी के मरीज ज्यादा है और स्वास्थ्य सेवाएं अविकिसत है। इसके लिए हम प्राइवेट सेक्टर से चल रही हमारी साझेदारी की पहुँच बढ़ाएंगे तािक टीबी सेवाएं नि:शुल्क और सुलभता से ज्यादा से ज्यादा मरीजों तक पहुंचे। जनता को टीबी के प्रति जागरूक करने के लिए हम जन जागरूकता अभियान भी चला रहे हैं।

मुझे ये बताते हुए खुशी है कि निक्षय पोषण योजना के माध्यम से 40.21 लाख टीबी मरीज को 1005.2 करोड़ रुपए से अधिक राशि वितरित की गई है। कोरोना महामारी के माहौल में हमने टीबी मरीजों को पोषण जैसी जरूरतों के लिए निक्षय पोषण योजना के माध्यम से धन राशि सही समय पर वितरित किया है और इस कार्यक्रम की पहुँच को बढ़ाई है।

में व्यक्तिगत रूप से सभी हितधारकों—टीबी विजेता, विकास सहयोगियों, समाजए सिविल सोसायटी, निजी क्षेत्र—से अनुरोध करता हूँ कि इस मुश्किल घड़ी में जब देश दो—दो स्वास्थ्य संकटों से लड़ रहा है, वो आगे आएं और क्षय रोग से संघर्ष में हमारे साथ जुड़े।

टीबी हारेगा देश जीतेगा।

(अश्वनी कुमार चौबे)

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**Message** 

The launch of the India TB Report gives us the opportunity to reflect upon the challenges faced in the past year and utilize the learning to pave the way forward and work towards Hon'ble Prime Minister's vision to eliminate TB by 2025.

The outbreak of COVID-19 earlier this year brought unprecedented stress on the country's health system. Several health programs including NTEP were repurposed to support India's response to the pandemic. The National TB Elimination Programme (NTEP) in particular, played a critical role, owing to their understanding and expertise in managing infectious diseases. Despite the diversion of human resources and diagnostic capacity from the program, the NTEP was quick to adapt to the changed environment to ensure that patients across the country had access to services including doorstep delivery of anti-TB drugs, despite restricted mobility.

In the early days of the nationwide lockdown, the NTEP issued directives to States to ensure dual screening of TB and COVID-19, intensifying case finding and scaling up digital adherence tools. It is important to note that the TB programme was one of the first to provide remote treatment adherence support to patients through the launch of the call-centre in a pilot project in 2014. The program's efficiency in adapting teleconsultations for TB care was a result of years of experience in deploying such innovative tools to ensure TB care is accessible to all.

These measures taken by the TB programme will go a long way in guiding other health programs as we look at strengthening our health services and expand access to affordable and quality care through landmark programs such as the Ayushman Bharat.

I would take this opportunity to thank all the NTEP programme officials and frontline workers who, over the last year, have shown great resolve in tackling COVID-19, while ensuring TB patients receive the care they require. It is now up to us, to follow the lead of the Honorable Union Health Minister and take a collective approach or a Jan Andolan to make India TB free.

TB Harega, DeshJeetega!

Place: New Delhi
Date: 05 January 2021

(Rajesh Bhushan)



आरती आहुजा भा.प्र.से अपर सचिव

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January 22, 20

#### **MESSAGE**

India's TB elimination programme has made great strides in the past few years and we are thankful to our Hon'ble Prime Minister for his leadership and guidance as we move towards our TB elimination target of 2025. Through this Annual India TB Report 2021, we seek to document the efforts made by the National TB Elimination Programme and the various strategies we undertook in an extremely challenging year, to provide quality services to each and every patient across the country.

Since the outbreak of the pandemic in our country, the TB programme faced several challenges with programme staff and diagnostic services being repurposed towards the COVID-19 response. Based on our prior learning and keeping in mind the odds faced by patients in accessing services, the National TB Elimination Programme formulated strategies to support state units in managing both the diseases. These strategies included initiation of bi-directional screening and testing for COVID-19 and TB, door-step delivery of drugs every month to ensure adherence to treatment, targeted messaging in regional languages to raise awareness on services available, intensifying case finding strategies, and expediting disbursal of pending payments under the Nikshay Poshan Yojana through DSC based payment.

The programme also launched the DBT manual aid to the NTEP's officers and personnel to improve and further streamline payment processes. Over 40.21 lakh patients received benefits under the Nikshay Poshan Yojana amounting to ₹ 1005.2 Crore.

To ensure all the above initiatives are well received by patients, it is extremely critical for the community to be regularly involved in the program. Last year, the government launched state and district TB forums to improve awareness of the program's initiatives and gather feedback from patients and survivor groups to improve services. Members of the forum have also helped raise awareness on TB and address the problem of stigma by engaging with a range of stakeholders including patients, health care workers and elected representatives including Sarpanchs. The programme has also worked on building the capacity of TB survivors to serve as TB 'champions' to help others in completing treatment successfully. Till November 2020, over 1500 TB champions have been empowered and mentored to support several TB patients. These efforts at the ground level will eventually create a Jan Andolan and pivot us towards our TB elimination goal.

I would like to take this opportunity to acknowledge the support of all state governments, and all our staff for their continued support in TB elimination.

Let's unite to End TB!







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विकास शील संयुक्त सचिव VIKAS SHEEL Joint Secretary



#### **MESSAGE**

This Annual Report 2021 of the National Tuberculosis Elimination Programme presents a comprehensive snapshot of the progress made by India in the fight against TB in 2020. This was a particularly challenging year for us, with the COVID-19 pandemic - this report records both the initial challenges we faced and our accelerated response. As always, the report also describes the overall achievements of the TB programme including data on key performance indicators, new policies, updates to diagnostics and treatment regimens and documents our enhanced engagement of the private sector and communities.

The COVID-19 pandemic posed significant challenges, and the Programme issued advance directives to ensure a continuity of TB services. We issued guidance to keep TB diagnostic labs open and made the use of Personal Protective Equipment by laboratory staff mandatory. We also made provision for ensuring uninterrupted supply of drugs to people with TB including door-to-door delivery. We instituted a regular mechanism of reviews with states and districts through virtual meetings, to take stock of developments in the field and respond in real time. Finally, we issued TB-COVID-19 bidirectional guidelines to implement rapid response measures for normalizing and expanding the coverage of TB services to pre-COVID-19 levels and beyond.

We are determined to overcome the initial setbacks of this year and remain committed to achieving TB elimination by 2025, as committed by our Hon'ble Prime Minister Shri Narendra Modi. In order to do so, we must reach the most number of people in the least possible time, and we will do this by effectively engaging the community at all levels and instituting accountability through measurable actions by individuals and agencies, both government and partners.

As we move towards a People's Movement, reaching the unreached and reaching them as early as possible remains a key challenge. This has been further made challenging by the COVID-19 pandemic, which lead to a temporary reduction in access to services and increasing stigma. We call on the print, digital and electronic media, who are key stakeholders in our fight against TB and COVID-19, to help in drawing public attention to both these diseases and to disseminate information about services as well as preventive measures.

I take this opportunity to acknowledge the support of all State Governments and partners for their continued support in helping us minimise the impact of the pandemic. I also urge all previously unengaged stakeholders to support this growing People's Movement and join hands to End TB in India.

(Vikas Sheel) (Joint Secretary, NTEP)

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**MESSAGE** 

The TB India Report 2021 is an annual publication from the Central TB Division (CTD) that places on records our activities and achievements in the last year. It has been a particularly significant, because the COVID-19 pandemic impacted our painstaking efforts since March, 2020. This has been the case not just in India but globally.

We began the year with a new name and identity – from the Revised National TB Control Programme to the National TB Elimination Programme – a name that reflects our commitment to eliminating TB in India by 2025. Despite the COVID-19 pandemic, we were able to identify and notify 18.05 lakh people with TB, including 31 per cent from the private sector (till the middle of December, 2020). We diagnosed and initiated on treatment regimen to 42,505 people in 2020 with Drug Resistant-TB.

For the team at CTD, we saw this year as a chance to convert a crises into an opportunity. We were able to integrate TB case-finding activities and COVID-19 preventive measures and thereby adopt joint efforts towards ending both the oldest disease known to humanity and reducing the impact of a new disease that we are still learning about every day. Bidirectional screening guidelines for TB and COVID-19 were issued, and are boosted by Active Case Finding in the community. TB screening among all people with COVID-19 and COVID-19 testing of all people on treatment for TB is underway. This is leading to a steady increase in OPD referrals and is being followed up through regular reviews with the States.

This year, we have expanded our efforts to sensitise and engage TB survivors through virtual meetings, with survivors from far-flung corners of the country joining in with enthusiasm. At the National TB Forum meeting, we heard first-hand from dedicated TB Champions on the challenges faced by affected communities as well as their efforts to address stigma associated with both TB and COVID-19. We are proud to have developed and disseminated for the first time a National Strategy to address Stigma associated with TB and are committed to make sure that every person with TB receives the highest quality of care.

The coming years are critical and require a holistic approach and intensified efforts at expanding access and improving the quality of services. I acknowledge and thank the dedicated efforts of every frontline health worker of the NTEP in India, whose determination and commitment to serving their communities remained steadfast despite personal risk. Together, we can End TB.

(Dr. Sudarsan Mandal)

"It's Time To End TB" TB Harega Desh Jeetega

## Acknowledgments

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- Dr. Sanjay K Mattoo, Joint Director, Central TB Division
- Dr. Raghuram Rao, DADG, Central TB Division
- Dr. Nishant Kumar, DADG, Central TB Division
- Dr. Ravinder Kumar, TB Specialist, Central TB Division
- All consultants of Central TB Division

# **ABBREVIATION**

ACSM Acsm Advocacy, Communication and Social Mobilization  AIDS Acquired Immune Deficiency Syndrome AIIMS All India Institute of Medical Sciences  ANSV Annual Negative Slide Volume ART Anti-Retroviral Therapy  ARTI Annual Risk of Tuberculosis Infection  ASHA Accredited Social Health Activist  CGHS Central Government Health Scheme  CHAI Clinton Health Access Initiative
AIDS Acquired Immune Deficiency Syndrome AIIMS All India Institute of Medical Sciences ANSV Annual Negative Slide Volume ART Anti-Retroviral Therapy Annual Risk of Tuberculosis Infection ASHA Accredited Social Health Activist CGHS Central Government Health Scheme
AIDS  Acquired Immune Deficiency Syndrome  AIIMS  All India Institute of Medical Sciences  ANSV  Annual Negative Slide Volume  ART  Anti-Retroviral Therapy  Annual Risk of Tuberculosis Infection  ASHA  Accredited Social Health Activist  Central Government Health Scheme
AIIMS  All India Institute of Medical Sciences  ANSV Annual Negative Slide Volume  ART Anti-Retroviral Therapy  Annual Risk of Tuberculosis Infection  ASHA Accredited Social Health Activist  CGHS  CGHS  Contral Government Health Scheme
AIIMS All India Institute of Medical Sciences  ANSV Annual Negative Slide Volume  ART Anti-Retroviral Therapy  ARTI Annual Risk of Tuberculosis Infection  ASHA Accredited Social Health Activist  CGHS Central Government Health Scheme
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ART Anti-Retroviral Therapy  Annual Risk of Tuberculosis Infection  ASHA Accredited Social Health Activist  CGHS Central Government Health Scheme
ARTI Annual Risk of Tuberculosis Infection  ASHA Accredited Social Health Activist  CGHS Central Government Health Scheme
ARTI Infection  ASHA Accredited Social Health Activist  CGHS Central Government Health Scheme
ASHA Accredited Social Health Activist  CGHS Central Government Health Scheme
CGHS Central Government Health Scheme
Scheme
Scheme
CHAI Clinton Health Access Initiative
CHAI Catholic Health Association of
India
CHC Community Health Centre
CTD Central TB Division
DALYs Disability Adjusted Life Years
DBS Domestic Budgeting Source
DBT Direct Benefit Transfer
<b>DDG</b> Deputy Director General
DGHS Director General of Health
Services
<b>DMC</b> Designated Microscopy Centre
DOTS Directly Observed Treatment
Short Course
DRS Drug Resistance Surveillance
<b>DRTB</b> Drug Resistant Tuberculosis
<b>DST</b> Drug Susceptibility Testing
DTC District Tuberculosis Centre
DTO District Tuberculosis Officer
<b>E</b> Ethambutol

ЕРТВ	Extra-pulmonary Tuberculosis
EQA	External Quality Assurance
FIND	Foundation for Innovative New Diagnostics
GFATM	The Global Fund to Fight against AIDS, Tuberculosis and Malaria
GMSD	Government Medical Store Depot
GoI	Government of India
Н	Isoniazid
HBCs	High Burden Countries
HIV	Human Immuno Deficiency Virus
HRD	Human Resource Development
ICMR	Indian Council of Medical Research
ICT	Information and Communication Technology
ICTC	Integrated Counselling and Testing Centre
IDSP	Integrated Disease Surveillance Project
IEC	Information, Education and Communication
IMA	Indian Medical Association
IPT	Isoniazid Preventive Therapy
IRL	Intermediate Reference Laboratory
JMM	Joint Monitoring Mission
KAP	Knowledge, Attitude and Practices
LT	Laboratory Technician
MDGs	Millennium Development Goals
MDRTB	Multi Drug Resistant Tuberculosis
MIS	Management Information System
МО	Medical Officer
MoHFW	Ministry of Health and Family Welfare

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мотс	Medical Officer-Tuberculosis		
MOTO	Control		
MoU	Memorandum of Understanding		
NACO	National AIDS Control Organisation		
NACP	National AIDS Control Programme		
NCDC	National Centre for Disease Control		
NEP	New Extra Pulmonary		
NGO	Non-Governmental Organisation		
NIRT	National Institute of Research in Tuberculosis		
NJIMOD	National Jalma Institute of Mycobacterial and Other Diseases		
NRHM	National Rural Health Mission		
NRL	National Reference Laboratory		
NSN	New Smear Negative		
NSP	New Smear Positive		
NSP	National Strategic Plan		
NTF	National Task Force		
NTI	National Tuberculosis Institute		
NTP	National Tuberculosis Programme		
NTEP	National Tuberculosis Elimination Programme		
NUHM	National Urban Health Mission		
OR	Operational Research		
OSE	On-Site Evaluation		
PATH	Programme for Appropriate Technology in Health		
PHC	Primary Health Centre		
PHI	Peripheral Health Institution		
PLHIV	People Living with HIV and AIDS		
PP	Private Practitioner		
PPM	Public-Private Mix		
PSU	Public Sector Unit		
PTB	Pulmonary Tuberculosis		

PWB	Patient-Wise Box			
QA	Quality Assurance			
R	Rifampicin			
RBRC	Random Blinded Re-Checking			
RCH	Reproductive and Child Health			
	Revised National Tuberculosis			
RNTCP	Control Programme			
S	Streptomycin			
SDGs	Sustainable Development Goals			
SDS	State Drug Store			
SHGs	Self Help Groups			
SOP	Standard Operating Procedure			
SPR	Slide Positivity Rate			
STC	State TB Cell			
STDC	State Tuberculosis Training &			
SIDC	Demonstration Centre			
STF	State Task Force			
STLS	Senior TB Laboratory Supervisor			
STO	State TB Officer			
STS	Senior Treatment Supervisor			
TB	Tuberculosis			
The	International Union Against			
Union	Tuberculosis and Lung Disease			
TU	Tuberculosis Unit			
UDST	Universal Drug Susceptibility Test			
UHC	Urban Health Coverage			
UNOPS	United Nations Office for Project			
	Services			
USAID	United States Agency for International Development			
WHO	World Health Organization			
WVI	World Vision India			
XDR-TB	Extensively Drug Resistant TB			
Z	Pyrazinamide			
ZTF	Zonal Task Force			

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# **EXECUTIVE SUMMARY**

lobally, the year 2020 witnessed a sweeping COVID-19 pandemic devastate lives, economies, health systems and public health programmes across the world with record-breaking speed. In just a few months, the pandemic reversed years of progress made in the fight against TB. The onset of the pandemic in March triggered lockdowns, restrictions in movement, near complete closure of OPD services in public as well as private sector, repurposing of available NTEP and health system resources, infrastructure, diagnostics, treatment centers and manpower to fight Covid-19, disrupted ongoing TB elimination efforts and services all over the country.

Between January and February 2020, the National Tuberculosis Elimination Programme (NTEP) was on an up-hill trajectory notifying more than 4,11,000 patients, ~6% more than in the corresponding months of 2019. The national lockdown imposed in March and April resulted in tumbling notifications by 38% (44% in private notifications) and NTEP worked hard to mitigate the impact of COVID-19 and regain the lost momentum. The key components of NTEP's response plan included the integration of TB and COVID-19 bi-directional screening strategy, laboratory services, diagnostic and treatment capacity upgrades and procedures for co-located testing for TB (among COVID-19 patient as well as ILI/SARI patients) and testing for COVID-19 (among notified TB patients) were introduced at most health centers and hospitals to augment surveillance and TB case finding efforts apart from a plethora of periodically updated advisories, directives, and guidance documents issued to the states. Covid-19 testing among TB patients was also undertaken and notified in Nikshay. The national TB prevalence survey resources were also re-purposed and optimally utilized to conduct three rounds of national SARS-cov-2 sero-surveillance by ICMR

in India. A large capacity of Nikshay Sampark (national TB call center) was also re-purposed to serve as COVID-19 helpline.

At the community level, large scale active TB case finding was launched with massive screening and testing in a campaign mode, engaging health outreach workers and community volunteers to facilitate surveillance of symptoms within households, the collection of sputum samples, consulting with residents through phone and video apps and supply of medicines to people at home. Contact tracing systems and testing for TB linked to COVID-19 contact tracing were quickly set up throughout the country. Private sector TB care facilities reopened, call centres were fully activated, digital tools were rolled out, home delivery of monthly medicine stock to help patients stick to treatment regimens, along with support like direct cash transfers and supplementary food provisions were delivered to people's home.

With these mitigation measures and catch-up campaigns, by December 2020, NTEP had almost closed the gap on TB treatment enrollment with a total of 18,05,670 patients notified, 11% more than the estimated projections made in April. A quarter of these were detected through active TB case-finding. The private sector too contributed notification of 5.49 lakh patients (31% of total notifications), 3% more than in 2019.

The National Strategic Plan (NSP 2017-25) for ending TB has framed appropriate strategies under the broad themes of Prevent, Detect, Treat and Build pillars for universal coverage and social protection. In response to the Prime Minister's call, some Districts/ States/UTs are already in an advanced stage of progress to achieve end TB targets, the NTEP has initiated Sub-National Certification of District/State/UT this year for achieving "Progress towards TB Free Status" under Bronze, Silver and Gold

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categories measured with graded milestones of decline in TB incidence compared to 2015 levels upon independent verification by a national team comprising of National Institute of Epidemiology, WHO India and Indian Association of Preventive and Social Medicine. The States/UTs of Kerala, Lakshadweep, Puducherry have already claimed TB Free Status with another 67 districts across India laying claims under various categories.

With the deployment of additional machines for rapid molecular testing for TB and Drug Resistant TB (DR-TB) in 2020, a total of 3,147 NAAT machines are now available to the NTEP with over 29.84 lakhs tests performed. An additional 3,14,570 first line LPA, 58,239 second line LPA and 2,85,773 liquid culture tests were performed.

NTEP initiated transition to replace smear microscopy with upfront molecular testing using NAAT for diagnosis of TB at 8,000 highworkload TB diagnostic centers (TDCs). In addition to the 87 Culture & DST laboratories certified by NTEP, 18 new laboratories are being developed with 28 laboratories being upgraded with LPA facility. Liquid culture-based DST has been expanded to Linezolid and Pyrazinamide across India and DST capacities are being built for Bedaquiline, Delamanid and Clofazimine at NRLs. NTEP is in the process of developing automated solutions using Artificial Intelligence for LPA result interpretation through Machine Learning (ML).

Despite the pandemic, 18,05,670 TB patients were put on treatment during t2020 which is 95% of total patients notified, the same as last year. There were also marked improvements in HIV testing in TB patients, universal drug susceptibility testing (UDST), treatment success rate and chemoprophylaxis, reflecting the NTEP's resolve for public health action. In 2020, 67% of total notified TB patients were offered UDST, treatment success rate (82%) and chemoprophylaxis (34%) reflecting the NTEP

resolve for public health action NTEP has been implementing the policy of UDST for all notified TB patients since 2018.

Till the end of the year, 793 DR-TB centers were made functional to offer decentralized Drug Resistant TB (DR-TB) treatment services which include 173 Nodal DR-TB centers. decentralization empowers districts to minimize the gap between diagnosis and treatment, reduce cost of travel and expedite early care of MDR/RR-TB patients within their respective districts. The access of injection free longer oral MDR-TB regimen with new drugs was expanded in all States/UTs in India. During 2020, 49,679 MDR/RR-TB patients were diagnosed and 42,505 (86%) were put on appropriate treatment. This included 21,613 M/XDR-TB patients who were put on longer oral MDR-TB regimen between January and December 2020. For early detection of HIV among presumptive TB patients, provider initiated testing and counseling (PITC) strategy is being implemented across the country. More than 8 lakh PLHIV have been tested with NAAT and >92% of notified TB patients having been screened for HIV. Under the TB-Diabetes collaborative services, 86% of the DMCs are now co-located with diabetes screening facility. 82% of all notified TB patients have been screened for diabetes in 2020.

Nutritional support is always considered a good adjuvant therapy for TB patients. The Government of India provides financial support to all TB patients for their nutrition needs under the Nikshay Poshan Yojana (NPY) through Direct Benefit Transfer (DBT) into the bank account of the beneficiary since 2018. The NTEP is one of the first health programs in India to use DBT to transfer monetary benefits to eligible patients and providers at this scale. Till December 2020, the NTEP has cumulatively disbursed Rs. 1005.2 Crores to 41.2 lakh beneficiaries.

Gender differences and inequalities play a significant role in how men, women and

transgenders access and receive healthcare in the public and private sectors. India is one of the first countries to adopt the Communities, Human Rights and Gender Tools developed by the Stop TB Partnership. This year, the NTEP has developed a National Framework for A Gender-Responsive Approach to TB. The framework aims for equitable, rights-based TB services for women, men, and transgender persons and to mobilize, empower and engage them in the TB response at the health systems and community levels. The NTEP has also, along with the Maternal Health Division, developed a framework with strategies to reduce morbidity and mortality due to TB in pregnant women and newborns through prevention, screening for early detection and prompt management of TB in pregnant women and achieve optimum at natal and perinatal outcomes.

Nikshay serves as a national online individual patient based TB notification and information management system for both Public and Private sectors and for forms of TB along the patient lifecycle. This year Nikshay was completely integrated with the PFMS system and is now updated with the latest PFMS Bank Master on a real time basis. Batch rejections have reduced to near zero and reconciliation process between Nikshay and PFMS has increased the efficiency of the DBT processes. 2020, about 500 districts have moved to DSC based approvals in PFMS. Work is ongoing on integrating Nikshay with SOCH (Strengthening Overall Care for HIV beneficiaries) and with the AB-HWC-CPHC portals. In 2020, NTEP also transitioned to NIKSHAY based monitoring of DR-TB for case holding, interim and treatment outcome reports, while the case finding report is expected to be included in NIKSHAY by the second quarter of 2021.

The NTEP strives to ensure an uninterrupted supply of quality assured anti-TB drugs to every TB patient diagnosed in the country. Strict vigil and supervision were maintained for all anti

TB drugs at National/ State/ District/ Subdistrict levels to avoid delay and interruptions in treatment.

cannot be eliminated without active participation from all stakeholders. Advocacy efforts with the corporate and industry sectors is aimed at spreading awareness on TB as a curable disease (both in employers and employees), maintaining a stigma and discrimination free environment at the workplace and encouraging the private sector to increase resources to combat TB, ultimately, improving TB health outcomes. NTEP in partnership with the Confederation of Indian Industry launched a 3-year long pan-India 'TB Free Workplaces Campaign' to engage the business leadership and provide a forum for convergence for the industry's response to TB, while safeguarding economic productivity and ensuring a healthier more productive workforce. Furthermore, the NTEP along with the USAID and The Union has launched the "Corporate TB Pledge" to provide the private sector an opportunity to join the fight against TB. Modalities for incorporation of TB related activities in all Red Ribbon Clubs nation wide has been finalized in collaboration with NACO. In October 2020, a joint letter by the JS (NTEP) and JS (NACO) was issued to all States/ UTs advising them to start making use of this platform to harness the potential of these youth by equipping them with correct information on TB Prevention, Care and Support and Treatment and build their capacities as peer educators and change agents in spreading messages on positive health behaviours.

A community-led response for TB has been incorporated as one of the key strategies to reach the un-reached and to support TB patients through their treatment and recovery phase. The National TB Forum was reconstituted in 2020 with civil society representative and ICMR representative as co-chairs. Equal representation was ensured from line ministries namely Ministry of Rural Development, Ministry

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of Panchayati Raj, Ministry of Social Justice & Empowerment, Ministry of Health & Family Welfare, departments, civil societies, affected community, academician, media, subject experts, etc. By end of 2020, TB Forums are constituted in all States and Districts with most of them convening their meetings and discussing various issues. A national level standardized training curriculum for empowering TB Survivor to TB Champions was developed and 180 TB survivors were trained as TB Champions using the 3-day training curriculum. Considering the limitation on conducting physical trainings due to COVID-19 restrictions, a 3-hour online module for TB survivors was designed and ~1500 TB survivors were sensitized on engagement with NTEP using this module.

India has shown considerable progress in terms of providing standards of TB care in the last decade. Empirical evidence suggests that a very large number of patients seek private care, which, if not more, is equal to the share seeking care in the public sector. Over the past few years, the NTEP has seen a significant increase in notification from the private sector. Patient Provider Support Agencies (PPSAs) through domestic budgetary resources were approved for a total of 266 districts in 19 states. Most states and districts continued to use the existing 22 Schemes prescribed under the National Partnership Guidelines (2019) to expand services through partnership with NGOs and Private Providers. Through the available modalities, 484 NGOs and Private Provider engagements were made countrywide across the 22 schemes.

On 24<sup>th</sup> November 2020, the Honourable Union Minister for Health & Family Welfare called for a people's movement - "TB Mukt Bharat" in the form of a Jan Andolan to make 2021 the year for TB and accelerate activities to achieve India's target of ending TB by 2025 (five years ahead of SDG 2030 targets). It is envisaged to engage all 1.3 billion people of this country, to take

ownership of the programme complemented by preventive, diagnostic and curative aspects of TB, demand generation, multi-sectoral engagement, community ownership and mobilization while engaging with the media regularly, both nationally and regionally to amplify the people's movement. Several development partners working in the field of TB care and management in the country has come forward committing active participation for strengthening collaboration and support to NTEP.

While COVID-19 has resulted in setbacks for TB elimination efforts, but as a silver lining to every dark cloud, it has also provided the chance to revisit and structurally redesign the public health infrastructure/system in our country. Dedicated Infectious Disease Hospitals being established as part of the pandemic preparedness and response, would contribute significantly to TB care and management. Ramping up of molecular diagnostic capacities across the country will ensure decentralized TB diagnosis. Renewed focus on infection control will alter transmission dynamics, particularly in health facilities. COVID-19 appropriate behavior acquired during the pandemic such as cough hygiene, use of masks, physical distancing, when sustained, will further contribute to reducing transmission of all respiratory illnesses including TB. Adoption of technology and use of online platforms for trainings, meetings and reviews will allow staff getting better adapted to the use of these modalities. The increased uptake of telemedicine and teleconsultations during the pandemic will provide additional channels of consultation on tuberculosis.

Marching ahead, let us truly make sure 2021 is the year in which TB response rebounds stronger and charges forward towards ending TB in India in the next four years as the clock is ticking.

# Structure of National Tuberculosis Elimination Programme

# **CHAPTER 1**



Review meeting on TB Jan Andolan under Chairmanship of Hon'ble Minister of Health & Family Welfare on 13<sup>th</sup> February 2021



# Structure of National Tuberculosis Elimination Programme

# **CHAPTER 1**

Programme is a Centrally Sponsored Scheme being implemented under the aegis of National Health Mission with resource sharing between the State Governments and the Central Government.

#### A. National Level

At the national level, the National TB Programme Elimination **ferstwhile** Revised National TB Control Programme) is implemented by the Central TB Division (CTD), Ministry of Health and Family Welfare (MoHFW). The Additional Secretary & Director General (NTEP) is overall in-charge of the programme supported by a Joint Secretary. The Deputy Director General-TB (DDG-TB) is the head of the CTD, leading technical implementation of the programme. The DDG is supported by Addl. DDG, Joint Director, Dy. Directors and Sr. Specialists to manage various areas of programme activities.

The Programme is supported by national level institutes, ICMR and its organizations, thematic national expert groups and committees.

#### a. Committees at National Level

Altogether 15 committees have been constituted at national level to provide technical guidance for programme implementation as under:

1. National Technical Expert Group (NTEG) on Diagnosis: provides expert advice to the programme on diagnosis of all forms of TB including Paediatric, Extra-pulmonary and

Drug-Resistant TB (DR-TB). It is aimed at offering regular update on diagnostic policies in line with international guidelines for TB care and WHO recommendations for TB including DR-TB to public as well as private sector.

- 2. National Technical Expert Group on Treatment: NTEP has expanded its scope of activities and treatment regimens multi-fold in past several years. WHO guidelines are rapidly changing for the management of TB & DR-TB. NTEG for treatment of Tuberculosis under NTEP provides expert advice to the programme for management of all forms of TB.
- 3. National Laboratory Coordination Committee (NLCC): is constituted with representatives of the six NTEP's National Reference Laboratories (NRLs), CTD, WHO-India and other partners as its members. This committee works as a task force to guide and oversee laboratory related activities of the programme.
- 4. National TB-Comorbidity Coordination Committee: Constituted under the chair-personship of Secretary (Health & Family Welfare), Co-Chair by AS & MD (Health & Family Welfare) and AS & MD (Health & Family Welfare), MoHFW with the objective of strengthening co-ordination mechanisms, scaling up of activities aimed at minimizing mortality and morbidity, review implementation of joint TB-HIV, TB-DM, TB-COPD,

TB-Tobacco, TB-Nutrition and other co-morbidity activities with NACP, NPCDCS, National Tobacco Control Programme, WCD and other relevant programs co-ordination.

- 5. **National** Technical working group on Latent TB Infection management Committee: formalized under the Chairpersonship of Dr. Randeep Guleria (Director, AIIMS New Delhi) with the aim to review the existing guidelines, prepare and finalize a technical and operational guideline. It will contribute to regular updating of the evidence based, national policy and guidelines and also to identify and prioritize research needs and oversee implementation of guidelines for diagnosis and treatment of Latent TB Infection (LTBI) in India.
- National Technical expert group on **Pediatric TB:** Committee established under the Chairpersonship Varinder Singh (Director Dr. Professor, Dept of Pediatrics, LHMC, New Delhi) with the goals of finalizing the revised guidelines, contributing to regular updating the evidence based national policy and guidelines, identifying and prioritizing research needs and oversee implementation of the guidelines for Pediatric TB management under National TB Elimination Programme.
- 7. Technical expert committee on TB in Women including Gender issues Committee: instituted under the Chairpersonship of Dr. Ashok Kumar (Ex. Addl. DGHS, Chairperson) with the purpose of finalizing

- collaborative framework for TB in Women in India, rolling out gender-responsive approaches to TB and identifying research needs in the above areas
- National Task Force for Medical Colleges: A National Task Force has been formed for effective implementation of National TB Elimination Programme in Medical Colleges. DDG (TB) is the Member Secretary of the NTF and the members are from CTD, each Zonal Task Force, the National Institutes and WHO. The main task of NTF is to provide leadership and advocacy, coordination, monitoring, and policy development on issues related to the effective involvement of medical colleges in National TB Elimination Programme.
- National **Operational** Research Committee (NORC): The Standing Committee National under the Chairmanship of Dr. Reddy comprises individuals and institutional members, including heads of prominent institutes and eminent persons from the Centers of Excellence in the field of medicine and research, CTD and technical agencies. This committee provides technical guidance to CTD on the National TB Elimination Programme Operational Research (OR), provides expertise to identify OR priority areas for commissioned research. They also serve on panels of experts for the review of commissioned research activities and technically review and approve proposals submitted by State/Zonal OR Committees to the National Level

- 10. National **Technical** Working Group (NTWG) on Private Sector **Engagement:** The NTWG Chaired by Prof. A. Venkatraman comprises individuals and institutional members, and eminent persons from the field of public-private partnership, management, private sector, CTD and technical agencies. This committee provides technical guidance to CTD on the public-private partnership, provides expertise to develop strategies for reaching to TB patients who seek care outside public sector.
- 11. Technical Working Group on NTEP-Corporate Hospitals Laboratories Collaboration: Under the Chairpersonship of Dr. Naresh Trehan. Founder & Chairman-Medanta Hospitals, this TWG aims to improve the collaboration between NTEP and the various chains of Corporate Hospitals and Laboratories, to enhance notification from the private sector, and extend public health action to patients seeking care from these institutions. The first meeting of the TWG was held on 20th January 2021 and a draft roadmap was prepared for End TB efforts by all participating members.
- **12.** National Forum of Professional Association working in Health (NFPA-H): A National Forum of Professional Association working in Health (NFPA-H) has been constituted under the Chairpersonship of Shri Vikas Sheel, Joint Secretary (Policy & NTEP) for collaboration with different professional associations working in the health sector. It

- includes members from various professional associations such as Indian Medical Association (IMA), Federation of Obstetricians and Gynaecologists of India (FOGSI), Indian Association of Preventive and Social Medicine (IAPSM), Association of Physicians of India (API), Indian Pharmaceutical Association (IPA) e.t.c. The forum advice MoHFW/CTD and associations in developing mechanisms to streamline TB case notifications and compliance to the Gazette Notification for mandatory notification of TB cases
- plan of meaningful involvement of community and civil society "National TB Forum" has been constituted under the Chairpersonship of the Secretary, HFW, Government of India, for engagement of community and civil society for increasing participation of community at large in TB control programme, to reach the unreached and to support TB patients in the course of their illness through a community-based response.
- 14. Inter-ministerial Co-ordination Committee for TB Elimination:
  Committee has been formed to forge convergence at policy, programme and implementation level across various ministries of the government for an accelerated multi-sectoral response towards Ending TB.
- **15. National ACSM Committee:** ACSM committee composed of experts in the field of mass communication, journalism and has vast experience in the field of TB and other related

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field. The committee has been constituted to provide inputs on creatives developed under Advocacy Communication & Social Mobilization.

#### **B. State Level**

At the State level, The Principal Secretary (Health) assisted by Mission Director (NHM) is responsible for programme implementation in the State. The State Tuberculosis Officer (STO) is responsible for the planning, training, supervising and monitoring of the programme. The STO, based at the State TB Cell (STC), coordinates with the CTD and the respective districts for execution of their duties with regards to NTEP.

The State TB Cells (STC) has been provided with contractual staff in addition to the general health system staff, to carry out its functions. It includes Medical Officer STC, Assistant Programme Officer, State HIV-TB Coordinator, State DR-TB Coordinator, State PPM Coordinator, State IEC Officer, Technical Officer for Procurement and Logistics, State Accountant, and NIKSHAY Operator.

The State TB Training and Demonstration Centres (STDCs) support the STC in most of the larger states. State Drug Store (SDS) has been established for the effective management of anti-TB drug logistics.

At the state level, the STC is supported by the State TB Forums for community engagement, State level Programmatic Management of Drug-Resistant TB (PMDT) committee for implementation guidance and review of PMDT, State level Technical Working Group for TB comorbidities. Nodal Drug Resistant TB centres are established for management of DR-TB with newer drugs, adverse drug reactions

and as referral unit.

#### C. District Level

The district is the key level for the management of the primary health care services. The Chief District Health Officer (CDHO)/Chief District Medical Officer (CDMO), or an equivalent functionary in the district, is responsible for all medical and public health activities, including TB control. The District Tuberculosis Centre (DTC) is the nodal point for all TB control activities in the district. The District TB Officer (DTO) at the DTC has the overall responsibility of managing of NTEP at the district level as per the programme guidelines and the guidance of the District Health Society. The DTO is assisted by contractual staff provided by NTEP which includes District Programme Coordinator, District PPM Coordinator, District DR-TB and HIV-TB Coordinator, District NIKSHAY Operator.

# D. Sub-District Level (Tuberculosis Unit Level)

Tuberculosis Unit (TU) is a programme management unit at the block level. The TU consists of a designated Medical Officer-Tuberculosis Control (MO-TC) who does TB work in addition to other responsibilities. There are also full-time NTEP contractual supervisory staffs exclusively for tuberculosis work - a Senior TB Treatment Supervisor (STS), a Senior TB Laboratory Supervisor (STLS) and a TB Health Visitors in urban areas.

## E. Primary Health Centre (PHC):

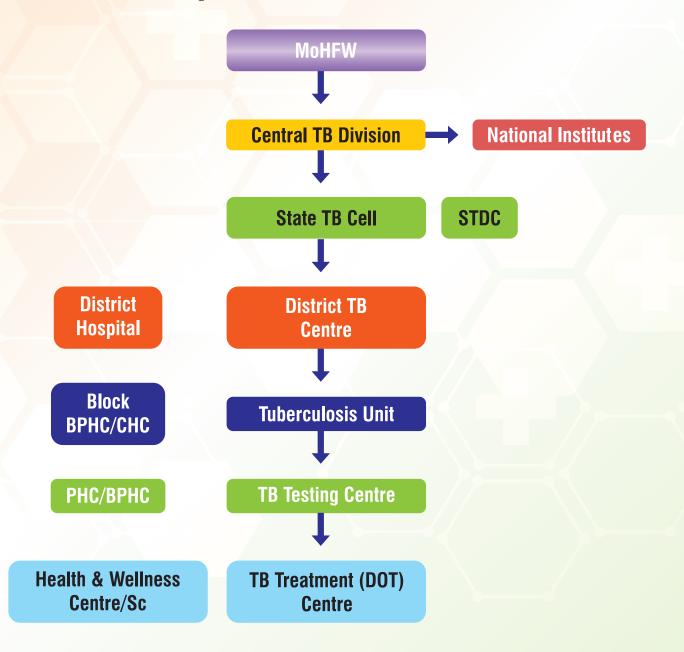
PHC is a service delivery unit with a Medical officer (MO) who takes care of the diagnosis and treatment of TB. The MO along with his team of CHOs, ANMs, LTs and ASHAs are responsible for all public health actions like

contact tracing, co-morbidity screening, DBT and linkages to other programs as required.

### F. Health and Wellness Centre (HWCs):

HWCs serve as the fulcrum of Comprehensive Primary Health Care and support system, for planning, delivery and monitoring services for the defined catchment population. The services at the HWC level includes early identification, basic management, counselling, ensuring treatment adherence, follow up care, ensuing continuity of care by appropriate referrals, optimal home and community follow up, health promotion and prevention for the expanded range of services. Community Health

Officer (CHO) is available in the HWCs is supported by ANMs, MPWs and ASHAs. Organogram of National TB Elimination Programme

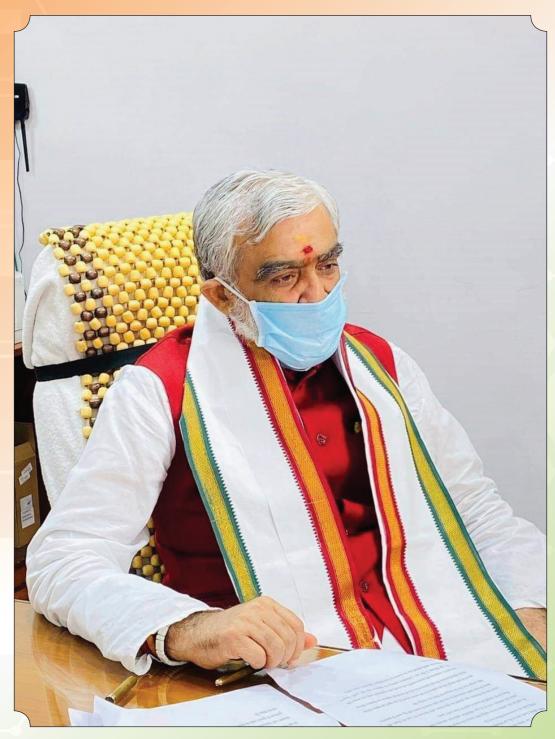


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# **Burden of TB in India in the year of The Pandemic**

# **CHAPTER 2**



Hon'ble Minister of State, Ministry of Health & Family Welfare is addressing in Confederation of Indian Industries (CII) initiatives for TB Free workplaces.



# **Burden of TB in India in the year of The Pandemic**

# **CHAPTER 2**

#### Introduction

Over the recent years, India had been successfully inching its way towards bridging the gap between the WHO estimated number of *incident* (*new + relapse*) TB cases and the number of incident TB cases notified by the National TB Elimination Programme (NTEP). The scale of achievement over the last five years is depicted as under-

about 6% more than the notifications in the corresponding months of the previous year.

However, the unprecedented COVID-19 pandemic derailed the momentum gained by the TB programme and like all other national programs, the routine TB related services were adversely affected across the country due to covid containment measures.

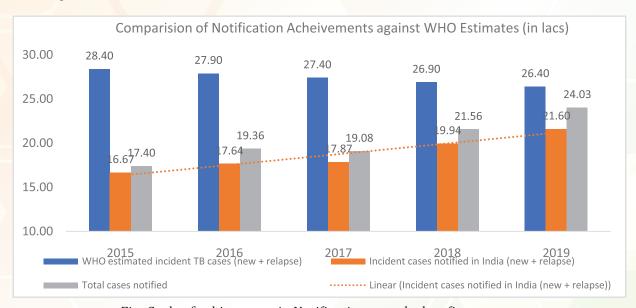


Fig-Scale of achievement in Notification over the last five years

In 2019, the NTEP achieved a notification rate of ~159 TB cases / lakh population against an estimated 199/lakh. Although the NTEP missed notifying around 2,40,000 cases of the estimated 26,40,000 incident cases of TB in 2019, the number of missing cases is significantly lower than the missing millions of the previous years.

The year 2020 began with a renewed vigour and an ambitious target of notifying 29,99,000 Total cases was fixed. With focussed efforts, the NTEP managed to notify 4,11,242 Total TB cases in the first two months itself – which was

### **Notification Status**

In 2020, after the initial 2 months of pandemic (March and April) TB notifications decreased by 38%, as compared to January and February. The National TB Elimination program, known for its robust systems and programmatic resilience, responded promptly and managed to put in place systems to overcome the gaps. As a result, TB case notifications started picking up and by the end of 2020, a total of 18,05,670 cases could be notified, a rise of 11% from the projections made around April end.



Fig- Comparison of Month-wise TB Notification between 2019 and 2020

Private Notifications were more affected than the Public Notifications during the lockdowns with 44% plunge in March and April, compared to January and February. However, after gradual recovery, Private Notifications picked up and by the end of the year 31% of total Notifications could be attributed to the Private sector, a clear increase by 3% than 2019.

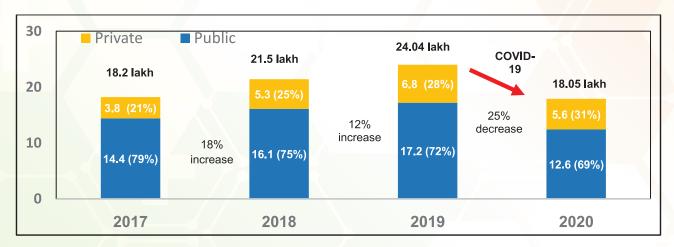


Fig- Notification Progress (Public and Private) over the years

Apart from Ladakh, Lakshadweep, Mizoram and Sikkim, all states and UTs showed a decrease in TB Notification rates in March and April compared to January and February 2020. Since May 2020, states took rigorous steps to increase TB case Notification through Active Case Search and TB-COVID bi directional screening. Most of the states were successful in showing an increasing trend towards TB Notification.

## Table showing the fall and rise of TB notification across states and UTs during 2020

# (% decrease and increase in last 2 columns has been calculated on average notifications for 1 month for the period mentioned)

STATES AND UTS	TOTAL Notification Jan - Feb 2020	TOTAL Notification Mar - April 2020	TOTAL Notification May - Dec 2020	% DECREASE BETWEEN B and A	% INCREASE BETWEEN C and B
	A	В	C	D allu A	C allu D
Andaman & Nicobar	111	61	306	45%	20%
Andhra Pradesh	15972	8976	39117	44%	8%
Arunachal Pradesh	452	403	1667	11%	3%
Assam	7787	5365	22106	31%	3%
Bihar	21945	10832	66217	51%	35%
Chandigarh	1109	660	2525	40%	-5%
Chhattisgarh	7253	5447	16644	25%	-31%
Dadra& Nagar Haveli & Daman &Diu	250	174	541	30%	-29%
Delhi	18748	12866	55230	31%	7%
Goa	353	258	1049	27%	2%
Gujarat	28763	17664	74131	39%	5%
Haryana	12511	9858	40341	21%	2%
Himachal Pradesh	2666	2098	8659	21%	3%
Jammu & Kashmir	2103	1373	5354	35%	-3%
Jharkhand	9659	5835	30008	40%	22%
Karnataka	15848	10629	39308	33%	-8%
Kerala	4506	3230	13096	28%	1%
Ladakh	37	43	159	-16%	-8%
Lakshadweep	1	3	16	-200%	25%
Madhya Pradesh	31207	18217	88220	42%	17%
Maharashtra	37551	24649	97459	34%	-1%
Manipur	430	207	926	52%	11%
Meghalaya	839	686	2614	18%	-5%
Mizoram	439	444	1451	-1%	-22%
Nagaland	747	477	2263	36%	16%
Odisha	9010	7607	29009	16%	-5%
Puducherry	789	475	1498	40%	-27%

STATES AND UTS	TOTAL Notification Jan - Feb 2020	TOTAL Notification Mar - April 2020	TOTAL Notification May - Dec 2020	% DECREASE BETWEEN B and A	% INCREASE BETWEEN C and B
	A	В	С	D allu A	C and D
Punjab	9837	7276	29084	26%	0%
Rajasthan	27787	17970	91588	35%	22%
Sikkim	254	291	781	-15%	-49%
Tamil Nadu	18297	10251	41753	44%	2%
Telangana	14033	9153	40023	35%	9%
Tripura	423	351	1297	17%	-8%
Uttar Pradesh	87684	43445	235580	50%	26%
Uttarakhand	4330	3141	12529	27%	0%
West Bengal	17511	12692	48833	28%	-4%
TOTAL	411242	253107	1141382	38%	11%

Over half of the total notifications are contributed by the five states namely Uttar Pradesh (20.30%), Maharashtra (8.84%), Madhya Pradesh (7.62%), Rajasthan (7.61%) and Gujarat (6.68%).

### **Transfers of persons with TB after Notification**

Nikshay, the surveillance tool of NTEP has helped the programme to understand the movement of persons having symptoms of TB as well as make comparative analysis in terms of care seeking behaviour (with respect to diagnosing location) with previous years when there was no COVID-19 pandemic. Delhi (456 / lakh), Chandigarh (366 / lakh) and Puducherry (185 / lakh) still had the highest TB Notification rates. These states /UTs mainly provide diagnostic services to population beyond their borders.

Type of Transfer	Notified	% of total number notified
No Transfer	841830	47%
Inter TU within district	419241	23%
Inter PHI within TU	336021	19%
Inter district within State	172034	10%
Inter State	36544	2%
Total	1805670	

In addition to Delhi, Chandigarh and Puducherry, only 7 other states/UT, Dadra & Nagar Haveli, Goa, Gujarat, Karnataka, Telengana, Maharashtra, Orissa have diagnosed more cases than those

who are availing treatment there. For all the remaining states/UTs the net TB patients seeking care after diagnosis is higher than those diagnosed at the states/UTs itself. State wise Net Notification rates after accounting Transfer in and Out are detailed in the following table.

Table showing Net Notification Rates of 2020. (Current cases are those where Transfers have been accounted for after diagnosis)

STATES AND UTs	Pop in lakhs 2020	% of Total Pop	% of Total Di- agnosed Cases 2020	% of Total Current cases 2020	Diag- nosed cases / lakh Pop	Current cases / lakh Pop	% change from diagno- sis to current 2020	% change from diagnosis to current 2019
Andaman & Nicobar Islands	3.90	0.03%	0.03%	0.03%	122	124	-1.26%	-3.62%
Andhra Pradesh	525.36	3.81%	3.55%	3.59%	122	123	-1.18%	-1.09%
Arunachal Pradesh	16.39	0.12%	0.14%	0.14%	154	158	-2.89%	-2.93%
Assam	350.45	2.54%	1.95%	1.95%	101	101	-0.04%	-0.19%
Bihar	1247.60	9.06%	5.48%	5.63%	79	82	-2.72%	-3.22%
Chandigarh	11.73	0.09%	0.24%	0.17%	366	254	30.55%	49.19%
Chhattisgarh	300.35	2.18%	1.62%	1.63%	98	98	-0.50%	-0.15%
Dadra & NH& Daman & Diu	8.04	0.06%	0.05%	0.04%	120	97	18.96%	31.37%
Delhi	190.45	1.38%	4.81%	4.23%	456	401	12.10%	9.89%
Goa	15.42	0.11%	0.09%	0.09%	108	107	1.02%	2.30%
Gujarat	697.62	5.06%	6.68%	6.59%	173	171	1.32%	1.89%
Haryana	294.42	2.14%	3.47%	3.56%	213	219	-2.64%	-0.94%
Himachal Pradesh	74.98	0.54%	0.74%	0.76%	179	182	-1.82%	-3.07%
Jammu & Kash- mir	148.48	1.08%	0.49%	0.49%	59	60	-1.09%	-0.29%
Jharkhand	394.82	2.87%	2.52%	2.55%	115	117	-1.19%	-1.46%
Karnataka	685.10	4.97%	3.64%	3.60%	96	95	1.20%	1.97%
Kerala	344.43	2.50%	1.15%	1.16%	60	61	-0.26%	-0.11%
Ladakh	0.00	0.00%	0.01%	0.01%			-3.35%	-8.79%
Lakshadweep	0.66	0.00%	0.00%	0.00%	30	29	5.00%	-53.33%

STATES AND UTs	Pop in lakhs 2020	% of Total Pop	% of Total Di- agnosed Cases 2020	% of Total Current cases 2020	Diag- nosed cases / lakh Pop	Current cases / lakh Pop	% change from diagnosis to current 2020	% change from diagnosis to current 2019
Madhya Pradesh	843.61	6.12%	7.62%	7.69%	163	165	-0.92%	-0.09%
Maharashtra	1257.41	9.13%	8.84%	8.71%	127	125	1.53%	1.36%
Manipur	31.24	0.23%	0.09%	0.09%	50	51	-2.11%	-3.84%
Meghalaya	36.60	0.27%	0.23%	0.23%	113	113	-0.24%	2.55%
Mizoram	12.61	0.09%	0.13%	0.13%	185	188	-1 <mark>.54</mark> %	-1.50%
Nagaland	20.70	0.15%	0.19%	0.19%	168	169	-0.57%	0.29%
Odisha	463.23	3.36%	2.53%	2.52%	99	98	0.25%	0.64%
Puducherry	14.96	0.11%	0.15%	0.07%	185	85	53.95%	64.37%
Punjab	306.65	2.23%	2.56%	2.61%	151	154	-2.05%	-2.32%
Rajasthan	799.15	5.80%	7.61%	7.62%	172	172	-0.16%	-0.07%
Sikkim	6.62	0.05%	0.07%	0.08%	200	205	-2.26%	-2.70%
Tamil Nadu	814.00	5.91%	3.89%	3.98%	86	88	-2.19%	-2.44%
Telangana	379.16	2.75%	3.50%	3.49%	167	166	0.30%	0.21%
Tripura	39.57	0.29%	0.11%	0.12%	52	56	-6.90%	-9.75%
Uttar Pradesh	2324.31	16.87%	20.30%	20.73%	158	161	-2.08%	-2.85%
Uttarakhand	116.32	0.84%	1.11%	1.11%	172	173	-0.59%	3.25%
West Bengal	999.11	7.25%	4.38%	4.40%	79	79	-0.48%	-0.79%
TOTAL	13775.46	100%	100%	100%	131	131	0%	0%

### **Age Sex Characteristics of Notified TB patients**

TB affects people of all genders and all age groups, but the men, accounted for 61.7% of all TB cases in 2020. Children (0 – 14 years) formed 5.65% of total TB cases. The Age Sex Notification distribution show that there is a preponderance of TB (38% of total) among the age group 15 – 30 years for both males and females. However, the southern states of Kerala, Karnataka, Andhra Pradesh and Tamil Nadu, and in two North-eastern states of Tripura and Manipur, the proportion of TB in 15 -30 years age group is between the range 18 to 29%. The proportion of TB cases in the age group 0 - 14 years is below National average of 6% in these states. In the transgender population, 970 were notified with TB, out of which 64 (6.6%) belonged to age group 0 – 14 years

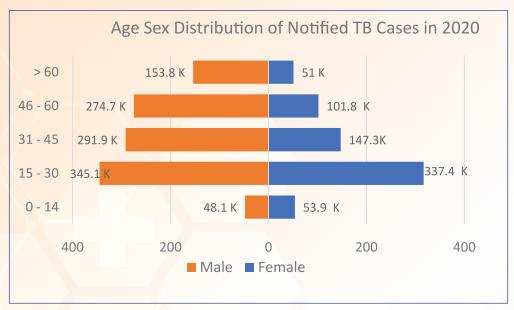


Fig: Graph showing Age Sex Notification distribution of persons with TB in 2020

#### **Status of Treatment**

### Table showing Status of treatment of persons with TB notified in 2020

Status of treatment	Private	%	Public	%	Total	%
Total Notified 2020	479905		1325765		1805670	
Treatment initiated	463339	97%	1247584	94%	1710923	95%
Notified and Not initiated on treatment	16566	3%	78181	6%	94747	5%
Notified, Initiated treatment, and outcome assigned	202651	44%	701736	56%	904387	53%
Currently on treatment	260688	56%	545848	44%	806536	47%

### Table showing Care Cascade and treatment outcomes of persons with TB notified in 2019

Indicator	Private	%	Public	%	Total	%
Total Notified 2019	619672		1708666		2328338	
Treatment Success	490824	79%	1415096	83%	1905920	82%
Died	19980	3%	69843	4%	89823	4%
Lost to Follow-up	27770	5%	53536	3%	81306	4%
Treatment Failure	2817	0%	10964	1%	13781	1%
Regimen Changed	3289	1%	23880	1%	27169	2%
Not Evaluated	74992	7%	135347	8%	210339	9%

Of the reported 23,28,338 cases in 2019, reported treatment success was 82% (N=19,05,920), Death rate was 4%, Lost to follow-up was 4%, Treatment failure and regimen change after initiation of treatment was together about 3%, and an overall of 9% cases was not evaluated after notification. State wise break up is provided in Annexure3.3



## **Diagnostic Services under National TB Elimination Programme**

## **CHAPTER 3**



Release of HWC TB Guideline by Hon'ble Minister of Health & Family Welfare, Secretary (Health), AS & MD (Health), JS (Policy & NTEP), WHO Representative, India



## Diagnostic Services under National TB Elimination Programme

### **CHAPTER 3**

### **Background:**

National Strategic Plan (2017-25) advocates early identification of presumptive tuberculosis (TB) patients, at the first point of care, be it in private or public sectors, and prompt diagnosis using high sensitivity diagnostic tests to provide universal access to quality TB diagnosis including drug resistant TB (DR-TB) in the country.

### **National Policy for diagnosis:**

- **Drug-Sensitive TB:** Direct sputum smear microscopy by Ziehl-Neelsen acidfast staining /Fluorescence Microscopy are the primary tools for diagnosis of patients with pulmonary tuberculosis and also for monitoring their response to treatment. Nucleic Acid Amplification Test (NAAT- CBNAAT and TrueNat) is offered for TB diagnosis in key populations such as People living with HIV (PLHIV), children, extra-pulmonary (EP) TB cases, smear-negative patients who have an X-ray suggestive of TB and patients referred from the private sector for early diagnosis and initiating appropriate treatment.
- Drug-Resistant TB: Patients at risk of Multi-Drug Resistant TB (MDR-TB)are diagnosed using NAAT. All diagnosed TB patients are also offered NAAT testing for determining resistance to rifampicin. All rifampicin-resistant (RR) patients are subjected to Line Probe Assay (LPA -first and second line).

• Response to treatment for MDR-TB is monitored by follow-up culture on Liquid Culture (MGIT) system.

## Strategies adopted for Case Finding in Public Sector:

- Passive Case Finding Patients with symptoms of TB voluntarily seek health care. The Medical Officer follows diagnostic algorithm for evaluating TB patients.
- Intensified Case Finding- Screening patients attending health facilities with comorbidities, for TB (HIV care settings, Diabetes clinic, Tobacco cessation clinic, Nutrition Rehabilitation Centre) and OPDs (Gynecology, Orthopedics, etc.). This is a provider-initiated screening of outpatient clinic/hospital attendees for symptoms of TB.
- Active Case Finding– Actively searching for TB patients among vulnerable population in the community (Slum, Tribal, Prison *etc.*). This activity adopted by the programme enables early detection of TB patients.
- Vulnerability mapping is done followed by periodic screening of vulnerable population. Leveraging outreach of other Health Programmes in Health and wellness centres.

Passive Case Finding (1962-)

Based on footfall in Health Facility Intensified Case Finding (2001-)

Co- morbid conditions-HIV, DM Active Case Finding (2017-)

Systematic screening of Vulnerable population [migrant, slums, prisons, contact of DR
TB, Paediatrics]

Population based screening(2020 -)

Vulnerability
mapping
Periodic
screening of
vulnerable

Figure 1: Evolution of Strategies for improving Case finding

## Strategies adopted for Case Finding in Private Sector:

- ➤ Gazette notification issued in March 2018 for mandatory notification of TB.
- Implementation of Schedule H1 drugs improved notification from chemists.
- ➤ Introduction of Patient Provider Support Agency (PPSA).

## **Structure and functions of NTEP Laboratory network:**

NTEP laboratory network is composed of 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 Designated Microscopy Centres (DMCs).

National Institute for Research in Tuberculosis (NIRT), Chennai in addition to being one of the NRLs is also one of the WHO designated Supra-National Reference Laboratory (SNRL) for the South-East Asia Region and National Institute

for Tuberculosis and Respiratory Diseases (NITRD), New Delhi is WHO designated Centre of Excellence.

Diagnostic services are provided by DMCs, NAAT sites, NRLs, IRLs as well as C-DST laboratories across India (Figure 2). NRLs, IRLs and C-DST laboratories are equipped to perform DST by various technologies such as Solid Culture, Liquid Culture and molecular tests such as LPA and NAAT.

- Laboratory services are provided free of costs to patients attending public health facilities as well as for those referred from the private sector.
- The programme has promoted partnerships and has certified 16 private sector and 4 Non- Government organization (NGO) laboratories to provide quality assured services to all patients.
- Universal Drug Susceptibility Testing (UDST) for Rifampicin Resistance among TB patients followed by resistance testing to fluoroquinolones has been implemented throughout the country.

- Intensified search for TB among key population groups has also been prioritized by National TB Elimination Programme (NTEP).
- Quality assurance is provided by a 3-tiered system comprising of Laboratories at National, State and District levels.

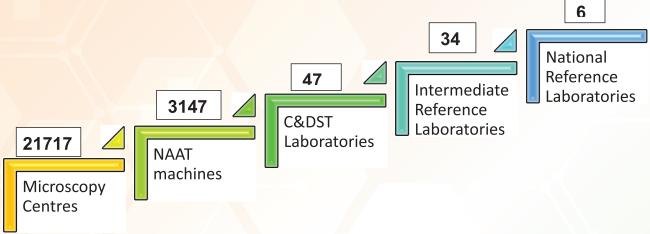


Figure 2: Hierarchy of Diagnostic Network

### **Quality Assurance of Laboratory Services:**

The programme has a very well-established quality assurance (QA) mechanism which is in line with the WHO system of hierarchical control from the highest level of NRLs to State IRLs, to the district/sub district level and then DMCs at the most peripheral level. The QA has all elements of internal quality control, on-site evaluation and external quality control.

- > External Quality Assurance (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.
- The EQA for phenotypic DST 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. Renewal of certification is biennial. List of certified laboratories is provided in Annexure 1.

## **Human Resource Development and Technical Committee meetings:**

In the current year, national level training programs for laboratory personnel were organized virtually. These included training courses for LPA (first and second line), liquid culture and DST, Truenat as well as EQA for CBNAAT.

Training programmes were also organized for detection of COVID -19 using CBNAAT and Truenat.

Recent advancements in TB diagnosis and detection of drug resistance were deliberated and performance of the NRLs reviewed during the NRL Coordination Committee meetings held during January and October 2020. Technical issues and recommendations potentially impacting and necessitating policy decisions were taken up in the National Technical Expert Group (Diagnosis) held in February and November 2020. Recommendations by the NTEG were subsequently communicated to the States for implementation.

### Performance by the Laboratory Network (2020)

With the deployment of additional machines for molecular testing for TB and Drug Resistant TB, further decentralization was achieved. Number of NAAT machines increased from 1547 in 2019 to 3147 in 2020.

According to revised programme policy, offer of FL LPA has been extended to all RR TB patients also.

**Table 1: NAAT (2020)** 

NAAT	No. of tests conducted	MTB detected	R Resistant
CBNAAT	2858713	779195 (27.2%)	53826 (7.0%)
Truenat	125923	11124 (8.8%)	340 (3.1%)

### Table 2: First Line LPA (2020)

No. of tests conducted		H & R Sensitive	H mono Resistance	R mono Resistance	MDR TB (H& R Resistance)
314570	289205	247842	19624	4452	21739
	(91.9%)	(85.7%)	(6.8%)	(1.5%)	(7.5%)

### Table 3: Second Line LPA (2020)

No. of tests conducted		FQ & SLI Sensitive	FQ Resistant		Low level Kanamycin	XDR TB (FQ + SLI
					resistant	Resistance)
58239	50311	31420	14803	700	468	2920
	(86.4 %)	(62.5%)	(29.4%)	(1.4%)	(0.93%)	(5.80%)

**Liquid culture** – 285773 culture tests were performed during the year 2020,

### Table 4: Second line LC-DST (2020)

SL DST Conducted	No. of valid test		No. of MDR + FQ resistance detected	No. of MDR + SLI resistance detected	No. of XDR detected
11948	10184	6183	2552	829	620
	(85.2 %)	(60.71%)	(25.1 %)	(8.1%)	(6.0%)

## **Strengthening of NTEP Laboratory Network:**

- 1. Diagnosis of TB using molecular testing was expanded with deployment of 1512 Truenat in the high load DMCs. The programme envisages to replace smear microscopy with upfront molecular testing using NAAT for diagnosis of TB at 8000 DMCs. Currently there are over 3000 NAAT platforms under NTEP.
- 2. CBNAAT EQA was scaled up to all public sector labs and some private labs. Over 2000 lab staff were trained virtually to implement CBNAAT EQA. PT panels were dispatched to 1,163 sites (1,127 public and 36 private). Analysis of EQA data showed 95.8% of the machines had satisfactory proficiency scores (80% and above).
- 3. Currently, 87 Culture & DST laboratories are certified by NTEP. Additionally, 18 C&DST laboratories are being developed and 28 laboratories are being upgraded with LPA facility.
- 4. Liquid culture-based DST is being expanded to Linezolid and Pyrazinamide. Capacity is being built to perform DST for Bedaquiline, Delamanid, and Clofazimine.
- 5. Thirteen laboratories under NTEP had obtained NABL accreditation in 2019 and in 2020, six additional laboratories (NTI Bangalore, IRL Bangalore, IRL Ahmedabad, IRL-Vishakhapatnam and TB C& DST

- Laboratory- Raichur & Hubli) are in advanced stages of being accredited.
- 6. NRLs were strengthened with additional positions of four Senior Laboratory Technicians, one Biotechnologist, one Biomedical Engineer and one Data Analyst each.
- 7. Capacity building of laboratory staff to perform Whole Genome Sequencing (WGS) and analysis of data had been conducted with the support of Foundation for Medical Research (FMR), Mumbai. Two sessions of independent runs have been carried out.
- 8. Laboratory Information and Management System (LIMS): Hardware has been delivered to 61 Laboratories and of them, 53 laboratories have achieved "GO LIVE" Status by initiating LIMS based reporting of laboratory data to NIKSHAY.
- 9. The Programme Division with technical support from Wadhwani Institute for Artificial Intelligence, is in the process of developing automated solutions for LPA result interpretation through Machine Learning (ML).
- 10. Six C&DST laboratories were assessed for liquid culture and DST capabilities through BD-USAID Partnership for Strengthening TB Resistance Testing & Diagnostic Systems. Assessment is planned for additional 10 C& DST laboratories in 2021.

- 11. Implementation of the USAID funded Infectious Disease Detection and Surveillance (IDDS) project, awarded to ICF incorporated, to support the strengthening of strategic institutions to improve the quality and efficiencies of the TB diagnostics care cascade in NTEP. Initial on-site assessment was conducted for three NRLs and three linked IRLs under the public sector TB laboratories.
- 12. The interim results from "Assessment of the Networks for Optimized Diagnosis to End TB (NODE-TB)" conducted in Assam, Bihar and Karnataka provided insights for optimizing placement of existing and new diagnostic technologies as

well as in designing efficient sample referral mechanisms.

### **Support to COVID-19 response:**

NTEP laboratory infrastructure and staff have been utilised by the states in responding to COVID-19 pandemic. NAAT facility available in the states were extended for use in COVID-19 diagnosis. Deployment and operationalization of Truenat machines for COVID-19 testing was coordinated with states. CBNAAT sites co-located with Biosafety Laboratories were mapped to ramp up the COVID-19 testing capacity across the country. Virtual training of NTEP staff to build capacity for undertaking COVID-19 testing using NAAT (Truenat and CBNAAT).



Microbiologist at IRL Patiala reviewing the test results in LIMS software



LIMS training session for staff at IRL Ahmedabad



TB LC- DST Laboratory established in Guru Gobind Singh Medical College, Faridkot, Punjab.

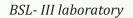


Training of Trainers workshop for CBNAAT EQA at NTI, Bangalore



Sensitization and Hands-on workshop for Master Trainer's on Truenat Technology held at NDTB, New Delhi in March 2020







**CBNAAT** 



TrueNat



LED microscope



## **Active Case Finding**

## **CHAPTER 4**



Active Case Finding Campaign launched by Hon'ble Chief Minister of Uttar Pradesh



### **Active Case Finding**

### **CHAPTER 4**

### **Active Case Finding**

Active Case finding (ACF) being was implemented for systematic screening of Tuberculosis high-risk among selected groups since 2017. The burden of undetected tuberculosis is large in many settings, especially in high-risk groups which were identified under the country's National Strategic Plan (2017-25).

Mapping of high-risk groups and carefully planned systematic screening for active disease among them has improved early case detection that may help to reduce the risks

of tuberculosis transmission, poor treatment outcomes, undesirable health sequelae, and adverse social and economic consequences of the disease.

In 2020, a total of about 17.19 crore population was screened and 52273 TB cases identified. 87 Mobile TB Diagnostic Van (MTBDV) have been provided to the states for implementation of ACF enabling early TB diagnosis in hard-to-reach areas. During January to December 2020, 34 State/UTs have carried out ACF activities at different time periods at the districts level.

### **State wise Active Case Finding Summary 2020**

S. No.	State/UTs	Screened Population	Number Patient diagnosed	
1	Andaman & Nicobar Islands	44762	21	
2	Andhra Pradesh	1151885	1685	
3	Arunachal Pradesh	48925	73	
4	Assam	15243	91	
5	Bihar	13776	7	
6	Chandigarh	6962	36	
7	Chhattisgarh	7462	170	
8	Delhi	985	30	
9	Gujarat	50847334	4565	
10	Haryana	8282557	866	
11	Himachal Pradesh	22709	595	
12	Jammu & Kashmir	141814	190	
13	Jharkhand	15230	1891	
14	Karnataka	92436	2939	
15	Kerala	37685	802	
16	Ladakh	5952	0	
17	Lakshadweep	70070	3	
18	Madhya Pradesh	1070951	4912	
19	Maharashtra	333161	12823	
20	Manipur	32289	52	
21	Meghalaya	532359	28	

S. No.	State/UTs	Screened Population	Number Patient diagnosed
22	Mizoram	59883	8
23	Nagaland	23272	23
24	Odisha	41965511	5116
25	Puducherry	10886	5
26	Punjab	4317208	529
27	Rajasthan	6906255	1067
28	Sikkim	11034	4
29	Tamil Nadu	281122	395
30	Telangana	60632	1207
31	Tripura	98845	109
32	Uttar Pradesh	43255104	10121
33	Uttarakhand	178511	100
34	West Bengal	11997372	1810
	INDIA	171940182	52273



ACF at Kangra district (Himachal Pradesh)



ACF Activities at Kariyalur village, Villupuram
District, Tamilnadu



ACF at Firozabad (Uttar Pradesh)

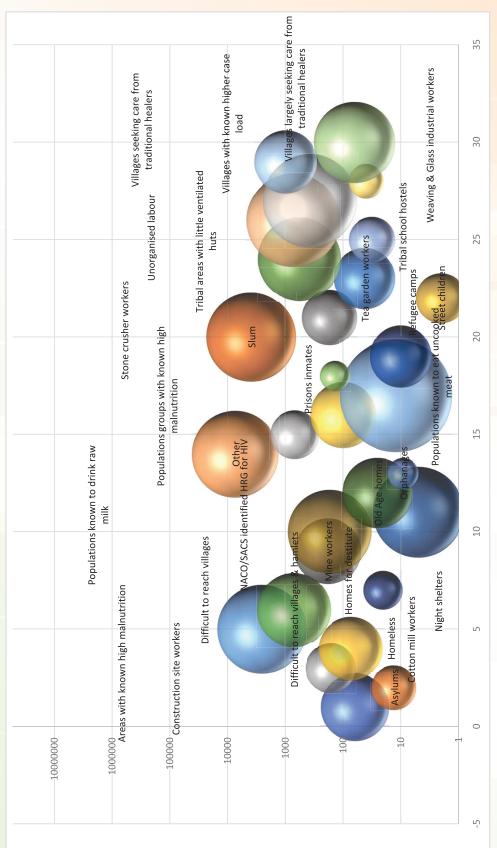


Active case finding at Dimapur district, Nagaland

Number Needed to Screen (NNS): Bubble size indicates that a larger number of population is needed to be screened to diagnose one TB case.

\*Source: Data Submitted by States. - Refer to Table on Active Case Finding Summary.





Representative Graph of various Vulnerable Groups screened during Active Case Finding - 2020

## **Treatment Services under National TB Elimination Programme**

## **CHAPTER 5**



Hon'ble Minister of Health and Family Welfare is offering drug course of 'All Oral Longer' regimen to a patient initiated on treatment.



## **Treatment Services under National TB Elimination Programme**

## **CHAPTER 5**

Strengthening of patient centred treatment services in NTEP with enhanced capacity to rapidly accommodate new drugs and treatment modalities is the cornerstone of National Strategic Plan 2017-25 for END TB in India.

## The country has made considerable progress in last couple of years in terms of treatment of TB

- ✓ Pan country roll out of injection free regimen (FDCs) for DS-TB
- Access to free drugs to private sector for DS-TB as well as DR-TB
- Decentralized molecular test for DR TB detection and subsequent linkage for treatment initiation at district level
- Decentralization of DR-TB treatment facilities by establishing decentralized 173 Nodal DR-TB Centre and 620 District DR-TB Centres
- ✓ More than 500,000 treatment supporter for patient centric treatment provision through community treatment centre (erst while DOTS Centre)
- ✓ Aligning national PMDT guideline with WHO recommendation
- ✓ Universal Drug Susceptibility Testing (UDST) of all notified TB patients for early opportunity of detection of DR-TB and put on appropriate regimen.
- ✓ Roll out of newer drugs (Bedaquiline & Delamanid) for the treatment of M/XDR-TB patients
- ✓ Implementation of shorter MDR/RR-TB regimen with injectables, all oral longer regimen and newer drug containing regimens

### A. Management of Drug Sensitive TB

All diagnosed TB patients are 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). Majority of patients who are started on treatment from the diagnosis centre. Those patients who are coming from the location other than the catchment area of a particular diagnosis centre are given transit FDC blister are advised to take medicine from health centre located around residence as per convenience of the patient. Additionally, National TB Elimination Programme has expanded free access of anti-TB drugs to the patient seeking care in private sector.



Patient's demographic details, test and treatment information are entered into NIKSHAY. The digital platform of NIKSHAY allows tracking of TB patients referred or transferred out from one health unit to another one within different geographical locations.

NTEP has started national call center and tollfree TB helpline- 1800-11-6666 which is utilized for patient guidance and linkage with appropriate public health facility for early patient management.

Performance in 2020 (Drug Sensitive **TB):** The country has reported 24 lakh TB notification in the year 2019 which is highest ever annual TB notification. The situation that arose out of COVID-19 pandemic and nationwide lockdown, literally broke the rising trend of TB notification in the year 2020. However, India has notified 18 lakh TB notification in the year 2020 which is 25% decline from notification in 2019. Out of which, 17.10 lakh (95%) TB patients put on treatment. The proportion of TB patients put on treatment out of notification remains same in the year 2020 compared to 2019. Other public health services are also sustained or rather improved (e.g. U-DST) in the year 2020 as presented in below table.

Indicators	2018	2019	2020*
• Total TB cases notified (In lakhs)	21.5	24.0	18.05
Proportion of patients with known HIV testing	50%	81%	92%
• % of TB notified patients tested for UDST	29%	58%	67%
Success Rate	66%	81%	82%
• Proportion of Children <6 years initiated on TPT	3%	20%	35%

This is a very prominent sign of sustained public health action following notification and maintained health services to notified TB patients as pre-lockdown situation.

Following key actions are taken by the Centre and the States / UTs for sustained delivery of programme services:

- Central TB Division has issued advisory and rapid response plan for continued programme delivery by the State and UT administration.
- The health staff has provided service delivery at the doorstep of the TB patients. Collecting sample for UDST from patient's home. The States (e.g. Telangana) have associated with 104 ambulance services for transport of sample to C&DST lab and delivery of drugs to the peripheral stores.



Visit to Private health care provider in Ahmedabad, Gujarat by State and National team

- Treatment supporter were instructed by the district administration and programme to supply one month medicine stock to all the TB patients for uninterrupted treatment during lockdown.
- Availability of free drugs to all TB patients.

The programme has achieved 82% treatment success rate of cohort reported in 2019.

- Disaggregated treatment success rate of patient notified from public and private sector is 83% and 79% respectively.
- Treatment success rate of new and retreatment TB patients are 84% and 77%
- Treatment success rate in TB-HIV coinfected patients is 69%

The state wise TB notification from public and private sector as well as treatment outcome are presented in annexures.

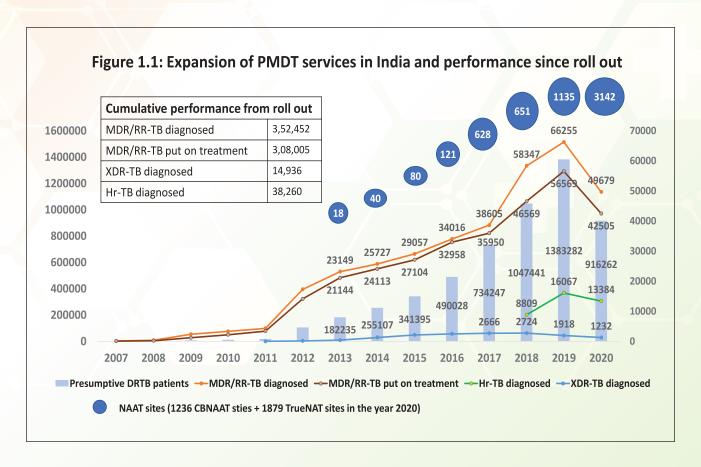
## B. Programmatic Management of DR-TB (PMDT)

PMDT services were introduced in 2007 and nation-wide geographic coverage was achieved by 2013. During 2011-12, there was a systematically planned approach to

scale-up of all these facilities with concerted efforts of multiple stakeholders resulting in countrywide coverage by 2013.

Under the first National Strategic Plan for 2012-17, NTEP envisaged expansion of rapid DST and roll out of newer drugs. The country has introduced and rapidly expanded CBNAAT (GeneXpert), UDST as a national policy and introduced Bedaquiline under programme condition.

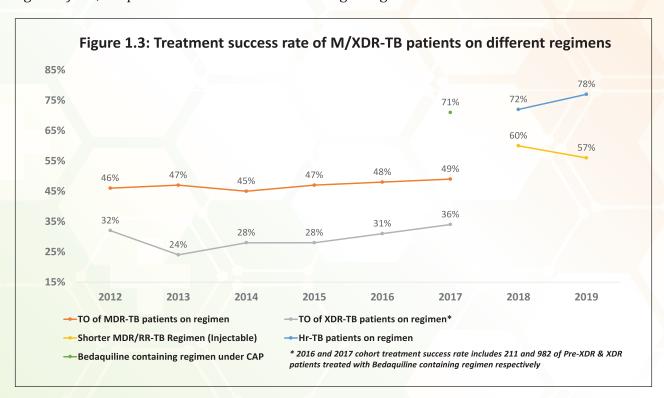
National Strategic Plan for 2017-25 for END TB in India directed towards molecular DST and establishment of Truenat at subdistrict level, nationwide coverage of Shorter regimen for MDR-TB patients, injection free all oral regimen, introduction of Delamanid under programme condition and rapidly expanded in entire country this.



Decentralized DR-TB services: With the aim to bring drug resistant TB treatment closer to TB patients' residence, DRTB treatment services were decentralized to district DRTB centers. By the end of 2020, 793 DR-TB centers have been made functional which include 173 Nodal DR-TB centers and 620 district DR-TB centers. to offer decentralized DR-TB treatment services. This decentralization empowers districts to enable the "test and treat approach" and to minimize the gap between diagnosis and treatment, reduce cost of travel and expedite early care of M/XDR-TB patients within their respective districts. Recently, to strengthan the involvement of all the medical colleges in DR-TB care, programme issued direction to the state to establish facility for the management of MBR-TB in all medical colleges.

**DR-TB performance analysis of 2020:** In 2020, 49,679 MDR/RR-TB cases were diagnosed and 42,505 were put on treatment. COVID has affected DR-TB notification also and reduced 25% DR-TB notification compared to 2019. 1232 XDR-TB and 13384 H mono/poly DR-TB patients were diagnosed.

Further, based on SL-DST result and other eligibility criteria, 10,489 M/XDR-TB patients were initiated on newer drug containing regimen (including 10,140 on Bdq and 349 on Dlm containing regimen). 14,735 patients enrolled on all oral longer regimen.



Till 2020, 22729 and 652 patients are put on Bdq and Dlm containing regimen respectively. Success rate of (extensively drug resistant [XDR] & MDR/RR-TB patients with additional resistance to Fluroquinolones (FQ) or injectable (SLDs) treated under Bdq conditional access programme (Bdq-Cap) is 71% (2016-17 cohort).

Average success rate of conventional XDR-TB patients put on treatment (without Bdq) from 2016 to 2018 is 29%. This has increased to 36% in 2017.

Success rate of 78% is reported for H mono/poly DR-TB regimen registered in 2019. Female, younger age (18-35 years) and extra pulmonary TB (EP-TB) have been significantly associated with favorable treatment outcomes of H mono/poly DR-TB.

State wise DR-TB notification and treatment outcome has been presented in Annexure.

National Technical Expert Group (NTEG) for TB treatment: The country has a mechanism known as NTEG, which is a group of experts to guide the programme in policy on TB treatment. The committee members are consisting of national expert in the field of medicine, public health and research. Central TB Division is the secretariat for the National Technical Expert Group for TB treatment. The group reviews national and international evidences and suggest changes in programme guideline.

Following are the key policy decisions taken by the programme based on recommendations of NTEG in the year 2020:

- Shorter all oral bedaquiline (Bdq) containing regimen (recommended by WHO) in adults (>18 yrs) in individuals confirmed with pulmonary MDR/RR-TB, uncomplicated extra-pulmonary TB disease and in PLHIV to be introduced in a phased manner.
- Shorter all oral Bdq containing regimen is being considered for children (6-17 years) given their special needs. NTEG for Pediatrics has also endorsed the regimen and suggested to introduced in phased manner.
- Only those patients with mutations in both inhA and katG will not be eligible for shorter regimen.

- Preventive treatment among close contacts of MDR-TB index patients (in whom FQ resistance has been ruled out) using 6Lfx for all age groups is going be introduced in selected states to gain programmatic experience and guide further.
- NTEG recommended the revised replacement drugs sequence under all oral longer M/XDR-TB regimen and that is in sequence of Delamanid, Amikacin, Pyrazinamide, Ethionamide, PAS, Ethambutol, Carbapenems.
- Extension of BDQ beyond 6 months and combined use of Bdq and Dlm in DR-TB patients has been considered conditionally.
- NTEG as well as expert group of Ob &Gy. endorsed the use of Bdq in pregnancy.
- Felt need was expressed by NTEG for establishment of MDR-TB management facility (DR-TB Center) in all the medical colleges of the country and requested National Task Force mechanism to support the establishment.

All the recommendations of NTEG are built in the Guidelines of PMDT in India-2021 developed by a working group with facilitation from WHO-India.

## C. Major initiatives and achievements in 2020

## a. Digital Adherence Technology (DAT) for monitoring of TB treatment- 99 DOTS

Central TB Division in collaboration with USAID and World Health Partners had conducted a pilot project on Integrated Digital Adherence Technology (IDAT) in 2018-19. The

project aimed to test various digital adherence technologies in a patient centric approach and scale up. When learnings were informed by an independent evaluation of the project, PIP process for 2020-21 was initiated at the same time in later part of 2019. CTD has given guidance to all the state to plan and propose funding for 99 DOTS envelops procurement. Technology support would be provided from CTD-NIKSHAY

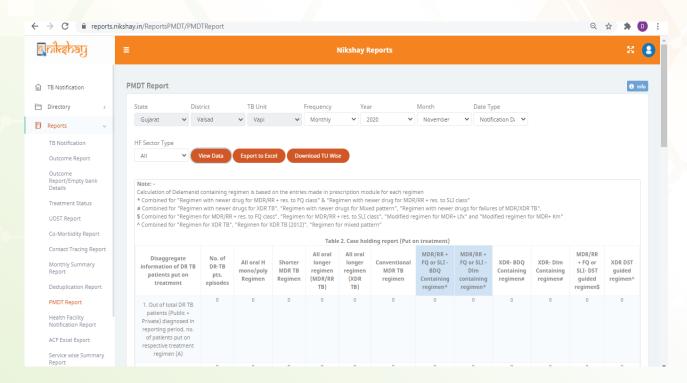


- A total of 1.99 lakh patients were associated with DAT in 2020
- Other digital technologies like Medication Event Reminder Monitor

(MERM) and ZMQ (Video DOT) were also rolled out in limited settings. There were 108 patients offered MERM in 2020

## b. Transition to NIKSHAY based reporting for DR-TB

Nikshay is a surveillance tool, which is a realtime-case-based-web-based reporting system since 2012. For DR-TB data and analysis was largely rely on quarterly-paper-basedreporting till 2019. With enhancement of NIKSHAY, country had decided to transition to Nikshay based monitoring of PMDT for case holding, interim and treatment outcome reports from 2020. Interim and treatment outcome report of retrospective cohort of 102018 would be monitored from NIKSHAY. The State officers and NTEP staff were trained on recording, reporting and monitoring from Nikshay. The programme has envisaged to complete the transition of PMDT report in Nikshay including case finding report within first two quarter of the year 2021.



## c. Implementation of All Oral Longer regimen for DR-TB

NTEG has recommended all oral longer regimen in M/XDR-TB patients if not eligible for shorter MDR-TB regimen. The guideline has been prepared based on recommendation of NTEG. Appropriate modification in the drug composition of all oral regimen, based on the DST result, can be done to ensure appropriate regimen is prescribed to the MDR/ RR TB patient.



Launch of All Oral Longer regimen in Jharkhand by Shri Sanjeeva Kumar (Special Secretary, Gol) and DDG-TB, PS- Health and MD-NHM of Jharkhand



Introduction of All Oral Longer regimen in Goalpara district Assam

 There were 21,613 DR-TB patients prescribed all oral longer regimen (including 5,513 MDR/RR-TB with additional resistant to fluoroquinolone or Second-line injectable and 788 XDR-TB) till Dec 2020.

### d. Completing the roll out of Delamanid-Conditional Access Programme

Delamanid Conditional Access Programme (CAP) was initiated under NTEP initially for 7 States and gradually expanded to other states as capacity build over the period. Enrollment of patients for DLM-CAP was completed in July 2020. The patients enrolled under the Delamanid CAP are being followed up. Although, the continue of Delamanid-CAP which should not be the restrictive criteria for access. The access of Delamanid has been expanded to all the States in the Country for the eligible patients in 6 to 17 years of the agegroup. Till December 2020, total 652 M/XDR-TB patients were enrolled on Dlm containing regimen.

### e. Corporate TB Pledge

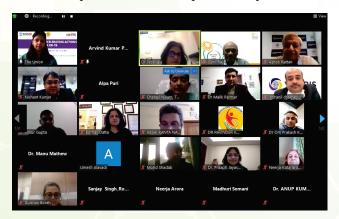
It is a joint initiative of Ministry of Health & Family Welfare and USAID for TB elimination. More than 80 companies of repute have committed and joined the pledge to support India's fight to eliminate TB. Corporate supported projects for TB elimination are now operational in many states across the country.

TB Free workplace campaign: Realizing greater interest among the corporates to complement government efforts and corporate access to workers, a 'TB Free Workplace Campaign' is being introduced to help companies in systematically addressing TB through workplaces. Since companies have access to large number of workers, role of workplaces becomes crucial in TB prevention and care.

 The Campaign is designed to create wider awareness among the workforces and ensure inclusive and TB patient friendly corporate workplaces with accurate information and services. A manual was inaugurated on the

occasion of commemoration of World TB Day '20 to guide and support the companies. on how to implement the campaign with suggested activities and timelines.

**Consortium:** DRTB Given the strong commitment for providing high quality treatment and care services to DR-TB patients, it is important for all stakeholders to support the programme in realizing this vision. In the past, most partner initiatives focused on the broader aspects of TB and not specifically on DR-TB. There has also been a lack of active participation by industry partners in supporting DR-TB initiatives. Although, there is, expertise, experience, and capabilities available across corporate organizations for DR-TB care, there is a need to have a common platform to utilize these expertise and resources. Under the aegis of Corporate TB Pledge, DR-TB Consortium has been formulated which is providing a platform for corporate sector to deliberate the programme need and support to be extended under corporate social responsibility.



• 2 meetings on DR-TB Consortium were organized in 2020 which was participated by DDG-TB, USAID Health Office Director, other key officials from the Central TB Division, USAID, WHO, the Union and representatives from pharma companies, diagnostics chains, hospitals in DR-TB space. Follow up meetings with Central TB Division, Mylan and Pathkind were organized to discuss new project and partnerships. Partnership proposal supported by Mylan for improving access to new drugs in private sector is approved by the CTD.

### f. Difficult To Treat TB Clinic (DT3C)

There is a decentralized network of Nodal and District DR-TB Centres. Those centres are conducting pre-treatment investigations, assess the resistance pattern and initiate appropriate regimen in DR-TB patients. However, for difficult to treat TB patients, NDR-TBC require support from national experts. The unique concept of Difficult to Treat TB Clinic was established in joint collaboration of NITRD, CTD and NTF. NDR-TBC in the State can escalate the cases to the National Experts to seek guidance. NITRD also holds once a month webinar and discuss the selected cases. This initiative serves as a problem solving as well as cross learning platform for the Nodal DR TB Centres across the country.

## NITRD-CTD-NTF DT3C clinic discussion in Zoom meeting



 There are 25 such difficult to treat DR-TB cases referred from Nodal DR-TB Centre to the DT3C and got successfully advised by National expert.

### **TB Co-morbidities**

## **CHAPTER 6**



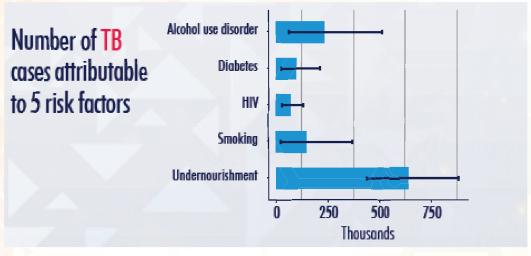
Launch of TB Free Air for every child in Kerala by Hon Governor of Kerala in presence of Hon Minister of Kerala and DDG (TB).



### **TB Co-morbidities**

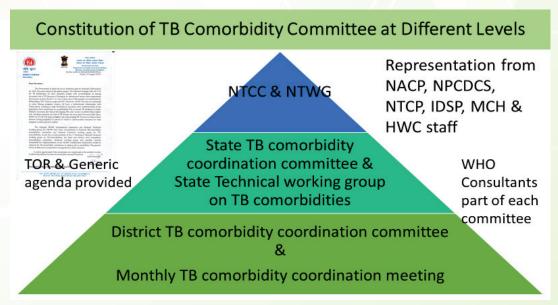
### **CHAPTER 6**

Imost 40% of India's population is having latent TB infection with *Mycobacterium tuberculosis* (*Mtb*), Active TB disease primarily occurs with a breakdown in the immune system of these people. This is the reason for association between active TB disease and other communicable diseases (CDs) and non communicable diseases (NCDs) that adversely affects the immune system. Co-morbid NCD risk factors include diabetes, smoking, alcoholism, malnutrition, and chronic lung disease, all of which are increasing over the past decade. There is also a big overlap between infections such as TB, HIV, and viral infections like COVID -19. This results in a "double burden of disease" in developing countries.



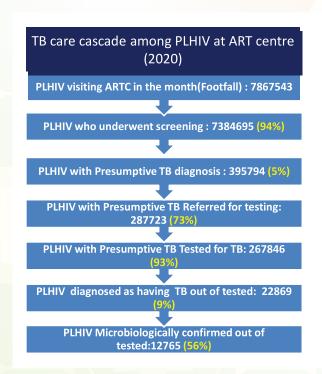
(reference Global TB report 2020)

Therefore, functional integration of NTEP with the National Programme for NCDs and other infectious diseases is pertinent to enhance the overall efficiency of public health responses. Thus as per the NTEP guidelines, it is essential to form the TB Co morbidity Committee at various levels as under-



Tuberculosis (TB) and HIV are major public health problems globally and particularly so in India. These two diseases are leading causes of morbidity and mortality among all other infectious diseases. In 2019, India accounted for estimated 71000 (49000-98000) incident HIVTB co-infected patients against the previous estimate of 92000 HIV TB co-infected patients (63000–126000) in 2018 (WHO's Global TB report 2020).

#### **TB HIV Collaboration:**



A joint effort in the form of HIVTB Collaborative activity by the National AIDS Control Programme (NACP) and National TB Elimination Programme (NTEP) to address the dual burden of TB and HIV was initiated in six high burden states in 2001 and was expanded across the country by 2008. Interventions were developed to ensure prompt detection of patients with TB-HIV co-morbidity. These interventions helped in reducing TB related fatalities by 82% (baseline 2010) among PLHIV to meet the 2020 end TB target.

The collaboration objectives were to have close coordination between NTEP and NACP at National, State and District levels and decrease morbidity and mortality due to TB among persons living with HIV/AIDS. The framework adopted four-pronged strategies:

- a. Preventive activities focusing on Isoniazid (INH) Preventive Therapy (IPT) and Airborne Infection Control (AIC) measures.
- b. Early detection of TB among PLHIV with the use of molecular diagnostics (CBNAAT/TrueNAAT)
- c. Prompt treatment of TB/HIV with Fixed Dosage Combination (FDC), including test and treat policy for PLHIV.
- d. Management of TB/HIV cases in special situations

In 2019, TB-HIV collaboration committee was restructured by MoHFW to form a TB-Co-morbidity Collaborative Committee at National, State and District level. Restructuring helps in addressing other co-morbidities among TB/TB-HIV patients like malnutrition, diabetes, tobacco consumption etc.

For strengthening the collaborative activity, expansion of TB diagnostics in HIV care setting, designating district TB officers as District AIDS Control Officers and provision of joint reviews and supervisory visits by NACP and NTEP staff were the major policy decisions taken. HIV-TB services are also provided as a referral service to the most HIV vulnerable populations. During the routine outreach services, the Peer Educator and other outreach team member screen High Risk Groups (HRGs) and bridge populations (Truckers and Migrants) for TB symptoms and refer them to the nearest TB centre for early diagnosis and treatment.

#### **Achievements:**

- a. For early detection of HIV among presumptive TB patients, Provider Initiated Testing and Counselling (PITC) is being implemented across the country. The programme is planning to strengthen this activity.
- b. More than 90% of the notified TB patients know their HIV status. (*Public:93%, Private:80%*)
- c. Nearly 86% of Designated Microscopy Centres (DMCs) are co-located/ located in proximity to HIV testing facilities.
- d. More than 8 lakh [S1] PLHIV are given access to rapid molecular testing via CBNAAT for TB diagnosis.
- e. Single window TB and HIV services are being implemented through existing 587 ART centers and these services are being further scaled up. With the ongoing COVID-19 pandemic, Multi-Month Dispensation (MMD) of medicines, teleconsultations and newer service delivery methods are being considered.
- f. The services include counselling of PLHIV, Opportunistic Infection (OI) management, ART/CPT provision and TB screening among ART center attendee using '4 symptoms screening tool'. Based on evaluation, PLHIV is being offered TB treatment or TB preventive therapy by ART medical officer.
- g. More than 90% of PLHIV visiting the ART centres every month are screened for any existing TB symptoms.

- h. The linkage of HIV-TB co-infected patients to Cotrimoxazole Preventive Therapy (CPT) and Antiretroviral Therapy in 2020 were 95% & 93% respectively.
- i. More than 11 lakh PLHIV initiated on TB Preventive Therapy since Dec'16.
- j. To further expand the service delivery, the central government has issued Gazette Notification by GoI dated 28th Oct 2020 about the mandatory requirement of ART centers and Drug Resistant TB services in all medical colleges.

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

## I. Intensified TB Case Finding (ICF) at ICTC:

Under ICF, all ICTC clients are screened by ICTC counsellors for presence of TB symptoms at the time of pre and post-test counselling. Clients who have symptoms or signs of TB, irrespective of their HIV status, are referred to NTEP diagnostic facility located in the nearest/co-located institution. During 2020, 891294/11953205 (7%) of general clients (except pregnant women) receiving pre-test counselling/information have been referred for TB testing from ICTC, and 45602 were detected as TB cases, is 5% of out of those referred. (Source: NACP SIMS Report for 2020)

ICF at ART Centre: PLHIV diagnosed with Tuberculosis are linked to first line anti TB drugs daily regimen for TB patients diagnosed in the respective ART centers while those with need for second line drugs are linked to the nearest Drug Resistant TB site (District/Nodal DRTB site).

94%(73846953 out of 786754) PLHIV attending ART centre were screened for ICF for 4 TB symptoms at ART centres. Subsequently 5% (36229 out of 665487) were identified as Presumptive TB cases & 76% (27632 out of36229) presumptive TB cases were referred to NTEP, among whom 93% (25599 out of 27632) were tested for TB and 1815 PLHIVs were diagnosed with TB i.e, 7% as per monthly ART centre report (Source: MPR-Oct.2020).

# II. Use of molecular diagnostic (CBNAAT or TrueNAAT) for early diagnosis of TB and Rifampicin drug resistance among People living with HIV (PLHIV):

Nucleic Acid Amplification Test (NAAT), CBNAAT or TrueNAAT, is rapid, sensitive and preferredTB diagnostic tool recommended in PLHIV and is available in all districts of the country.

TrueNAAT is a new diagnostic tool recently added for providing TB and DRTB detection at block level apart from the existing network of 1128 CBNAAT laboratories in the country. The scale up of this diagnostic modality will further help in early diagnosis of TB and Rif Resistance among People living with HIV.

## III. TB Preventive Therapy- TPT (or Isoniazid Preventive Therapy IPT):

Isoniazid (INH) is one of the most effective bactericidal drug. It protects against both progression of latent TB infection (LTBI) to active disease (reactivation) as well as from re-infection when exposed to active TB case. Cumulative IPT coverage among PLHIV is 81% (1119738/1379092) as on Dec'20.

IPT is one of the 3 I strategy globally recommended for the prevention of incident TB among HIV infected individuals. IPT is a

key public health intervention preventing TB among PLHIV and has been recommended as part of a comprehensive HIV and AIDS care strategy. NACP also plans to adopt a safer, shorter and effective TPT regimen, once sufficient evidence in the country is available for the same.

### **Priority Areas for 2020-21:**

To universalize access to HIV testing and treatment, NACP is considering further expansion of HIV testing services so that diagnosis of HIV as well as TB diseases is offered in the same facility and HIV can be detected at an early stage. Other areas of importance will be capacity building of new HIV testing centres and ART centres healthcare workers for regular reporting using digital platform like SOCH/IMS SOCH, strengthening single window service delivery of ART centres, improvement of HIV testing coverage among TB patients in the private sector and improving coverage of TB Preventive Therapy(TPT) for eligible PLHIV, intensified TB case finding at TI/Prison/HRG settings, Integration of Nikshay online portal under NTEP and SOCH online portal of NACP, evidence generation for shorter and effective regimen for TB preventive therapy among PLHIV would be the key areas of intervention.

## **Quality Improvement activities under TB-HIV collaborative activity:**

i. Supervision and Monitoring Mechanism: Regular Supportive Supervisory visit conducted by NTEP Official to NACP facilities to review on ground implementation of the TB-HIV services. Considering the recent COVID-19 Pandemic, the programme has adapted to digital platforms for programme activities and reviews.

- ii. Supply Chain Management: Programme is also undertaking integration of digital platform Nikshay-Nikshay Aushadhi and SOCH (Digital Surveillance System of NACP) to further strengthen the collaborative activity.
- iii. Review meetings: As part of program, NTEP has been conducting review meetings at regular intervals both at National and State level, which includes TB-HIV and other comorbidity components The main purpose of the meeting is evaluating the performance of the States/UTs under NTEP. Issues related to other programs are flagged for early resolution.
- iv. Private sector involvement for better HIV testing coverage: Both NTEP and NACP have realized that private sector engagement is crucial not only for HIV testing of TB patients but also for subsequent cascade of care. Programme is strategizing domestic funded Patient Provider Support Agencies and other innovative mechanisms for strengthening the TB-HIV service delivery in coordinated manner with NACP.

### Way forward:

- Scale up of HIV testing at TB service delivery points by operationalization of F-ICTC at TB diagnostic laboratories for expansion of HIV testing services.
- 2. Improving HIV testing coverage among TB patients notified from Private sector in coordination with NTEP

- 3. Saturation of eligible PLHIV population for TB preventive therapy, improving the TPT completion rates using innovative digital solutions and evidence generation with further scale up of TB preventive therapy.
- 4. Introduction of newer diagnostics like TB-LAM for TB diagnosis among PLHIV with advanced disease
- 5. Capacity building at all levels for joint monitoring and programme reviews and addressing TB-HIV collaborative activity gaps and preparation of action plan with NACP counterparts.
- 6. Scaling up of TB and HIV screening by TI and Link Worker Scheme Projects and improve the screening for TB as well as HIV in Prisons and people in other closed settings.

#### **TB-Diabetes:**

### **Background**

In India, there are an estimated 2.7 million incident TB cases. As a consequence of urbanization as well as socio-economic development, there has been an escalating epidemic of Diabetes Mellitus (DM). Available evidence and modeling studies indicate that nearly 20% of all TB cases in India may also suffer from DM.

### Correlation between TB and Diabetes

- Patients with Type 2 DM have a 3-fold increased risk of developing TB
- Patients with TB have a 2-fold increased risk of developing DM
- TB causes glucose intolerance
- DM may alter the clinical presentation of TB

- DM may increase the time of sputum culture conversion
- Double risk of development of drug resistance TB among DM patients
- Odds of having treatment failure, relapse and death was 8.99, 1.64, 1.88 times higher among TB patients with diabetes
- Due to lack of early detection and treatment, complications from TB-DM Co-morbidity lead to high cost of treatment and out of pocket expenditure

the Designated Microscopy Centers under National TB Elimination Programme are now co-located with Diabetes screening facility.

In 2020, 1481066/1805670 (82%) of all the notified TB patients in the public +private sector have been screened for Blood sugar and 115208(8%) were found to have Diabetes. Out of this 61739(54%) co morbid patients were referred to the NCD clinic and linked to anti-diabetic treatment. Among the NCD clinic attendees with Diabetes, about 15% have been screened for Tuberculosis, and referred for TB testing.

Refer to annexure 2.5 for state wise report

### **Achievement**

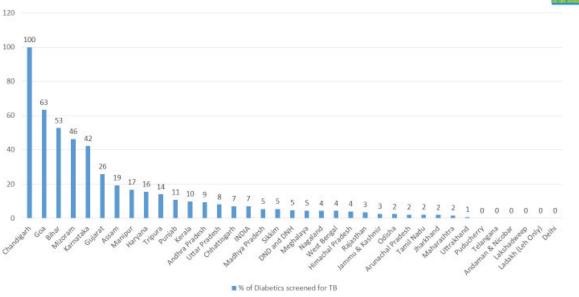
As a result of TB-Diabetes collaborative framework implementation, nearly 86% of



### State Wise Intensified TB case finding in NCD clinics

Data Source-NPCDCS excel sheet-April to September 2020







### National level Intensified TB case finding in NCD clinics



Period	Total Patients diagnosed with Diabetes (a)	TB patients already on treatment amongst (a)	Patients screened for TB (b) (%)	Presumptive TB cases referred for TB diagnosis amongst (b) (%)
2018-19	1,88,62,438	1,30,702	11,50,582 (6%)	1,51,376 (13%)
2019-20	2,13,64,319	1,79,052	19,70,285 (9%)	2,95,009 (15%)

### **TB-Tobacco:**



### **Background**

Both TB and tobacco are major public health problems in India. More than 20% of global TB incidences may be attributable to smoking. As per the WHO estimation, mortality due to tobacco-related diseases is more than the combined mortality due to top three communicable diseases (tuberculosis [TB], HIV/AIDS, and malaria) which is expected to increase further to 8 million by 2030. Tobacco is documented as major and independent risk

for development of TB, contributes to around 40% of TB mortality among male population of India which is a cause for great concern. Controlling the tobacco epidemic will help prevent the TB epidemic.

### **Correlation between TB and Tobacco**

Smoking is a risk factor for TB, Independent of alcohol use and other socioeconomic risk factors Smoking interferes with TB at every stage of the disease. 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 transmission of the disease. Some of these effects are mediated by a higher bacillary load among smokers. However, still literature

pertaining to the association between smokeless tobacco and TB is limited.

### **Progress**

Under the National TB Elimination Programme 1243853/1805670 (69%) of TB patient's status is known for tobacco usage. Out of this 167461 (13%) of TB patients were identified as Tobacco users at enrolment. Among those screened, 27%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 Co morbidity Committee meeting at various levels.

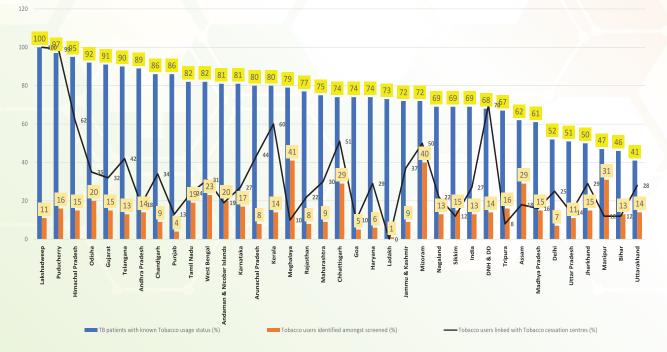
Refer to annexure 2.6 for state wise report



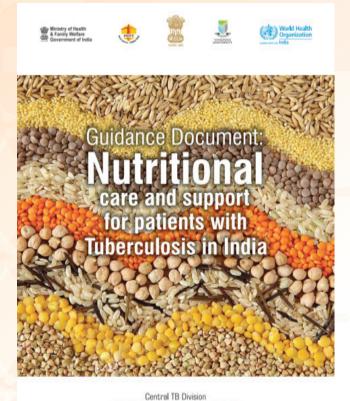
National and State Wise TB Tobacco Data (January to December 2020)

Data Source Nikshay\* data extracted on 12<sup>th</sup> Feb 2021





### **TB-Nutrition:**



Directorate General of Health Services

Ministry of Health and Family Welfare Government of India, New Delhi

### **Background**

There is a link between active TB and undernutrition. but malnutrition or undernutrition do not cause TB on its own. Undernutrition adversely affects the immune system and increases the likelihood that latent TB will breakdown into active TB disease. The catabolic effect of TB results in weight loss and wasting, worsening the malnutrition. Malnutrition in people, who are in close contact of a patient with active TB, increases their risk of developing TB. Because of this association nutritional assessment and its management are necessary for TB treatment and care.

#### Correlation between TB and Nutrition

 Risk of TB increases by about 14% for each unit reduction BMI

- Risk of recurrence is 4 times compared to those with normal weight
- Only about 1/3<sup>rd</sup> of men & 1/4<sup>th</sup> of women had normal range BMI after successful TB treatment

### Nutritional support to TB patients

- Improves weight gain, muscle strength and quality of life
- Reduces mortality
- Provides a shorter time to sputum conversion and greater sustained microbiological cure thereby decreasing recurrence of TB disease
- Improves adherence to therapy.

### **Achievement**

The Government of India has committed the provision of nutritional support to all TB patients through direct benefit transfer into the bank account of the beneficiary.

Linkages between NTEP and food security programmes

- Antyodya Anna Yojana (Ministry of Food and Civil Supplies)
- Women and Child Development/ Integrated Child Development Services (WCD/ICDS)
- 3. Food security Act 2013 (implemented in 11 states)
- 4. TB specific schemes in states e.g. Chhattisgarh which provide supplementary nutrition, often as dry ration.

# National Nutrition Mission (Poshan Abhiyaan)

- Target population Pregnant/lactating women, adolescent girls or children below the age of 6 are provided nutritional support through Anganwadi centres.
- Activities Awareness campaigns on TB and Nutrition integrated with Poshan Abhiyan under WCD, apart from Jan Aandolan (Peoples movement) campaigns and Community Based events.

### Nutrition-TB App (N-TB app)

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 CTD with the support of various organizations/partners. It is a tool for healthcare workers to calculate TB patients' BMI, counsel patients to choose the right food items according to their BMI, and improve BMI while on treatment and later.

### TB and Gender:

### **Background**

Gender differences and inequalities play a significant role in how men and women access and receive healthcare in the public and private sectors.

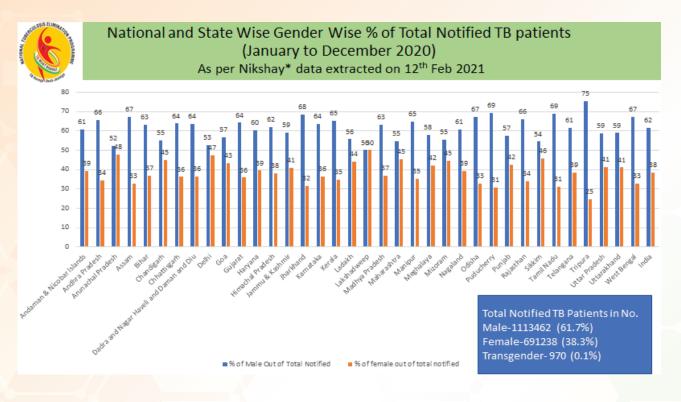
Although more men are affected by TB, women experience the disease differently. Gender is a significant influencer of epidemiology, risk factors, probability of diagnosis, access to health care, treatment adherence and overall impact of TB on communities.

India is one of the first countries to adopt the communities, Rights and Gender Tools developed by the Stop TB Partnership. In 2020 out of the Total TB cases notified 61.7% were male, 38.3% were female and 0.1% transgender.

This is in line with the programs effort to engage civil society and affected communities in the TB response through the creation of National, State and District TB Forums and involving TB Champions or 'Kshay Veers' at various levels.

### **Progress**

National TB Elimination Programme has developed a National Framework for Gender-Responsive approach to TB in India to adopt and implement a gender-responsive approach to TB in India. The framework aims for equitable, rights-based TB services for women, men and transgender persons by adopting a gender-specific programmatic approach at all levels and to mobilize, empower and engage women, men and transgender persons in the TB response at the health systems and community levels. The programme would be building the capacity of all stakeholders in the implementation of the framework and ensuring its monitoring.



### **TB and Pregnancy**

### **Background**

Women of reproductive age group (15-49 year) bear a significant burden of TB in India and globally. India had an estimated 44,500 pregnant women with TB in 2011 and contributed to 20.6% of the global burden of TB among pregnant women.

TB among pregnant women can adversely affect the health of the mother, foetus, neonate, and their children with a wide spectrum of short and long-term implications. TB in pregnancy could have serial and sequential effects: repeated reproductive failure, foetal ill-health, preterm delivery, and TB of the newborns and infants, leading to high maternal and perinatal morbidity and mortality.

### **Progress**

National TB Elimination Programme and Maternal Health division has developed a framework with strategies to reduce morbidity and mortality due to TB in pregnant women and newborns through prevention, screening for early detection and prompt management of TB in pregnant women and achieve optimum at natal and perinatal outcomes. In 2020, as per Nikshay, only 23%(1,65,691/6,91,238) female patients were screened for pregnancy out of which 1,290 (0.7%) were reported to be pregnant. There is data limitation with respect to screening of all female patients for pregnancy as this feature has newly been incorporated in Nikshay. The programme would be training all health care workers in effective implementation of the framework and recording of information.

Refer to annexure 2.9 for state wise report

### **Childhood Tuberculosis:**

### **Background**

Paediatric Tuberculosis (TB) is one of the ten major causes of mortality globally among children (population age less than 15 years). Globally, in 2019, an estimated 12 lakh children became ill with TB. Out of this, 1.9% of children died because of TB (including children with HIV associated TB). In India, about 3,42,000 incident cases of paediatric TB are estimated to occur every year accounting for 31% of the global burden and 13% of the overall TB burden in the country. In India, although paediatric TB is estimated to be approximately 10% of total incident cases, only 5.6% (102090/1805670) of the total cases reported to the National TB Elimination Programme (NTEP) in 2020 are children, and this proportion has remained almost similar over the last several years.

Guidelines on Paediatric TB management in India have been updated with the support of the Indian Academy of Paediatrics and other stakeholders. Recently, the Central TB Division has signed a Memorandum of Understanding (MoU) with Indian Academy of Paediatrics (IAP) in October 2019 to build capacity for TB case management in children less than six years in Public and Private sector through 300 district level training. In 2020 the number of trainings could not be carried out as planned due to COVD-19 pandemic. However a total

of 26 trainings were done (physical-22 and virtual-4) and a total on 1884 paediatricians were trained.

NTEP Collaborated with Child Health Programmes to address burden of Tuberculosis among children and adolescent population

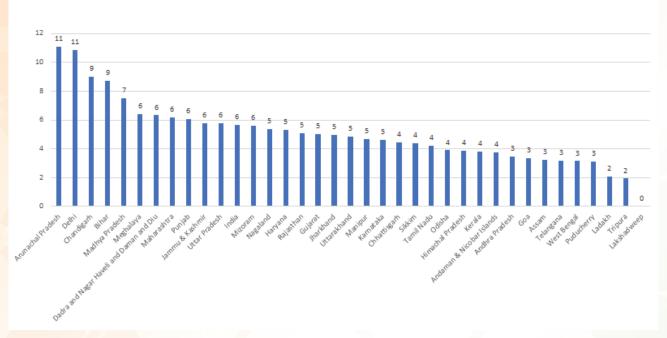
There were 27 crore children (0-18 years) (Census2011) and 25.3 crore adolescents in the age group 10-19 years in India in 2019 (1). Almost 3.42 lakh children (0-14 years) develop TB every year (as per the global TB report). There is an estimated gap of 56% in pediatric TB notification under NTEP during 2019, with only 1.5 lakh paediatric cases notified.

In order to address the gaps in Paediatric TB coverage, NTEP plans to collaborate with Child Health Programs in the country; the two primary health programs that serve children and adolescents across the country are Rashtriya Bal Swasthya Karyakram (RBSK) and Rashtriya Kishor Swasthya Karyakram (RKSK) where the screening of children in the age group of 0-18 will be done through Mobile Health Teams of RBSK and Adolescent Friendly Resource Centers of RKSK.

National level Training of Trainers on NTEP-RBSK- RKSK collaborative framework was organized through a virtual platform for the entire country. State and district level training are ongoing.



# State Wise % of Paediatric TB Cases Out of all cases notified (January to December 2020) As per Nikshay\* data extracted on 12<sup>th</sup> Feb 2021



### **Paediatric Drug Resistant Tuberculosis:**

Currently, there is no official data on the global paediatric DR-TB burden. Estimates indicate that out of the 12 lakh children under the age of 15 who became sick with TB in 2019 globally, 5586 had DR-TB. The world is far away from the 2018 targets set at the United Nations High-Level Meeting on TB and Global Plan to end TB, of treating 115,000 children with DR-TB by the year 2022. The country has a policy to offer upfront Gene X pert testing to all paediatric presumptive TB patients to improve TB diagnosis.

The country is already in the process of procuring child-friendly formulation of drugs used for management of Paediatric DR TB. DCGI has also approved the use of Bedaquiline for children above 5 yrs of age. The use of Delamanid for patient >6 yrs is already implemented pan India and the use of Bedaquiline has been approved by paediatric NTEG and will be rolled out soon. The

programme is also in the process of getting the dispersible 20mg tab of Bedaquiline through Japanese Grant of STOP TB Partnership.

States have been communicated for management for Paediatric DR TB patients by admission in existing DR TB centers with active involvement of paediatricians.

#### **Paediatric Centre of Excellence**

In order to support National TB Elimination Programme (NTEP) in TB control activities in Paediatric age group, a network of Centre of Excellence (pCoE-TB) across the country is being set up at National level, Regional level, State leveland District level, as per the requirement of States/UTs.

Two national level pCoE-TB are already identified at Lady Harding Medical College & Kalawati Saran Children Hospital and National Institute of Tuberculosis and Respiratory Diseases.

### Five Regional Level pCOE identified are as under

S No	Region	States linked	Name of Paediatric CoE
1	West	Dadra & Nagar Haveli, Daman & Diu, Goa, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan	Department of Paediatrics, BJ Medical College Pune, Maharastra
2	North	Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Ladakh, Punjab, Uttar Pradesh, Uttarakhand	Advanced Pediatrics Centre, Postgraduate Institute of Medical Education and Research, Chandigarh
3	South	Andaman & Nicobar Islands, Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu, Telangana	Institute of Child Health-Egmore, Chennai, Tamil Nadu
4	North East	Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura	Agartala Medical College, Tripura
5	East	Bihar, Chhattisgarh, Jharkhand, Odisha, West Bengal	IPGMER (SSKM)- Institute of Post Graduate Medical Education and Research, Kolkata, West Bengal

### **Contact Tracing and Chemoprophylaxis**

Under the programme, contact screening is undertaken as a regular activity to augment intensified case finding efforts across the country. All household members/ contacts of active TB disease are screened for TB. The children less than 6 years of age are provided isoniazid (INH) chemoprophylaxis after ruling out active TB. Widespread implementation of this activity is carried out with support from the general health system.

Nearly 41 lakh household contacts more than 6yrs were screened for TB as part of household contact investigation in 2020. And an additional 23028 TB patients were diagnosed. In less than 6 yrs 488905 children were screened for TB and 4026 paediatric TB cases were diagnosed amongst them. 164969(34%) were initiated on IPT.

### Partners Supporting Paediatric TB Management

SAATHII is working towards reducing TB related morbidity and mortality among

pediatric through a Catalyzing Paediatric TB Innovations (CaP TB) project, a co-funded project by UNITAID and Elizabeth Glaser Pediatric AIDS Foundation (EGPAF). The objective is to support the NTEP by enabling rapid scale-up of paediatric TB services across the private health sector through evidence generation. The project has been scaled up in a phased manner from six to 15 districts between Aug 2018 to Aug 2020 across Andhra Pradesh, Telangana and Maharashtra. The project joins hands with the Indian Academy of Paediatrics (IAP) for joint ownership and training of its member paediatricians.

The key achievements for January-December 2020 are: (a) As part of evidence generation through partnerships with 82 private paediatric sites across 15 districts, 3,62,235 children (75%) out of 4,83,573 attendees were screened, 1429 paediatric presumptive TB cases identified, 85% of them evaluated with chest X ray, and 45% tested with CBNAAT, 170 TB positives identified and initiated on treatment, with 81% of them started on government FDC drugs.

# **Supervision, Monitoring & Evaluation**

# **CHAPTER 7**



Review meeting with development partner on TB Jan Andolan under the Chairmanship of Hon'ble Minister of Health & Family Welfare on 24<sup>th</sup> February 2021.



### **Supervision, Monitoring & Evaluation**

## **CHAPTER 7**

### Introduction

Regular monitoring and review of the programme interventions are an essential component to control the disease. Supervision and monitoring activities are pivotal in ensuring quality services delivery for achieving the vision of TB Free India by 2025.

Monitoring is a continuous process of collecting and analysing information to compare how well a project, programme, or policy is being implemented against the expected result. Monitoring is the day to day follow up of activities to identify deviations so that corrective actions can be taken to bring the activities on the right track. Evaluation is an assessment of a planned, ongoing, or completed interventions to determine its relevance, efficiency, effectiveness, impact, and sustainability.

Evaluation is a collection and analysis of data (information) to determine programme performance. Monitoring and Evaluation are required to manage policy, program, and project implementation efficiently. Programme Indicators are an essential part of a monitoring and evaluation system. The most crucial element in monitoring service delivery is collecting and collating patient-wise data through 'Nikshay'.

'Nikshay' is a case-based web-based real-time patient management system that enables programme managers to monitor their patients real-time. It captures following services delivery components of DSTB and DRTB patients both in public and private sector:

- Demography details of the patients
- Treatment initiation status

- Laboratory tests done
- UDST status
- Treatment adherence/ compliance of the patient
- TB co morbidity status
- Treatment outcome
- Direct Benefit Transfer of Nikshay
   Poshan Yojana

To overcome restrictions inthe field activities imposed due to COVID-19 Pandemic, CTD shifted the focus to Online review of programme performance.

The following activities were conducted by the programme:

- 1. Review by Honourable HFM-International Organizations performance.
- 2. Programme review by Officials AS, JS-NTEP, DDG-TB, CTD Team
- 3. CTD Chaired the DTO review meeting conducted by various states.
- 4. CTD also reviewed the performance of various thematic areas like
  - NRLs & LIMS
  - ACSM
  - Community Engagement
  - DBT-NPY Campaign
  - PPSA Implementation
  - TB Co morbiditiy

### List of activities undertaken during the year 2020:

Sl.No	Activity	Dates
1.	Review by Hon'able HFM	24/06/ 2020 24/11/2020
2.	Jan Andolan	24/11/2020 24/12/2020
3.	Review by Secretary (H)	24/12/2020
4.	Review by AS & JS-NTEP	15/01/2020 17/12/2020 30/12/2020
5.	STO Review by JS-Impact of COVID on NTEP	29/07/2020
6.	CTD Chairing the DTO Review meeting organized by States	Jharkhand (23/01/20) Tamil Nadu (05/02/20) Andhra Pradesh (11/08/20) Rajasthan (27/08/20) Meghalaya (04/12/20)
7.	Review of States by CTD	12-15 June 2020 (STO), 17-19 June 2020 (WHO NTEP),
8.	Partners Review by CTD	SAATHI (07/07/20) JEET (19/12/20) WB Perf Review (27/5/20 & 19/9/20)
9.	National Reference Laboratory Review	NTI (08/07/20) NITRD (09/07/20) JALMA (10/07/20) RMRC (13/07/20)
10.	ACSM Review	South 1 - 13/07/2020 South 2 - 17/07/2020 North East- 24/07/2020 West - 17/08/2020 North 1 - 05/08/2020 North 2 - 10/08/2020 East - 13/08/2020
11.	DBT-NPY Campaign Review	West & South (26/08)
12.	Second Line Drug Stock Review	23/09/20
13.	Community Engagement Review	North 03/12/2020; South 07/12/2020; Central 08/12/2020
14.	PPSA Review	JEET: 20/01/2020, 20/05/2020, 28/08/2020, Domestic:16/12/2020

### Review Meeting:

- Review Meetings were conducted virtually by CTD and States/UTs were facilitated to overcome the impact of COVID-19 pandemic on NTEP.
- Regular monitoring of the States was done through review meeting planned at both the State and the Central level.

### **State TB Score:**

The Central TB Division assesses the States/UTs achievements and performances which are compared with 9 key indicators using the State TB Score. The country was grouped into 3 categories viz: Union Territories, States with population less than 50 lakhs & States with population more than 50 lakhs. Districts are also ranked based on the same indicators.

### **STATE TB SCORE Indicators: Maximum Total Score 100**

Indicator	Numerator	Denominator	Score
% of Target TB notification achieved	Total TB patients notified during the defined period	Target TB patients estimated for the year	20
% of TB notified patients with known HIV status	Number of patients with HIV status known i.e., HIV result is either positive or negative/ Reactive or Non- reactive	Net TB patients notified during the defined period	10
% of TB notified patients with UDST done	Number of patients with UDST done and Rifampicin status known i.e,. Rifampicin status is either Sensitive or Resistant	State Benchmark of Net TB patients notified during the defined period	10
Treatment Success Rate	Number of TB patients with treatment outcome given as success i.e.,. either cured or treatment completed	Net TB patients notified during the same period previous year	15
% of Eligible beneficiaries paid under Nikshay Poshan Yojana	TB patients in whom payment has been done at least once	Total eligible TB patients during the same period	10
% of MDR/RR patients initiated on treatment out of total diagnosed	Number of MDR patients initiated on treatment during the defined period	Net MDR patients diagnosed during the defined period	15
% of expenditure amongst the approved ROP	Fund utilised in the defined period	ROP as approved during the financial year	10

Indicator	Numerator	Denominator	Score
% of children given chemoprophylaxis from the total eligible children identified	Number of children < 6 years given Isoniazid Chemoprophylaxis	No. of children < 6 years eligible for chemoprophylaxis (Totalchildren identified – Children with active TB detected/treated)	5
% of PLHIV given IPT from the total eligible PLHIV	Number of PLHIV given IPT	No. of PLHIV in whom active TB has been ruled out among the PLHIV attending the ART centre	5

States	District	Total Ranking (within the country)
Himachal Pradesh	Kinnaur	1
Odisha	Sonapur	2
Sikkim	DTC Gangtok	3
Odisha	Boudh	4
Himachal Pradesh	Hamirpur	5

Aspirational districts and Tribal districts are also monitored separately based on the same indicators.

States	District	Total Ranking (within the country)	Rank within State
Odisha	Gajapati	9	4
Himachal Pradesh	Chamba	17	7
Odisha	Koraput	19	6
Odisha	Dhenkanal	28	10
Odisha	Kalahandi	31	12

### Tribal Districts Monitoring\*:

States	District	Rank within the Country	Rank within State
Himachal Pradesh	Kinnaur	1	1
A&N Island	Nicobars	7	1
Odisha	Gajapati	9	4
Odisha	Mayurbhanj	12	5
Lakshadweep	Lakshadweep	13	1

N.B, Six indicators namely Notification, HIV Status, UDST, NPY, Treatment Success Rate & IPT <6 years were used for Scoring. and the date of Nikshay Data extraction is 01<sup>st</sup> Feb 2021.

#### **Data Validation Protocols**

Nikshay, National TB Elimination Programmes IT-based information/ patient management system, has addressed the information/ data related challenge by becoming a comprehensive record of all patients' TB related information. This includes Direct Benefit Transfers, implemented across the country for providers in all sectors and constantly aligning itself with the latest changes in guidelines and operational processes.

Nikshay takes up a load of internal data validation at the time of data entry by the user; using a number of protocols and algorithms. Efforts are also underway to collect data directly from electronic devices and external portals, further minimizing erroneous data entry. Reports are calculated automatically based on data entered into the system. Thus, validation is required only at the data source. Data Validation protocols are being developed to ensure accuracy of recorded data.

### **Output:**

No. of Cases identified	No. of Cases
Duplicate	Deleted
11628	

Sub-national Certification of Progress towards TB Free Status

A District or a State will be recognized for achieving "TB Free" status though monetary and non-monetary awards upon verification of successful achievement of targets outlined (80% reduction in TB incidence from 2015 as per SDG Framework). Since it may take a longer

to achieve TB free status, interim recognition is also considered as awards and certification of progress towards TB Free Status under bronze, silver and gold categories for identified milestones before reaching the 80% reduction. The certification and awards will be provided based on the claim submitted by respective District/State/UT through an appropriate channel as defined in this document.

### **Sub-national Certification of Progress towards TB Free Status**

A District or a State will be recognized for achieving "TB Free" status though monetary and non-monetary awards upon verification of successful achievement of targets outlined (80% reduction in TB incidence from 2015 as per SDG Framework). Since, it may take a longer duration for achieving TB free status, in order to motivate the states, interim recognition is also considered as awards and certification of Progress towards TB Free Status under bronze, silver and gold categories for identified milestones before reaching the 80% reduction. The certification and awards will be provided based on the claim submitted by respective District/State/UT through an appropriate channel as defined in this document.

# Rewards for Sub-national certification for TB Free Status: (Rupees in Lakhs)

Inci- dence decline	≥20% - BRONZE	≥40% - SIL- VER	≥60% - GOLD	≥80% - TB FREE
State	25	50	75	100
District	2	3	5	10

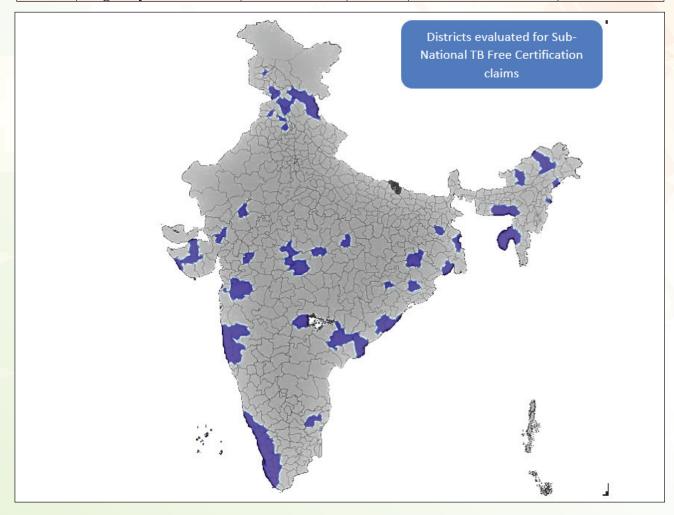
A National Task Force was constituted for the purpose has guided in the development of protocol for verification and the validation exercise scheduled to be done in February 2021 and successful States/Districts to be awarded on World TB day 2021.

The following is the list of States/ UTs and districts that have Claimed for Subnational TB free status verification.

States/UT: Kerala, Lakshadweep, Puducherry

### Districts:

Sl. No.	States/UT	No. of Districts	Sl No.	States/UT	No. of Districts
1	Andhra Pradesh	2	11	Mizoram	1//
2	Arunachal Pradesh	4	12	Nagaland	1
3	DNH & D&D	3	13	Odisha	2
4	Gujarat	6	14	Punjab	3
5	Himachal Pradesh	5	15	Rajasthan	2
6	J&K	3	16	Tamil Nadu	1
7	Jharkhand	4	17	Telangana	4
8	Madhya Pradesh	6	18	Tripura	4
9	Maharashtra	11	19	West Bengal	2
10	Meghalaya	3		Grand Total	67



**Nikshay** 

# **CHAPTER 8**



Release of Training Manual on Direct Benefit Transfer under Nikshay by Hon'ble Minister of Health & Minister of State, MoHFW on 24<sup>th</sup> June 2020.



**Nikshay** 

## **CHAPTER 8**

### Introduction

The accumulation of quality health-related data is of utmost importance for the success of all public health initiatives. Without correct and current data, diseases cannot be understood, health programs do not accomplish their goals, and resources cannot be rightly allocated. A functioning surveillance system therefore can improve health promotion programs, and help policy makers and funders allocate resources effectively.

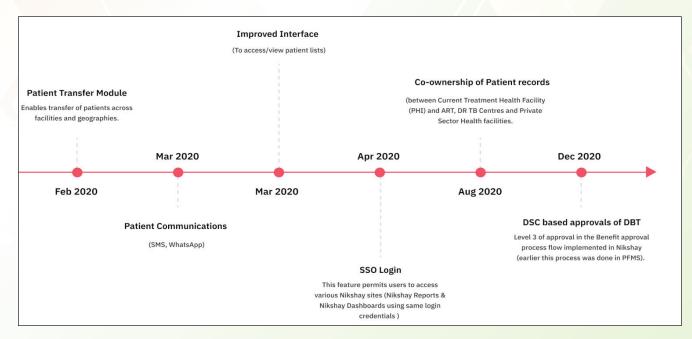
With the National TB Elimination Programme going forward to End TB by 2025, the management of the entire database of patients and monitoring of the programme activity with all its complexities falls under the purview of Nikshay.

Nikshay serves as a national TB patient information Management Tool for both public and private sectors and for both pulmonary & extra pulmonary of TB patients. It allows the user to manage information of each patient throughout the patient lifecycle related to

screening, diagnosis, treatment, follow-up, outcomes, transfers as well as Public Health actions like Contact Tracing, Comorbidity testing and adherence monitoring.

Nikshay also enables electronic transfer of benefits, directly to the bank account of beneficiaries under four incentive schemes provisioned by Government of India; as per eligibility. These incentive schemes are Nikshay Poshan Yojna, Tribal Incentives, Private Provider Incentives and Treatment Supporter Incentives. DBT is done through integration with Public Financial Management System (PFMS).

Nikshay has been developed and implemented under the leadership of Central TB Division, MoHFW, with technical guidance from WHO and support from Everwell Health Solutions Pvt. Ltd. In 2020 NTEP introduced numerous upgrades in the various ICT based solutions deployed, for improved programme management and patient centered care.



### **Nikshay**

In 2020, focus and efforts were directed towards the following areas:

Apart from launching the aforesaid features, efforts were also directed towards the following:

- 1. Improvements in performance (system response time) and minimal system maintenance / down times
- 2. Ongoing efforts towards strengthening the backend architecture so that Nikshay becomes more robust and scalable.
- 3. Improvements in integration between (Nikshay and PFMS systems Nikshay is now updated with the latest PFMS Bank Master on a real time basis). Batch rejections have reduced to near zero. Improved Benefit and beneficiary status reconciliation process between Nikshay and PFMS has increased the efficiency of DBT processes.
- 4. The third level approval in the benefit approval process flow is now implemented in Nikshay (earlier this process had to be done in PFMS). This can be done for DSC based payments as well as non-DSC based payments. These will enable users to complete the entire approval process in Nikshay itself.
- 5. In 2020, about 500 districts have moved to DSC based approvals in PFMS instead of PPA based approvals. This has reduced the time taken for payment of benefits via Nikshay PFMS integration.
- 6. An exhaustive Standard Operating process (SOP) document on DBT was prepared and launched by Honorable

HFM, to guide various programme stakeholders on the detailed process of the incentive schemes implemented in Nikshay.

Following are the functionalities that are presently under development and planned to be launched in early 2021:

- 1. Aadhaar authentication services for NPY
- 2. Patient centric mobile application-TB Arogya Sathi.
- 3. Revamped Dispensation Module
- 4. Revamped Diagnostics Module
- 5. Informant DBT Scheme (to enable benefit payments to informants)
- 6. TB Symptom checker
- 7. LTBI Module

# Integration between ICT activities of other Health programs and Nikshay

Apart from the above functionalities, efforts are on for integration of Nikshay with SOCH (Strengthening Overall Care for HIV beneficiaries), which is a web and mobile based system to record beneficiary service and inventory transactions in the National HIV program. The key components of Nikshay – SOCH integration is summarized in the table below-

Information Flow	
Referral from Nikshay to SOCH for HIV Testing	Enrolling beneficiary in ICTC (SOCH) module referred from Nikshay
	Beneficiary verification from Nikshay to SOCH
	Getting the HIV result from SOCH to Nikshay

Information Flow		
	Enrolling beneficiary in Nikshay from SOCH system	
Referral from SOCH to Nikshay for TB	Request for TB testing from SOCH to Nikshay	
Testing	Getting beneficiary TB result from Nikshay to SOCH	
	Nikshay verification and deduplication API	

Information exchange between Nikshay and portals is also on the anvil. Ayushman Bharat-Health & Wellness Centre- Comprehensive Primary Healthcare (AB-HWC-CPHC). This integration of the two systems will enable seamless information sharing to effectively manage beneficiary care management pathways and ensure continuum of care. Currently programme level integration is envisaged only for public health facilities and public health users.

The following are the guiding principles of the integration-

- Common end users such as ASHA, ANM should preferably have single sign on facility to both the systems
- Both systems should have the most updated information that is necessary for field level actions
- Mechanism to be built to handle failed transactions/ exceptions

### Nikshay in numbers

Registered entities till Dec 2020-

Public Health Facilities= 39136 Private Health Facilities= 244508 Staff= 267714

Number of TB patients notified in Nikshay

from **2017** to **2020**= 80,42,008

Number of beneficiaries paid at least 1 benefit since inception of NPY in April 2018 to Dec 2020= 39,37,719

**Amount disbursed till Dec 2020** (since inception of NPY)= 990.4 crore

### **Nikshay Reports**

- 1. Released 10 new registers Patient and 7 new summary reports pertaining to various modules.
- 2. Improved the performance of the portal to ensure that large files get downloaded within 60 seconds
- 3. Improved the User Interface Standardized search filters across all reports/ registers and introduced help text / report definitions





From Nikshay reports, various indicators can be calculated. For example, it has been seen that in 2020, the average time taken for initiation of treatment after diagnosis is 3.4 days in the entire country. The average time is more than country's average in 13 states/UT like Assam, Chandigarh, Delhi, Haryana, Maharashtra, Manipur, Meghalaya, Orissa, Puducherry, Rajasthan, Sikkim, Tripura and West Bengal.

### **Nikshay Data Policy**

Real time recording of patient data has been envisioned under NTEP and is vital to ensure timely follow up and monitor progress towards successful treatment out comes. This also facilitates programme managers to monitor the programme using various performance indicators. During review meetings and supervisory visits, huge back log of entries in

notifying TB patients as well as updating other public health action related information in Nikshay was observed. Delayed completion of entries results in variation of figures available from reports over time and this continuous variation under-mines reliability of the MIS system, introducing challenges in supervision, monitoring and evaluation.

In order to ensure uniformity of data forth purpose of Supervision, Monitoring & Evaluation across all levels, it has been decided that data from Nikshay only shall be considered as final. Moreover, to address the data entry backlog in Nikshay, it has been decided to provide a fixed time period, allowing sufficient time for the user to make entry into the system and after which, the reports on Nikshay would be considered as final. The fixed period for each in dicatoris mentioned in table below-

### Maximum time period allowed for data entry and updation:

	Report type	Freeze period for patient diagnosed in Month X	If X=Jan2020	Remarks
	Notification, Treatment initiation of notified patients, TB comorbidity testing, UDST	X+2 months	01/03/2020	Min 1 month given to review and correct data
	End IP Follow up (DSTB patients)	X+5 months	01/06/2020	3 months to end IP follow up + Min 1 month to review and correct data
	Treatment Outcome (All DSTB patients)	X+10 months	01/11/2020	8 months of treatment duration + min 1 month to review and correct data
	Treatment Outcome (DRTB Patients) (Shorter regimen/ H-mono/ poly regimen)	X+15 months	01/04/2021	Up to 11 months of treatment duration + 2 months for follow up culture report + min 1 months to review and correct data
	Treatment Outcome (DRTB Patients) (All other DRTB regimens)	X+ 30 months	01/08/2022	Up to 27 months of treatment duration +2 months for follow up culture report+ min 1 month to review and correct data

Report type	Freeze period for patient diagnosed in Month X	If X=Jan2020	Remarks
End IP/6 month follow up (DRTB Patients)	X+10 months	01/11/2020	8 months for follow up + 1-2 months to review and correct data

(The above data policy is according to the regimen that existed in NTEP in early 2019.)

States have been requested to adopt the above criteria on a priority basis, to ensure uniformity in carrying out Supervision, Monitoring and Evaluation activities. For all Drug sensitive TB cases enrolled in Nikshay after diagnosis has been made, the average delay in enrolling a TB case from the date of diagnosis for the entire country has been found to be 2 days in 2020 as compared to 15 days in 2019.

### **Nikshay Dashboards**

Dashboards portal was launched in 2020. Dashboards provide a visual representation of the various NTEP indicators to users across all levels- Country  $\rightarrow$  State  $\rightarrow$  District $\rightarrow$  TU  $\rightarrow$  HF (PHI or Private Sector HF). It enables administrators and programme staffs across all levels monitor and review their performance against the select indictors. The various filters enable users to monitor the indicators over time and drill down up to the PHI level. The Dashboards are accessible via a web browser, and can be viewed using both, desktop, and mobile devices. In each of these Dashboards there are options to have the Geographic, Tabular and Summary views. 4 Dashboards have been released so far- TB Index, TB Notification, DBT Reports and DBT Process Indicators.





### Way forward

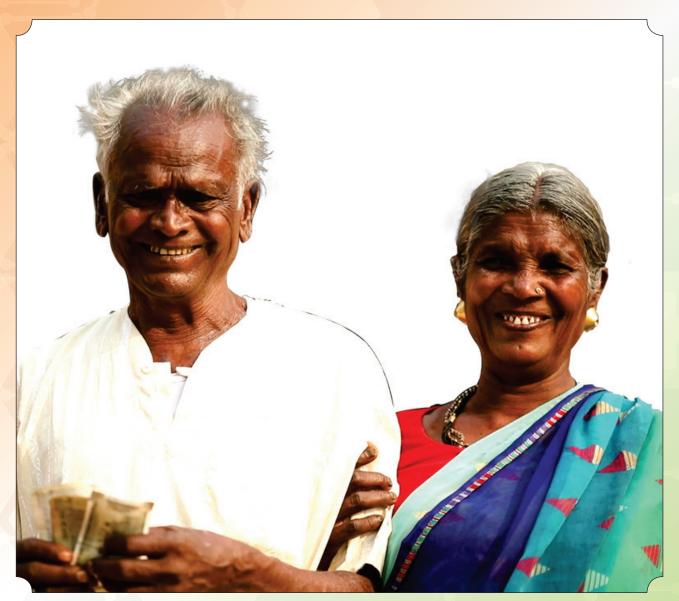
Programme envisions a real time paperless surveillance system for the National TB Program. At the same time Nikshay has to constantly go through numerous changes and updates to keep pace with the National Programme that is mandated to End TB by 2025 as well as incorporate newer technologies for integration and make it more user friendly.

(All figures for year 2020 have been extracted from Nikshay on 12th February 2021)



# **Direct Benefits Transfer (DBT)**

# **CHAPTER 9**



Received financial incentives under Nikshay Poshan Yojana



### **Direct Benefits Transfer (DBT)**

## **CHAPTER 9**

### Introduction

Direct Benefit Transfer (DBT) is a major reform agenda of the Government of India, entailing targeted delivery of benefits to citizens through the effective use of technology. Through DBT, benefits for any government scheme gets directly transferred into the bank accounts of the beneficiary, thus providing efficiency, effectiveness, transparency and accountability for each transaction.

The following DBT schemes of National TB Elimination Programme are being implemented:

- Nikshay Poshan Yojana (NPY)
- Incentive to Treatment Supporters/
   DOTS Providers
- Notification incentive to Private Providers
- Transport incentive to Tribal TB patients

India, with partial financing provided through a World Bank loan. The DBT provides Rs 500 per month to notified TB and MDR-TB patients for the duration of their treatment. Overall financing for the DBT is estimated at 600 Crore for 2020.

The TB patients taking treatment from both, public sector facilities and private sector providers are eligible to receive incentives under this scheme.

Beneficiary	All notified TB patients for the duration of treatment	
Objective	To provide financial incentive for nutritional support to TB patients from the time of notification.	
Benefit Amount	Rs 500 per month will be paid during the course of treatment	

### Nikshay Poshan Yojana

Government of India's National Strategic Plan for Tuberculosis Elimination (2017 - 2025) is committed to provide Direct Benefit Transfer (DBT) for all TB patients in order to support their nutrition needs and help address the financial burden of tuberculosis for the affected households.

The scheme called "Nikshay Poshan Yojana" was introduced in April 2018 by the National TB Elimination Programme, Ministry of Health and Family Welfare (MoHFW), Government of India. Guidelines and training have been successfully completed on the implementation of the scheme by MoHFW in all States. The scheme is financed by the Government of







Government of India has launched

Direct Benefit Transfer Scheme for

### **Private Providers Incentives**



### **Incentive to Treatment Supporters/DOTS Providers**

Beneficiary	Community Treatment Supporters who support patients during treatment and till successful treatment (Cured or Treatment completed.)	Ministry of Health & Family Welfare Government of India has launched	
Objective	To provide honorarium to the treatment supporters for supporting TB patients	Direct Benefit Transfer Scheme for  Treatment Supporters Honorarium	
Benefit Amount	<ul> <li>INR 1,000 as a one-time payment on update of Outcome for Drug Sensitive TB Patients</li> <li>INR 2,000 on completion of Intensive phase (IP) and INR 3,000 on completion of continuous phase (CP) of</li> </ul>	TB Harega Desh Jeetega	
	treatment or total INR 5000.	To know more, visit nikshay.in or call at 1800116666	

### **Incentives to Private sector Providers for notification of TB patients**

Beneficiary	Private Providers (Private Practitioner, Hospital, Laboratory and Chemist) who notify TB patients to National TB Elimination Programme
Objective To provide financial incentives for notification, follow-up till outcor patients who are diagnosed/treated by the beneficiaries.	
Incentive Amount	INR 500 as a one-time payment on notification INR 500 to Private Practitioner or Hospital for updating the patient's treatment outcome.



### **Incentives to informants for referring presumptive cases to Public Sector Facilities**

Beneficiary	Any member of the community or civil society organization including ASHAs who contribute to National TB Elimination Programme's case detection
Objective To provide financial incentives for referring presumptive cases for Terminal Services in the public sector.	
Benefit INR 500 as a one-time payment on referral of presumptive cases amount sector health facility; who gets diagnosed with TB.	

### **Transport Incentive to Tribal TB patients:**

Beneficiary	All Notified TB patients from Notified Tribal areas	DOTS .	Ministry of Health & Peanty Yeaffare Overnment of India	्रागीरहीत्रपु
Objective	To provide financial support for transportation.	— тв	Government of India has launched  Direct Benefit Transfer Scheme for  Patient Support In Notified Trib	
Benefit Amount	INR 750 as a one-time payment at the time of notification		TB Harega Desh Jeetega	
			To know more, visit nikshay,in or call at 180011688	

### **Informant Incentive:**

Beneficiary	<ul> <li>Any member of community or civil society organization who wishes to contribute to case detection and treatment efforts of NTEP can be designated as an informant.</li> <li>All existing ASHAs* and community-based Treatment Supporters registered on Nikshay are deemed to be an informant.</li> </ul>
	*Any salaried person (regular/contractual) from the public sector cannot be designated as an informant.
Objective	To increase TB case notification
Benefit Amount	INR 500 as a one-time payment on notification

### **Progress**

### Progress in implementation of DBT schemes in 2020 cohort (as per Nikshay)

Scheme	<b>Total Beneficiary Paid</b>	<b>Total Benefits Paid</b>	<b>Total Amount Paid</b>
Nikshay Poshan Yojana	10,34,221	33,32,348	₹ 230,80,000,00
Treatment supporter	2,31,251	2,42,564	₹ 25,00,000,00
Private provider	460	460	₹ 2,30,000
Tribal patient support	72,382	72,382	₹ 5,40,000,00

Note: State wise/ District wise list of top performers on NPY implementation to be included as annexure

### **Steps Taken for fast-tracking DBT under NTEP:**

Central Tuberculosis Division (CTD) introduced Digital Signature Certificates (DSC) under the programme in the year 2019, to ensure that the DBT beneficiaries get their due benefits much quicker than the earlier practice of approvals through physical signature(s). To implement Digital Signature Certificate (DSC) based payments across the country, many States/Districts have started the implementation of the DSC based payment system. The summary of DSC Implementation status as of 15<sup>th</sup> Feb 2020 is as under:

	Total Districts Mapped in Nikshay		Districts with Pending DSC Implementation
India	769	628 (82%)	141 (18%)

As a part of this process some changes are envisaged in Nikshay as well, like setting up features of DSCs and changes in DBT processing workflows to include Agency approver to digitally sign payment request files. The development for the same has been completed in Nikshay. Currently, PFMS supports the digital payment via DSC based approvals. However, going forward, Nikshay will be upgraded such that the DSC based approval of payments could be done in Nikshay (instead of PFMS). This upgrade has two advantages:

Users will not need to login into two separate portals, Nikshay and PFMS for processing payments and the entire approval process can be completed in Nikshay.

Since digitally signed batch files would be sent by Nikshay to PFMS, the technical integration mechanism would be more safe and secure.

This feature can be enabled (PFMS Agency wise) by a one-time configuration process by STO Users.

Under the guidance of Central TB Division, approximate 50 training sessions were held with the consultants and state officers, coupled with regular weekly review meetings placed across the country which was supported by CHAI, WHO, Everwell and UNION.

In Phase – I of DSC implementation, the states which had progressed in procuring DSC keys lead the way for other states which were yet to initiate file approvals, which was followed

by Phase-II, in which all the remaining States/ UTs were asked to adopt DSCs. As of December 2020, more than 70% district-level agencies have completed the DSC based payments. With the increased use of DSCs and the support from state offices, it is encouraging to note the advantages DSCs has brought to patients / beneficiaries for meeting their nutritional requirements and significantly reducing time to credit of benefit transfer.

- The NIKSHAY database is integrated with PFMS (Public Finance Management System) for smooth transfer of benefits directly into the bank account of the beneficiaries.
- DBT module in Nikshay is active for four DBT schemes viz. NPY, Treatment Supporter Incentive, Tribal Support Scheme and Private Provider Incentive Scheme, through which users are able to make DBT payments to the respective beneficiaries.
- Nikshay Dashboards are also made available for the four DBT schemes through which aggregate data on DBT can be graphically visualized and drilled down to the PHI level.

### **Challenges and way forward:**

The Year 2020 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 across the board. Exceptional measures including providing door-step services were implemented post-lock down period to recover the ground. Other than this, invalid or dormant bank accounts or holding of account in a branch which is yet to be integrated with PFMS (Public Finance Management System) are a few challenges being faced in DBT implementation. To overcome these issues and to ensure that TB patients are not denied of NPY benefit, flexibility of providing the benefit through existing bank account of a blood relative has been given. Pilot project for opening bank accounts through Indian Payments Postal Bank (IPPB) have 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).



# **Budgeting and Finance**

# **CHAPTER 10**



Release of India TB Report 2020 by Hon'ble Minister of Health & Minister of State, Secretary (H), AS & FA of MoHFW



### **Budgeting and Finance**

### **CHAPTER 10**

National TB Elimination Programme (NTEP) (formerly known as RNTCP) is a centrally sponsored scheme under NHM to implement the programme activities, as envisaged under NSP 2017-25.

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

Institutional arrangements: Central TB Division (CTD), being a part of the National Health Mission (NHM) holds the overall responsibility of financial management of the program. Similarly, at the state and district level, the State TB Cell and the District TB Centre are responsible respectively.

**Budget:** Programme 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).

**Funds Flow and Releases:** The fund flow remains within the existing financial management system of the MoHFW, which operates through the centralized Pay and Accounts office. Release of funds to states is done in installments through State Treasury.

**Sanctions & Approvals:** All procurements of commodities are processed by the

Central Medical Services Society (CMSS), an autonomous society under MoHFW, Govt. 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 programme 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 CTD to MoHFW and donors including The Global Fund and World Bank on periodic intervals based on the compiled monthly accounts and CTD's own record of expenditures.

**External Audit:** The audits are being conducted as per the standard terms of reference. The audit reports are then being made available to all donors as per the agreement. At state level, audits are being done as per state NHM manual and guidance for audit by empanelled chartered accountancy firms of the state. All the states are required to submit the annual audit report to CTD by 30<sup>th</sup> September of the subsequent financial year.

#### Financial Performance of NTEP:

(Rs. In crores)

Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Budget Requested	1300.00	1000.00	2200.00	4115.00	3525.00	3554.00	15694.00
Budget Estimates/ approved Budget	640.00	640.00	1840.00	3140.00	3333.21	3109.93	12703.14
Total Releases to States	483.19	533.17	871.36	907.65	870.81	449.64*	4115.82
Total Expenditure	639.86	677.78	2759.44	2237.79	3130.11	2061.99*	11506.97

<sup>\*</sup>till 31st December 2020

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

Since 2003, The Global Fund is supporting National Tuberculosis Elimination Programme in addressing TB burden in the country. As part of 2017-2019 allocation period of the Global Fund, a grant of USD 201 million has been allocated to Central TB Division as Principal Recipient for the period from January 2018 to March 2021. The grant is supporting scaling up high impact programme 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, Establishment of National Project Management Unit, Capacity Building to strengthen Public Financial Management Services and contribution to Green Light Committee. Apart from this, some of the key projects being implemented by the "Sub-Recipients" of the Central TB Division under the Global Fund Grant 2018-2021 are as follows:

- i. Indian Council for Medical Research (ICMR): ICMR is implementing four Operational Research studies for a budget of USD 3.43 million (Rs 22,29,63,065/-)underthe Global Fund grant to generate crucial TB related evidence and strengthen Operational Research (OR) component under National Tuberculosis Elimination Programme.
- ii. Tibetan Voluntary Health Association (TVHA): The project involves Active Case Finding in Tibetan Refugee Community in India with special emphasis on TB case detection, continuum of care including HIV co-morbidities for the period from January 2018 to March 2021 with an allocation of USD 0.33 million (Rs 2,20,52,940/-).
- iii. Tata Institute of Social Sciences (TISS): This project is focused on MDR and XDR TB through structural counselling and psycho-social

support interventions to improve treatment adherence in four States i.e. Maharashtra, Gujarat, Karnataka and Rajasthan for budget of USD 4.64 million (Rs 30,17,49,760/-).

iv. Southern Health Improvement Samity (SHIS): This project is funded to support Active Case Finding in the "Unreached" key population areas on the Sundarban region 19 Blocks under Sunderban belt, comprising portions of North and South. 24 Parganas with an allocation of USD 0.37 million (Rs 2,43,50,235/-).

In 2020, Central TB division submitted TB Funding Request for the Country through India CCM to avail allocation of USD 280 million grant from the Global Fund for period April, 2021-March, 2024. The entire allocation request has been recommended by the Technical Review Panel (TRP) of the Global Fund for grant making and to commence implementation from April, 2021.

The key components and implementing agencies of the next Global Fund grant (2021-24) are as under:

Central TB Division						
Implementing Principal Recipient (PR)	Key Interventions under the TB grant					
Government Principal Recipient	<ul> <li>Expanding the coverage of DR TB treatment</li> <li>Decentralization of Rapid Molecular diagnostics and strengthening of Laboratories</li> </ul>					
Sub Recipients to CTD a. TISS b. NIRT c. Humana d. TCI Foundation e. SPYM	<ul> <li>Psychosocial counselling support for DRTB patients</li> <li>Strengthening TB Surveillance</li> <li>Addressing TB in the vulnerable populations</li> </ul>					
Non-Government Principal Rec	ipient					
International Union Against Tuberculosis and Lung Diseases (The UNION)	<ul> <li>Scale-up programmatic management of TB preventive treatment</li> <li>Multi-Sectoral co-ordination and workplace interventions</li> <li>Technical support for PFMS</li> </ul>					
William J Clinton Foundation (WJCF)	<ul> <li>Scale-up programmatic management of TB preventive treatment</li> <li>Sustain and strengthen the gains under JEET project through transition to domestic resources</li> </ul>					
Foundation for Innovative Diagnostics (FIND India)	<ul> <li>Scale-up programmatic management of TB preventive treatment</li> <li>Strengthening laboratory system across the TB programme</li> <li>Engagement and empowerment of TB communities</li> </ul>					
PLAN India	Strengthening Supply chain management					

#### **World Bank:**

The NTEP has availed a USD 400 million IBRD loan from World Bank to fulfil the NSP funding gap. The DEA's 84<sup>th</sup> Screening Committee approved a project of "RNTCP World Bank IBRD US\$ 500 "Moving toward Elimination of TB 2018-2025 in 2 tranches of USD 400 and USD 100 million for a total period of 6 years.

The Programme Towards Elimination of TB (PTETB) is a well-defined subset of the government program. The PTETB agreement was signed on the 21st of January 2019.

The PTETB was carved out of the NSP by: (i) result area; (ii) geographical area with the selection of priority states; and (iii) time frame.

### The Programme focuses on four result areas (PfR):

- i. Scaling up private sector engagement;
- ii. Rolling out TB patient management and support interventions;
- iii. Strengthening diagnostics and management of DR-TB; and
- iv. Strengthening NTEP institutional capacity and information systems.

These results areas are inter-linked and mutually reinforcing.

Four 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. WHO has been appointed as the Independent Verification Agency for the process.

Year 1 targets have been achieved & the DLIs have been verified by independent verriciation agency. A total claim of USD 122.20 million was claimed against the target of USD 70.00 million. US \$ 40 million was received upfront to buy down principal amount of the loan with support from Global Fund. An additional 100 million \$ will be made available subject to completion of all activities & utilization of \$ 400 million

Year 2 has been completed and the verification process is under process. The claims for year 2 will be submitted by Programme Division post the verification by IVA i.e. WHO.

# **Procurement & Supply Chain Management**

### **CHAPTER 11**



Welcome of Minister of Health & Family Welfare in TB Harega Desh Jeetega Campaign by Addl. DDG (TB)



# **Procurement & Supply Chain Management**

### **CHAPTER 11**

#### **Background:**

The National TB Elimination Programme strives to ensure a continuous supply of quality assured diagnostics, Anti TB Drugs, equipments and all related commodities to every TB patient diagnosed in the country. This procurement is planned, coordinated and conducted centrally on an annual basis through a well-defined procurement mechanism. The financial support for procurement is provided by Domestic Budgetary Source (DBS), and The Global Fund (TGF). NTEP now centrally procures LPA, LC-DST & Naat Consumable ensuring adequate availability at field level. While procurement of consumables decentralized to the states, certain drugs may be procured by the states during emergencies with prior consent from CTD.

#### **Structure of Procurement:**

The procurement of anti TB Drugs (first and second line) under DBS mechanism is conducted through a procurement agency selected by the Ministry of Health and Family Welfare (MoHFW), i.e., M/s Central Medical Services Society (CMSS), an independent and autonomous body under MoHFW. Procurement for The Global Fund mechanism is enabled through the Global Drug Facility (GDF) of the Stop TB Partnership housed and administered by the United Nations Office for Project Services (UNOPS) and the International Dispensary Association Foundation (IDA). The authorized procurement agent is responsible for ensuring all bidding procedures under the International Competitive Bidding (ICB) and supply of anti TB drugs to the consignees is completed in a timely manner.

#### STATE LEVEL MONITORING REPORT



Uninterrupted supply of Anti TB Drugs during COVID19 Pandemic –

- Proactive steps were taken during the pandemic to ensure dispensation of drugs for one-month duration to newly diagnosed TB patients and patient currently on treatment.
- Arrangements were made and appropriate instructions were provided to ensure that drugs can be issued from any other nearby health facility to the patients who were unable to approach health facility from where she / he were taking medicines. Provisions were also made in Nikshay Aushadhi for the record management.

- with all the State/UTs for support during the lockdown. In addition, Direct Mobile Numbers of Central Level Supply Chain Management Team were also shared. The same were also flashed on the TBC India website and Nikshay Aushadhi portal to facilitate patients / states in case of any drugs logistics issues during lockdown.
- A close watch and observation were maintained for all Anti TB drugs at national, states, district and subdistrict levels to ensure that all patients had access to medicines without any delay or interruption in their treatment course during National Lockdown.
- Procurement of sufficient Anti TB drugs as per the requirement of the states was ensured. Meetings were held with suppliers to ensure timely supply of drugs during the pandemic.
- Programme division continuously monitored the procurement processes and relevant progress to ensure that all procurements materialized and were delivered in the desired timeframe as per the programme need.
- As part of preventive chemoprophylaxis, Isoniazid and Pyridoxine were procured and given to children aged less than 6 years and PLHIV
- Provision was made to release drugs through Nikshay Aushadhi to the private sector for treatment of TB patients to facilitate private sector engagement.

#### **NIKSHAY Aushadhi**

An electronic drug distribution management

system has been implemented across the country. Nearly 29,922 stores are reporting through NIKSHAY Aushadhi (All State, District and Block level drug stores and >50% of PHC level stores are reporting drug inventory through NIKSHAY Aushadhi).

20,000 computer TABLETS have been provided for accelerating **NIKSHAY** implementation and Aushadhi enabling real-time reporting. Virtual workshops/ Video Conferences are regularly conducted with States and districts on corresponding supply chain and logistics practices for stock management under NTEP.

#### The programme currently has

- Anti TB Drugs Central TB Division procures all anti-TB drugs (DSTB, DRTB are procured annually based on the requirements of the programme.
- ◆ LED Microscopes: 2500 LED microscopes were procured and installed at various TB Diagnostic Centres to provide more accurate and efficient diagnostic equipment for the management of drug sensitive TB
- CBNAAT: 1268 CB-NAAT machines and over three million cartridges were procured to strengthen diagnostic capacity and enable scale up of rifampicin sensitivity testing.
- Mobile Diagnostic Vans 45 mobile vans procured and handed over to the states
- In addition, newer diagnostics including
- TrueNat (Chip-based Real Time micro-PCR Tests- – Successful procurement of 1879 TrueNat machines along with TrueNat chips were done.

- X-Ray with CR System Successful procurement of - 395 X-Ray with CR systems.
- New formulations drugs for all oral DRTB regimen for adults and children, including newer drugs like Bedaquiline and Delamanid were successfully procured
- Child friendly formulations (Dispersible tablets) were procured for the 1<sup>st</sup> time under NTEP.

In case of emergencies NTEP has made provisions for procurement of anti-TB drugs locally through the NHM. Orders have been issued to mitigate acute local drug shortages through facility for emergency procurement up to 25% of total state annual requirements for all drugs.

#### Quality Assurance of anti-TB drugs:

All anti TB drugs procured meet internationally approved and accepted quality standards.

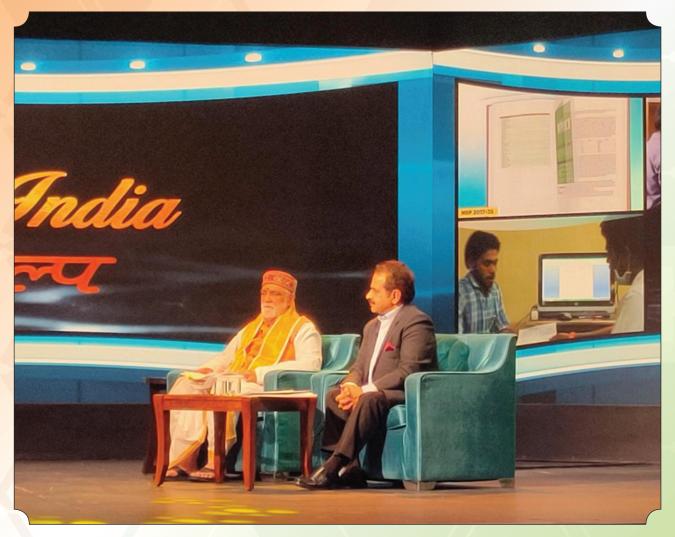
- Each drug used by a patient is safe, efficacious and has appropriate standards of quality.
- System of pre-dispatch & post-dispatch testing of drugs is established
- Quality of drugs are continuously maintained and remains the same throughout the supply chain of the drugs.

Multifaceted of procurement and logistic requirements of NTEP are undertaken through a vide variety of stake holders ensuring smooth functioning of NTEP down to the last mile.



# Advocacy, Communication & Social Mobilization

### **CHAPTER 12**



Hon'ble Minister of State, MoHFW has participated in New India Sankalp – 2 through Doordarshan on Tuberculosis on 5<sup>th</sup> February 2020



# Advocacy, Communication & Social Mobilization

### **CHAPTER 12**

Advocacy, Communication and Social Mobilization (ACSM) remains a cross cutting, strategy that focuses on all aspects of TB care for ensuring quality in diagnosis and treatment, strengthening social support systems for TB care and community interventions to reduce stigma. It is important that ACSM plays a more complementary and catalytic role across all thematic areas of the programme as well as align efforts with other public health programmes for synergistic communication.

The emergence of COVID 19 has diversely affected routine programmatic communication of TB elimination efforts. Not only has this caused severe disruptions in scheduled communication activities for the year, 2020, especially planned mass media campaigns around programme accelerators like TB Harega Desh Jeetega and community engagements like Meetings, Walks and Rallies, but the rapid shift of focus towards COVID-19 crisis communications has forced cancellations of major flagship events like the World TB Day 2020. Lockdowns and social distancing measures have ensured electronic channels and social media has emerged as the primary medium for information dissemination and consumption.

Below, are the ACSM activities undertaken during the financial year 2020:

#### **Rebranding RNTCP:**

Given the ambitious target of achieving the Sustainable Development Goal (SDG) of on TB by 2025, five years ahead of the Global Targets, a need to change the name of the programme to better represent the goal was felt. Accordingly, in January 2020, name of the programme

was changed from the Revised National Tuberculosis Control Programme (RNTCP) to the National Tuberculosis Elimination Programme (NTEP).

#### National TB Elimination Programme



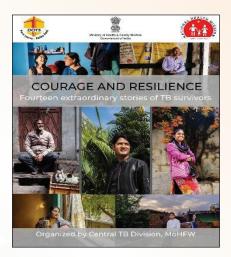
#### (NTEP) Logo Launch:

The existing DOTS logo has been extensively used over the decades and has a strong association with TB. However, the logo also required an urgent

upgrade with the change in the name of the programme. The logo revamp exercise was undertaken while retaining some pre-existing elements that evoke strong recall value with the programme. A multiagency and multi-stakeholder process was conducted and after two rounds of shortlisting from several options, the final logo was unanimously selected. The new NTEP logo has been shared across the programme network and is currently in use across the communication material of the programme.

#### **National Photo Exhibition:**

Photo Exhibitions are an incredible way to communicate and popularize an idea and create an experience. Central TB Division in the run-up to the World TB Day planned a sequence of events to culminate it with the main event on 24<sup>th</sup> March 2020. One of the scheduled events was the national photograph exhibition titled "Courage and Resilience" – Fourteen extraordinary tales of TB patients".







The exhibition was held at the Central Park in Connaught Place, New Delhi. The location chosen was strategic and received numerous footfalls and is one of the most heavily visited spots in the national capital. It was open to public for viewing from 4-10th March, 2020. The exhibits were compelling in their portraiture of the individuals and the gripping stories of each patient who are TB survivors and now leading normal lives. The photography exhibition successfully challenged the prevailing stereotypes and preconceptions about TB, TB patients and its prevalence and cure. This activity managed to mould public perception in favour of talking TB and normalising it among the common masses. The activity was in partnership with Global Health Strategies.

Media Engagement (Print/Electronic):

Press Briefing: The media serves as agenda setters, frames how people see an issue and influence them. Harnessing the power of media for the programme is an ongoing initiative of ACSM. A National media sensitization workshop was conducted to promote the understanding of Tuberculosis and the recent policy initiatives with an aim to increase public awareness and develop a better understanding by engaging the media. A large contingent of national media was present in the workshop,

and it resulted in more than hundred plus news reports coverage in the national and regional press across the media platforms. Subsequently, in the span of the year, over ten press and media interactions were actively pursued, with an average of one per month, in the form of disseminating press releases, addressing specific media queries etc resulting in national and regional media coverage. The predominant themes dealt with were COVID and Government of India response, COVID and TB, India TB Report, Impacts of COVID on TB care, Initiatives taken for uninterrupted TB care in view of the pandemic situation etc. In addition to this, opinion editorials were also developed on similar themes.







#### रैली निकाल लिया टीबी को हराने का संकल्प



स्थान कर कर के प्राप्त के प्रति के प्

#### औद्योगिक क्षेत्र के कार्यस्थलों को बनाएंगे टीबी फ्री

सीआईआई के सहयोग से आयोजित वर्चुअल परिचर्चा में बनी रणनीति

#### CII & State TB Cell Join Hands On Making Workplaces Free From Tuberculosis CII Business Leaders Interaction With State TB Cell

Dehradun (The Hawk): Taking forward the agenda of Central TB Division (Ministry of Health & Farn-ily Welfare ) & Confedera-tion of Indian Industry on TB Free Workplaces, CII Uttarathand organised an interactive session of Busi-ness Leaders with Uttarakhand TB Cell to-day.



### हाजीपुर 15-09-2020

# इलाज से पूरी तरह से ठीक हो जाता है टीबी रोग, खर्च भी सरकार उठाती है

सिटी रिपोर्टर | राजापाकर

राजापाकर सीएचसी में सोमवार को टीबी निश्चय दिवस कार्यक्रम असाध्य रोग नहीं है। यह इलाज उन्होंने बताया कि टीबी के मरीज का आयोजन किया गया। इस मौके से पूरी तरह से ठीक हो जाता है। को इलाज के लिए सरकार की ओर पर टीबी रोग एवं उसके लक्षण व उन्होंने स्वास्थ्यकर्मियों से कहा कि से पांच सौ की राशि भी मिलती लिए स्वास्थ्यकर्मियों को जानकारी पदाधिकारी डॉ. राजेश कुमार के बताया कि अगर किसी व्यक्ति को

प्रभारी चिकित्सा पदाधिकारी डॉ. तो उसे अस्पताल में जाकर अपनी राजेश कुमार ने कहा कि टीबी रोग बलगम की जांच करानी चाहिए। इलाज के बारे में प्रचार प्रसार के टीबी रोग के इलाज के बारे में प्रचार है। इस मौके पर डॉ. सुबोध चंद्रा प्रसार कर लोगों को बताए कि इस दी गई। कार्यक्रम का आयोजन रोग के इलाज का खर्च सरकार की सीएचसी के प्रभारी चिकित्सा ओर से वहन किया जाता है। उन्होंने

नेतृत्व में किया गया। इस मौके पर पिछले 15 दिनों से खांसी हो रही हो ,बीएचएम रवि कुमार, नवीन कुमार ,एएनएम मीरा कुमारी, गीता रानी, प्रमिला कुमारी, वीरेंद्र राय आदि मौजूद थे।



ODATA SHARING

#### 4. Television:

I) There was a live telecast programme "New India Sankalp - 2» on TB on 12<sup>th</sup> February, 2020 at 5:15 PM at Doordarshan. The objective of the programme is to showcase Government of India initiatives in Ending TB from India by 2025. Four dignitaries from Ministry of Health & Family Welfare, GoI were invited by Doordarshan:

Shri Ashwini Kumar Choubey, MoS, HFW Smt. Preeti Sudan, Secretary, HFW Shri Vikas Sheel, Joint Secretary, HFW Dr. Rohit Sarin, Ex - Director, NITRD, New Delhi



This was one hour programme in which short video on TB Champions were also telecasted. Two TB champions/patients from each two states (Maharashtra & Chhattisgarh) were also the part of the programme who have benefited by government incentives such as Nikshay Poshan Yojana Beneficiary, incentives to TB Patient in tribal area, and TB Champion.

II) Tennis icon Sania Mirza, prolific sportswoman, inspiring influencer and a strong advocate of social concerns, joined the cast of MTV Nishedh "Alone Together", a 5-episode mini drama series, carrying messages around awareness and management of TB, especially in times of the COVID-19 pandemic. The weekly mini series is available

every Friday, 27th November onwards on MTV India and MTV Nishedh YouTube, Instagram and Facebook channels. Sania Mirza has specifically highlighted the challenges faced by people with TB and underlines the importance of seeking proper diagnosis, treatment, support and care.

- 10 million views for MTV Nishedh across MTV, Colors Rishtey, and VOOT
- 68 million social media impressions with 220,000+ views on Instagram; 786,000+ on Facebook; 1.3 million people (TB specific content) on YouTube
- 1,37,000 visitors on the Nishedh website

The drama series follows the struggles and triumphs of two characters with TB and aims to inform young people about the signs and symptoms of the disease encourage those who might be affected to seek care, and debunk common myths to help reduce the social stigma faced by patients. At the end of each TV episode, the programme logo and National TB Helpline number (1800-11-6666) was displayed, and viewers were encouraged to seek support if required. Supported through an educational grant from Johnson & Johnson Services Inc. and spearheaded by the MTV Staying Alive Foundation and Viacom18, this was a unique first of its kind initiative on TB awareness.

#### 5. Radio:

Central TB Division's prime agenda for the year 2020 was to popularize Nikshay Poshan Yojana (NPY) scheme and reduce stigma associated with TB. NPY is the one of the new initiatives of the GoI to provide nutritional support of Rs. 500/month to all TB patients during the

course of treatment through Direct Benefit Transfers (DBT). To popularise free diagnosis, free anti TB drugs and NPY for patients seeking care, a campaign was launched through All India Radio over a period of 4 months.

Audio Spot	Theme	Duration	Language
Last Bench	NPY	30 Sec	Hindi, Bengali, Marathi
Family Photo	Stigma	40 Sec	Hindi, Bengali, Marathi

#### 6. Advocacy for Industry Action:

Advocacy efforts with the industry is aimed at spreading awareness on TB as a curable disease (both in employers and employees), encouraging workers for periodic check-ups, recognizing symptoms of TB, helping them cope with physical and emotional stress, and referring symptomatic persons for diagnosis, ensuring treatment completion, continuing the employment relationship, and maintaining an environment free of stigma and discrimination at the workplace.

The industry will have to come forward and become active agents of change that invest in Public Health delivery, bringing to bear their competencies in technology, operations, and management. Its members need to strategically approach TB at their workplaces and support employees who are affected by it. To further such efforts within the industry, CTD has signed a MOU with the Confederation of Indian Industry (CII), a collective representative of the industries, in February 2020.

Central TB Division (CTD), in partnership with CII, launched a 3-year long pan-India

'TB Free Workplaces Campaign' to engage the business leadership and provide a forum for convergence for the industry's response to TB, while safeguarding economic productivity and ensuring a healthier more productive workforce. The campaign was virtually inaugurated on 17<sup>th</sup> of August 2020 by the Hon'ble Union Minister of Health, Dr Harsh Vardhan, in the presence of Shri Ashwini Kumar Choubey, Hon'ble Minister of State.

The initiative consists of signing of a pledge, an information/ teaching App, a best practices compendium, which is provided to each corporate post signing the TB Pledge. As part of the activities, CII together with Central TB Division is convening Regional Roundtables to create platforms to sensitize companies and organizations with large workforces on TB and its impact on productivity levels for businesses. The discussions bring together key policy makers and healthcare providers at the state levels to deliberate on how India can advance in TB disease care and management leveraging on the private sector to amplify the efforts and catalyse the fight in eliminating TB. Four such Regional Roundtables covering the states of Uttar Pradesh, Karnataka, Maharashtra and Tamil Nadu have taken place between September and December 2020.

#### 7. Advocacy for Corporate Action:

Advocacy with the corporate sector aims at encouraging the private sector to increase resources to combat TB, raising awareness of TB as a curable disease, and, ultimately, improving TB health outcomes. As part of this effort, CTD along with the USAID and The Union has launched the "Corporate TB Pledge" to provide the private sector an opportunity to join the fight against TB.

This pledge contains several tiers, based on a company's level of commitment to adopt a TB workplace policy, implement TB workplace programs, and fund TB programs through Corporate Social Responsibility resources. Private sector entities sign the pledge that commits them to use their resources, both human and financial, to combat TB, It recognizes companies for their commitment to end TB; spurs increased investments in Corporate Social Responsibility (CSR) and workforce wellbeing; and links companies with the technical resources they need to better plan and implement TB programs at the workplace and in their communities. Pledge partners get access to a range of technical support and opportunities to showcase programs in national and international forums.

### 8. Social Mobilization through NACO's Red Ribbon Clubs:

TB is the biggest killer amongst people living with HIV. People who are infected with HIV are 20 times more likely to develop active TB. Research consistently demonstrates that young adults are more likely to use alcohol and smoke tobacco due to societal, lifestyle and peer pressure factors, which increases the risk of TB and HIV. The purpose of NACO's Red Ribbon Clubs in colleges/ universities is to encourage peer-to-peer messaging on HIV prevention and to provide a safe space for young people to seek clarifications of their doubts and on myths surrounding HIV/AIDS.

About 14,000 such clubs are functional across the country and are being supported for these activities. As RRCs engage with youth who are invariably in the age group of 15-29 years, it provides for an opportune existing platform for the NTEP for large scale efforts of information dissemination and behaviour change communication related to TB at the grassroot level.

CTD in collaboration with NACO has finalized modalities for incorporation of TB related activities in all RRCs nationwide. In October 2020, a joint letter by the JS (NTEP) and JS (NACO) was issued to all States/UTs advising them to start making use of this platform to harness the potential of these youth by equipping them with correct information on TB Prevention, Care,Support and Treatment and build their capacities as peer educators and change agents in spreading messages on positive health behaviours.

### 9. National Rapid Review of IEC Material of all States/UTs:

For the first time, a comprehensive national rapid review of communication material across all States/UTs was undertaken, that are currently in use under the NTEP in the country. The objectives of the exercise were twofold: a) To collate the existing communication and A/V material across all states/UTs in various languages in the country. b) To analyse indepth and identify gaps (if any) in the content, planning, conceptualisation, and execution.

This exercise offered the programme a unique insight and visibility to regional execution of the communications activities under ACSM. It also brought to the fore the need to plug the existing gaps to make the process more efficient and effective to achieve the desired programme goals. More than 400 creatives were analysed from 36 States and UTs in different languages. This pan-India exercise was divided into seven zones (South-1, South-2, North East, West, North-1, North-2 and East). Each zone comprised a cluster of States that are geographically or linguistically contiguous wherever applicable for streamlining the review process. Communication material was evaluated in multiple ways. Cardinal features of import like apt language, appropriate

semantics, layout, formats and design were focused to keep the content error-free and tailored to target audience.

#### 10. Social Media Campaign:





Social media plays a dominant role in our day-to-day life. It creates a wide range of impact on people when it is shared. Instant messaging, images, status updates, image-sharing, video-sharing are few of the major elements that play a role in the recognition of social media. In fact, a study suggests that half of the persons who are aged between 17-45 years have social networking profiles like Facebook, Twitter, YouTube etc. Not only the young people, but people of all ages, and all profession are using social networking sites as a means of communication.

Central TB Division has taken several steps for accelerating TB information through social media platforms such as:

A month-long intensive DBT Campaign (17<sup>th</sup> August - 16<sup>th</sup> September 2020) ran at national as well as state and district levels. All State TB Cells were requested to do maximum utilization of their respective

media platforms for awareness of Nikshay Poshan Yojana by using different traditional media, mid-media, and social media platforms. State TB Cells were advised to circulate the information and updates Nikshay Poshan Yojana in more useful and effective manner. All Officers (State, District, Block), Consultants, NTEP Staffs and Partner Organisations were requested to join hands proactively on social media platform and amplifying the campaign on NPY exponentially. One post through social media platforms can reach out to approximately 4 lakhs 32 thousand six eighty two (4, 32,682) people at a time.

Apart from DBT campaign, other thematic areas such as on symptoms of TB, availability of TB services at Health & Wellness Centres, Active Case Finding (ACF), Stigma & Discrimination, Door- to-Door survey drive and comprehensive social media campaign were done to spread the awareness about TB among the public.

#### 11. Nikshay Patrika Newsletter:

Newsletters are often said to be life force of communications for any organisation. It is a significant communication tool when used strategically and can build, motivate, and amplify awareness of various programme





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initiatives, learnings, and achievements. In line with this view, the Nikshay Patrika newsletter received a boost with diverse content being added, states being roped in, adding up more pages and topical editorial messages to capture myriad of issues pertaining to tuberculosis insightful and offering perspectives. Significantly, this year the newsletters have been consistently brought out and all four issues have been released. Inclusion of field stories, and opportunities for staff to express on national platform drives motivation among them. More state level contributions and participation will make the newsletter truly representative of the national programme and give it diverse and vibrant appeal, valuable insights, and frontline information.

#### 12. Events:

#### **World TB Day**

Elaborate arrangements were planned for World TB Day commemoration on 24<sup>th</sup> March 2020. The sudden outbreak of COVID pandemic resulted in setting aside the plans till the situation improved. Several pre-events such as Hanky Rally etc that were to be held in the respective states simultaneously were also shelved due to this. As per the Health Ministry advisories and after due deliberations with

partner organisation and stakeholders, it was decided to hold a virtual event on the social media to spread the awareness during the World TB Day commemoration week and extend the activity till the month end, involving all the partners and create buzz on Facebook and Twitter regarding tuberculosis and various aspects of the disease management and precautions. An intensive information campaign on social media through the respective handles of CTD was done and similarly all the partners joined to repost the messages and there by contributing to helping spread the information far and wide and to reach thousands of social media users. This activity was conducted for 15 days virtually with infographics, information on TB, prevention, and other awareness messages were disseminated for the benefit of public.

#### Vigilance Week

Vigilance Awareness Week was conducted from 27<sup>th</sup> October to 2<sup>nd</sup> November 2020. Integrity pledge was mandatorily administered to all the staff members and similar exercise was conducted at state level too. Several other competitions and events were conducted during the week to mark the occasion. Essay writing competition on a given topic was held where all the employees participated and submitted their handwritten essays. Three winners were selected and were awarded the prize. Subsequently, wards of the employees were also encouraged to participate in a painting competition. During the entire week social media posts on integrity were also posted to increase the awareness among the employees and stakeholders. The one week long event culminated in award ceremony where participants adjudged best, were awarded with gift hamper and prizes.

#### **Constitution Day**



Dr. Sudarshan Mandal, Addl. DDG (TB) is reading Preamble on Constitution Day (26th Nov. 2020)

Constitution Day or Samvidhan Diwas is celebrated on 26 November every year. On this day in 1949, the Constituent Assembly of India formally adopted the Constitution of India that came into force on 26 January 1950. The day is also known as National Law Day. This year, due to COVID-19, Constitution Day was virtually celebrated by all CTD Officers, Consultants and Staff by reading of the Preamble to the Constitution from their respective seats at the same time as the Hon'ble Prime Minister at 11:00 AM. The Preamble was read in both English & Hindi.

#### **Pledge for TB Free India:**



CTD collaborated with MyGov platform for all citizens to pledge to make every village, district, state and the country TB Free under the "TB Harega Desh Jeetega" initiative. The objective of this activity is to spread awareness on TB and simultaneously influence change in the knowledge, attitude, behaviors and practices across wider sections of the population. Those who took this pledge received certificate (link:ttps://pledge.mygov.in/tbday/).

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# **Community Engagement for a People-centred and Community-led TB response**

### **CHAPTER 13**



Cyclothon organised under the umbrella of TB Harega Desh Jeetega Campaign by the State of Tripura



### Community Engagement for a Peoplecentred and Community-led TB response

### **CHAPTER 13**

#### **Background:**

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

Community engagement is the process of working collaboratively with and through communities to address issues affecting their well-being, including influencing systems and serving as catalysts for changing policies, programs and practices, more patient sensitive.

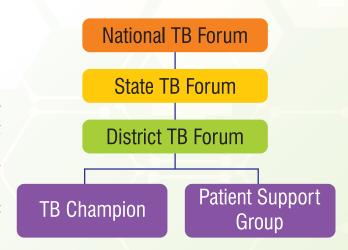
#### **Engaging with TB affected Communities:**

TB patients undergo not only clinical manifestations but one have to face uncomfortable situations, and even self-discrimination because of society's prejudice. They also have to bear economic barriers (for example, the cost of transport, ancillary medicines, and investigations in private sector).

While there are existing strategies under NTEP such as community volunteer incentivised as treatment supporter, financial support for transportation of patient/sample, involving private sector and civil society in service delivery, work place policies, and advocacy and communication to increase awareness and mitigate stigma. It is very well established that affected communities could play a vital role in enhancing effectiveness of these strategies and bridge in gaps. Communities, especially those who had gone through the experience of fighting TB, have the unique advantage of being close to their peers, understanding the issues and field reality as well the ability to communicate and articulate their needs. Thus, community engagement as a strategy is critical for the country's aim of Ending TB by 2025. The Programme promotes community-based interventions for awareness creation and stigma reduction, screening and referral, treatment adherence support, etc as a strategy.

### **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 to improve the quality of TB services and making the services patient centric. These forums have representation of 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:

 To advice on ensuring patient centric delivery of services and making the Programme more responsive to the needs of people, especially of TB affected communities.

- To advice on formulation of policies and strategies for engaging communities and increasing community participation in NTEP and provide feedback on their implementation.
- To discuss community's feedback on critical gaps in service delivery and propose solutions to strengthen Programme.
- To discuss concerns of TB affected communities, TB related stigma & discrimination and patient support requirements, and advocate for their solutions.
- To identify and recognise best practices across the country on community engagement and the contribution made

by community members, survivor networks and civil society organizations to the fight against TB.

The National TB Forum was reconstituted in 2020 with civil society representative and ICMR representative as co-chairs. Equal representation was ensured from line ministries namely Ministry of Rural Development, Ministry of Panchayati Raj, Ministry of Social Justice & Empowerment, other division within the (Ministry of Health & Family Welfare), departments, civil societies, affected community, academician, media, subject experts, etc. The reconstituted National TB Forum meeting was held on 30th September 2020 under the Chairpersonship of Secretary (HFW), Government of India.



TB Champion conducting session with Women's Group in Chhattisgarh.



Sensitisation of CHO, Punjab



TB forum meeting district Banswara Rajasthan, held in chairmanship of district collector on 30<sup>th</sup> Dec 2020.



Block Level TB Forum meeting, Namakkal district, Tamil Nadu

By end of 2020, TB Forums were constituted in all States and Districts TB. Most of the States and Districts also reported convening their meetings and discussing various issues.

Moving forward, the Programme plans to set broader agendas for discussion and monitoring of action taken on the decisions made in the meetings of TB Forum at various levels.

### Key Activities under Community Engagement:

Various models of engagement of TB affected communities in the programme are implemented in the country and includes capacity building and engagement of TB survivors as TB Champions, Establishment of Peer Support Groups, Community led mentoring and grievance redressal services, Community feedback through patient score cards, etc.

A national level standardised Training curriculum for empowering TB Survivor to TB Champions has been developed and shared with States/UTs and Districts.

180 TB survivors were trained as TB Champions using the 3-day training curriculum on empowering TB survivors to TB champions.

Considering the limitation posed by COVID-19 pandemic on conducting physical training, a 3-hour online module on sensitisation meeting of TB survivors was designed. The motive was to sensitize the TB survivors on engaging with NTEP. More than 1500 TB survivors were sensitized on engagement with NTEP using the module. The sensitization programme was implemented in collaboration with partner organizations (REACH, KHPT, Jhpiego and the Union) who are implementing donor supported projects related with community engagement in different States

# Sensitization of the State Nodal Officers and Programme Officers was conducted on community engagement

3 Regional review meetings for North (Delhi, Ladakh, Jammu & Kashmir, Haryana, Himachal Pradesh, Punjab and Uttarakhand), Central (Dadar & Nagar Haveli and Daman & Diu, Gujarat, Goa, Madhya Pradesh, Maharashtra and Rajasthan) & South zones (Andhra Pradesh, Andaman & Nicobar Islands, Lakshadweep, Telangana, Karnataka, Kerala, Tamil Nadu and Puducherry) were held on Community Engagement during the year 2020.

### Glimpses of TB Forum meetings from the States:



Community Engagement through Church, Karnataka



Provision of nutrition through local NGO, Tamil Nadu



NPY support vulnerable populations across Karnataka, Telangana and AP during lockdown



Patient provider meeting with STS, TB champion, ASHA and TB patients, Howrah district, West Bengal



State TB Forum meeting held under the Chairmanship of the Principal Secretary (Health), Government of Andhra Pradesh.



State TB Forum meeting held under the Chairmanship of the Principal Secretary (Health), Government of Uttarakhand

### Research

## **CHAPTER 14**









CTD-ICMR-WHO collaboration for the National TB Prevalence Survey

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### Research

### **CHAPTER 14**

#### Research (Operational Research)

The National TB Elimination Programme (NTEP) is periodically bringing in changes in policies, treatment algorithms and programme management practices based on global scientific evidence and in-country operational research evidence. Hence, Operational Research (OR), which aims to improve the quality, effectiveness, efficiency and accessibility of the elimination efforts forms an integral part of the NTEP policy making and programme implementation.

#### **Structure and Functioning**

The entire exercise of conducting ORs and feeding into programme is carried out through an institutional mechanism.

The programme seeks to leverage the enormous technical expertise, resources existing within the programme across the many medical colleges, institutions and agencies. It collaborates with Medical colleges, National/State/Zonal OR Committees, Collaborative Research with departments/organisations, NTEP commissioned Research and NGOs/Developmental Agencies.

To promote and support OR, a Research Cell has been constituted at CTD to coordinate the National Standing Committee on Operational Research comprising of 14 individual and institutional members. This Committee provides technical guidance to CTD on OR and helps identify OR priority areas for commissioned research. Apart from that, there are Zonal and State OR committees who identify priority areas for research as relevant

to their zone/state, based on the national research agenda.

Proposals above Rs 5 lakhs are appraised and approved through the National Operational Research Committee, proposals up to 5 lakhs are done at Zonal OR Committee and proposals up to Rs. 2 lakhs, are appraise and approved by the State OR Committee.

All clinical trials are to be submitted at Indian Council of Medical Research (ICMR).

All Foreign funded studies are to be submitted at Health Ministry's Screening Committee (HMSC).

#### **Research Priorities:**

Following are the areas prioritised by the programme and look for more scientific evidences coming through ORs:

- Studies on strengthening surveillance and tuberculosis notifications
- Studies for Improvement of TB disease burden estimation; improved TB diagnostics including Childhood TB and Extra Pulmonary TB
- Studies on TB transmission and its interruption
- Studies related to systematic screening of high-risk groups and intensified case findings
- Drug Resistant TB management (Drug resistance surveillance and ADR monitoring)
- Studies related to the cascade of care in public and private sector

- Studies on Preventive therapy
- Socio-economic impact and poverty alleviation (Social determinants of TB)
- Strengthening NTEP management
- Integration with State Insurance and Universal Health Coverage initiatives
- TB therapeutics including that for recurrent re-infection TB
- Co-morbidity studies
- Laboratory, Supply chain, sample transportation
- Advocacy, Communication, Social Mobilization (ACSM)
- Collaborative studies with other ministries: Yoga-Ayurveda intervention studies and linkages with veterinary public health.

### Call For Operational Research And Screening Process

Calls are made by CTD, to receive OR projects on the areas of priority as decided under NTEP. The applications thus received under a call, are first reviewed by the CTD internally and the shortlisted protocols are then shared with the groups of experts. After, having undergone the experts review, the further shortlisted are presented before NORC. The NORC accepts, reject, divert and may ask for revisions of the proposals. If the project values are less than 5 lakhs, or else are diverted to respective



Zonal or State OR committees. The revised proposals are then discussed in the subsequent NORC for further actions. Those ORs which are approved by the NORC are funded from CTD for conducting the research. The Principal Investigator (PI) of the OR will be responsible to appraise CTD and NORC on the progress and results of the research.

#### Call for new OR proposals, October-November 2020

In response to the call for new research proposals issued on 6<sup>th</sup> October 2020, 66 proposals were received by the closing date (20<sup>th</sup> November 2020). These proposals are under screening/review for NORC's consideration.

### NORC review meeting was held on 15<sup>th</sup> and 16<sup>th</sup> October 2020

Under the chairmanship of Dr DCS Reddy, the NORC met to review the 23 revised-andresubmitted proposals. Of these, 6 proposals were diverted (3 each to respective SORC/ ZORC and other funders) and 4 were rejected. The NORC has recommended revision and resubmission for the remaining 13 proposals. communicated outcomes were the respective Principal Investigators on 6<sup>th</sup> November 2020, requesting them to incorporate the comments by 6th December 2020. However, considering the multiple requests for extension of the deadline, the last date had been extended to 30th December 2020. When in place, these research proposals are expected to explore:

#### The utility of:

 IT enabled solutions for rechecking of sputum smear microscopy,

- ◆ 18F FDG PET/CT scan and LAMP for diagnosis of extra pulmonary TB,
- Xpert/RIF assay of oral swabs and stool samples for diagnosis of pulmonary TB
- The option of adapting the surveillance data for creating decision support systems
- The status and factors associated with stigma, and isoniazid resistance
- The effect of TB and MDR-TB on employment
- The role of informal groups in TB control
- Challenges in data quality assurance in NIKSHAY portal
- Rate of recurrence of TB upon implementation of daily regimen.
- In addition, a research proposal on the modified B-PaL regimen for XDR, pre-XDR or Non-responsive MDR pulmonary TB were considered in two separate sittings of NORC on 16<sup>th</sup> October 2020 and 11<sup>th</sup> November 2020.

#### **Research Projects Funded by CTD**

#### **Completed:**

Evaluation of Gene Xpert MTB as compared as compared to conventional methods in diagnosis of genital TB among infertile women (Dr JB Sharma, AIIMS, New Delhi)

#### **Ongoing projects:**

 Diagnostic utility of self-collected buccal swab specimen as an alternative

- to sputum for molecular detection of pulmonary tuberculosis" (Dr. Aarti Mane, ICMR-National AIDS Research Institute)
- Evaluation of Gene X pert as compared to convectional method in diagnosis of Genital TB among infertile women. (Dr. J. B Sharma, Department of Obstetrics and Gynaecology, AIMMS)
- Tuberculosis among Paediatric household contacts of drug sensitive and multidrug – resistant tuberculosis patients a multicentric prospective cohort study (Dr. Sangeeta Sharma, NITRD)
- Evaluation of the Effect of Pharmacogenetics on Pharmacokinetics of First Line Anti Tubercular Drugs in Paediatric Intra thoracic Tuberculosis". (Dr. Pankaj Vaidya, PGIMER)
- Enhanced and improved diagnosis of Paediatric TB and LTBI in Household contacts of TB cases in Nagpur, India (Dr. Radha Munje, IGMC Nagpur)

#### **Approved by CTD:**

- Paediatric house hold contact investigations for TB: Challenges and its burden, Karnataka (Dr Kiran Chawla, Kasturba Medical College, Manipal)
- An observational study on the determinants of Psycho-social Wellbeing (PWB), Lost to Follow-up (LFU) and Deceased patients of Multi Drug Resistant Tuberculosis (MDR TB) (Dr K Sathyamurthi, Madras School of Social Work)

- Diagnostic and treatment delay among Tuberculosis patients detected by ACF campaign under NTEP in Haridwar district of Uttarakhand state in 2020: A mixed Method Study. (Dr Mahendra Singh, AIIMS, Rishikesh, Uttarakhand)
- "Implementation of the INH-Rifapentine preventive therapy for latent tuberculosis infection in highrisk household tuberculosis contacts in India: a community-based pilot" (Dr. Nandini Sharma)
- "Implementation of the end TB (Evaluating Newly approved Drugs for multidrug-resistant TB, Study number: NCT02754765) and end TB-Q (Evaluating Newly Approved Drugs in Combination Regimens for Multidrug-Resistant TB with Fluoroquinolone Resistance. Study number: NCT03896685) clinical trials at two Sites in India, located in Pune and Mumbai" (Dr. Samiran Panda)

### National Institute for Research in Tuberculosis (ICMR-NIRT)

### a. Drug Susceptibility Testing (DST) on newer drugs

Novel anti-tuberculosis drugs and the regimen containing them are urgently required to shorten TB treatment and manage patients with drug resistant TB. DST not only guides treatment but also forms the tool for monitoring the emergence of drug resistance through surveillance studies. With anticipated widespread use of newer drugs such as Bedaquiline (BDQ), Delamanid (DLM) and Pretomanid, ICMR- NIRT as Supra National Reference Laboratory (NRL) has set up the platform

for testing the above mentioned drugs with MGIT 960; validation has also been carried out and published for BDQ. In the year 2020, closer to 200 cultures from pre-XDR and XDR-TB patients were subjected to both BDQ and DLM DST testing by MGIT 960. The genotypic testing of these drugs using whole genome sequencing was also carried out and the methodology and interpretation using the validated mutations is available for genotypic diagnosis. These methods standardised at NIRT can be expanded to other NRL/IRL, thus extending the scope of DST guided treatment for drugresistant TB patients under NTEP.

#### b. National TB Prevalence Survey

CTD, MoHFW in collaboration with ICMR and World Health Organisation, India is conducting a National TB Prevalence Survey in 20 States/groups of states. The objective is to estimate the point prevalence of TB in India and 20 States/groups of States. The survey is being implemented across the country using specially designed mobile vans equipped with digital X-ray unit; tele radiology enabled imaging techniques and CBNAAT machines to detect Pulmonary TB disease among the surveyed. It also includes burden estimation of latent TB infection using IGRA. The survey also collects information about comorbidities and health care seeking behaviour among the respiratory symptomatic. Network of ICMR Institutes, State TB Cells Intermediate/National Reference Laboratories across the country are coordinated by ICMR- NIRT, Chennai implementing this survey. survey operations are guided by various expert committees across the country to ensure good data quality. The survey was inaugurated in September 2019

and is ongoing. Targeted to cover the entire country, with over 5,00,000 people screened for TB, the National TB Prevalence Survey is the largest global effort of its kind. In India's fight to End TB, this survey would help in generating evidence for TB burden estimation at national and regional level through a scientific method.







c. Evaluation of the accuracy of 99 DOTS, a novel cell phone-based strategy for monitoring adherence to tuberculosis medications (supported by Bill and Melinda Gates Foundation)

99 DOTS is a cell phone-based strategy for monitoring TB medication adherence.

In a cohort of 650 Indian TB patients, NIRT compared 99 DOTS' adherence record against the results of a urine isoniazid test collected during unannounced home visits. The analysis of 597 patients found suboptimal operating characteristics of 99 DOTS for measuring TB medication adherence in this multi-site cohort study, partly due to poor patient engagement with 99 DOTS. It is recommended to strengthen this digital strategy by focusing on patient centric challenges and addressing them to improve treatment adherence.

d. A Phase III, Randomized, Double-blind, Three arm Placebo controlled study to Evaluate the Efficacy and Safety of two vaccines VPM1002 and Immuvac (Mw) in Preventing Tuberculosis (TB) in Healthy Household Contacts of Newly Diagnosed Sputum Positive Pulmonary TB patients (supported by ICMR- India TB Research Consortium)

Household contacts are at increased risk of contracting tuberculosis (TB) from sputum smear positive index pulmonary TB (PTB) patients. The multicentric, Phase III, double blind, randomized clinical trial across India is evaluating the efficacy of VPM1002 and Immuvac vaccines among healthy household contacts of newly diagnosed sputum positive PTB patients in comparison to placebo in the prevention of TB. Household contacts aged > 6 years,

HIV sero-negative, without history of prior or current anti-TB treatment and with no evidence of TB disease are randomized to receive intra-dermal VPM1002, Immuvac or placebo after one month. Participants are followed up for a period of 3 years. The trial is ongoing in ICMR-NIRT sites in the Chennai, Thiruvallur, Madurai and Vellore. The overall enrolment target for the trial across the country in multiple sites is 12,000 participants of which ICMR-NIRT will contribute 2000 participants.

# e. Airborne Infection Control (AIC) practices in health care facilities (through ICMR extramural funding)

Nosocomial spread of TB / DRTB is a major threat to TB control. Airborne infection control (AIC) measures for prevention of TB transmission to health care workers and other patients in a health care facility are very important. The National Guidelines for AIC in health care and other settings to provide technical and operational guidance for reducing the risk of transmission of TB and other airborne pathogens was published in 2010. Implementation of AIC practices as per the recommended guidelines will contribute significantly for prevention of TB transmission. Identification of the strengths and gaps in implementation of AIC practices and devising strategies to improve it would help to strengthen the Programme towards the goal of TB elimination. A study is being conducted by ICMR-NIRT to assess the AIC practices, interventions for its improvement as well as the impact of these interventions in health care settings in Chennai.

### **Research Projects Funded by Non-NTEP Sources**

i. Finding and retaining India's 'missing' tuberculosis patients: informing large-scale active casefinding strategies through analyses of the care cascade and geospatial mapping – the TB Screen, Track, and Map Project (TB STAMP), Dr Srinath Sathyanarayan, The Union.

- ii. Value TB project, Dr Manoj Toshniwal, Durga clinic, Akola.
- iii. RATIONS (Reducing Activation of Tuberculosis by Improvement Of Nutritional Status)study, Dr Anurag Bhargava, Yenepoya Medical College, Mangaluru, ICMR-TB Vaccine Study, Telangana, Dr. Manjula Singh
- iv. Prevalence and severity of COVID-19 among cured and active TB affected patients in a representative slum in India, SHARE India, Dr Shikha Dhawan.
- v. Assessment of TB control measures in urban India including TB control among migrant population, Dr Ranjani Gopinath, ADB.
- vi. Tuberculosis preventive therapy among household contacts of bacteriologically confirmed pulmonary tuberculosis patients and people living with HIV across 12 districts in India A mixed-methods study, Dr Karuna Sagili, The Union.
- vii. Research Projects funded by Global Fund:
- viii. Prevalence of Microbiologically Positive Pulmonary Non-Tuberculous Mycobacteria (NTM) including Species Information under the NTEP, India, Dr. Shripad A Patil.
- ix. Prevalence and Determinants for TB Disease among Contacts of TB

Patients, A bi-directional Study, Dr. Mamta Arora.

- x. Strengthening Mechanisms for TB
  Death Reporting under the National
  Tuberculosis Elimination Programme
  (NTEP) and the Registrar General of
  India, Dr. Avi Kumar Bansal.
- xi. Sentinel Surveillance for measuring the TB Burden and trends in High-Risk Group for TB, Dr Srinivas B M.
- xii. Effectiveness of 12 dose Rifapentine– Isoniazid in preventing Tuberculosis among household contacts of patients diagnosed with Tuberculosis under programmatic conditions in India– a feasibility study, Dr. Pradeep A Menon.

#### India TB Research Consortium

In order to maximize India's response to TB elimination, the Ministry of Health & Family Welfare and Indian Council of Medical Research (ICMR) decided to create India TB Research Consortium (ITRC). The aim of the consortium is to advance technology by harnessing interdisciplinary expertise, and focus on building and strengthening scientific capabilities to accelerate development of new diagnostics, new and improved vaccines, immune therapies and drugs for TB.

ITRC is collaborating with all relevant TB stakeholders in research including other Ministries from the Govt. of India. National Non-Governmental and Global Organizations, Trusts and Industries as funding and non-funding partners. ITRC activities are mainly focused in four thematic areas: Therapeutics, Diagnostics, Vaccines and Implementation Research to develop efficacious and cost-effective new tools as per national priorities, ensure proper and efficient spending and channelization to the most promising leads, and minimize duplication of efforts.

#### **Brics TB Research Network**

**BRICS** countries (Brazil, India. Chine. Russia and South Africa) have established a collaborative TB Research network. The network promotes and conducts collaborative scientific and operational research along with development and innovations on diagnostics, vaccines, drugs, regimens, infection control and patient service delivery mechanisms commonly applicable in all these countries for effective TB control and management. National TB Elimination Programme is working closely with the other BRICS countries.

The BRICS made a call under the BRICS STI Framework Program, to receive coordinated and multilateral projects on Response to COVID-19. Accordingly, a project titled, "Epidemiological impact and intersection of the COVID-19 and tuberculosis pandemics in Brazil, Russia, India and South Africa" with coordinated efforts from India Brazil, Russia, India South Africa and Russia has been scientifically approved by Department of Science and Technology (DST). The planned project duration is 2 years. Principal Investigators from India span across institutes like All India Institute of Medical Sciences, New Delhi, Rajan Babu Institute of Pulmonary Medicine and Tuberculosis, Pondicherry Institute of Medical Sciences, WHO-India as well as Programme Managers from Central TB Division of the National Tuberculosis Elimination Program, India.

Intensive efforts and multiple meetings and discussions were conducted starting mid-2020 towards developing the project outline first and then making a nuanced proposal which stands approved by the Department of Science and Technology.



### **Human Resources**

# **CHAPTER 15**



Release of Training Module by Hon'ble Minister of Health & Family Welfare on 24th June 2020

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### **Human Resources**

### **CHAPTER 15**

cornerstone for strengthening health systems to respond to TB is a well-trained workforce. The entire chain of human resources engaged in framing policies, managing of resources, and coordination with concerned stakeholders and finally in delivering the services/benefits to the end beneficiaries forms the pillar of the overall system.

With the greatest number of TB patients of any country, India has a critical role to play in the eradication of TB. NTEP has put in place ambitious goals to End TB by 2025. To achieve this goal, the programme will need to scale up existing interventions and introduce new strategies. Adequate numbers of skilled staff will be needed in the right locations for NTEP to successfully achieve its aim. Given the socio-cultural and geographic diversities of the country, establishing a cadre of dedicated health workers along the chain of service delivery is of paramount importance. Moreover, TB programme works well within the general health system. It is equally important to keep up the skills of the all health staff on delivering TB services in order to ensure quality services.

The HR under the programme consists of both medical and non-medical personnel, integrated with the general public health system, especially with the National Health Mission (NHM) at the central, state, region, district and block level. The HR policies of the contractual are governed by the respective State, based on state specific situation and are similar to other programmes under NHM.

The National Strategic Plan (NSP 2017-25), concentrates on strengthening NTEP management structure, implementation

arrangement, possible augmentation of HR, crafting HR reforms and scale up the provision of technical assistance at both National and State level.

Identifying the training needs and imparting it is an another important area. It is to have in place a comprehensive training programme catering to various skills categories at different levels with allotted resources and technology. This is mandatory so as to make the health workers aware and prepared to meet program's present and future needs for, growing complexities within the programme like dealing with clinical interventions around MDR/XDR TB, TB-Co morbidities and public health measures like private sector engagement, community engagement etc. Till recently, the modular training, were being conducted at NTI, Bengaluru and NITRD, New Delhi, STDC Gujarat. This has been discontinued owing to the COVID pandemic. The programme is working towards developing a robust system of e-training modules to cater to all cadres.

The NSP envisages the introduction of innovative, user friendly approaches to capacity building. One of the key strategies is, to move towards an e-learning mode utilizing the web based and mobile based learning experiences. E-training through well-developed e-modules specifically cadre wise helps in gaining easy access, wider reach, avoids mis-interpretations and redundancy in the information, can be taken in self-paced manner etc. It does include self-assessment at end of every module and after which, guides the trainee towards the next module. The programme will be transitioning from the conventional training methodologies to these newer composite and agile tools like e-learning. Further down at the state level,

the State Training and Demonstration Centre (STDC) are being strengthened to play key role in health system strengthening.

In order to implement the most complex and robust programme like NTEP with its goal-oriented approach, there are many challenges to be dealt with. The foremost challenge is that the public health systems in few states are sometimes under-staffed and hence sharing of manpower/responsibilities strains it further. At the other end, challenges like timely availability of trained manpower, addressing the training needs, retaining competent staff, dealing with shortage of critical staff and so on, always keeps the HR planners on toes.

Reducing the spread of tuberculosis is one of the most pressing global health issues.

#### **Challenges:**

One of the biggest challenge NTEP faces is in terms of discrepancies in HR staffing in various states. District level vacancies range from 2% - 30% across different states. The situation is worse where vacancies among different cadre of staff range from 12% -75%. It is critical not only to fill the vacancies at all level in the Programme but also enhancing the efficient use of general health system staff to support the delivery of the NTEP.

# **Private Sector Engagement**

# **CHAPTER 16**



Mr. Chandrajit Banerjee, Director General, CII committing to join hands with MoHFW for Ending TB

India TB Report 2021 129



### **Private Sector Engagement**

### **CHAPTER 16**

#### **Private Sector Engagement**

India has shown considerable progress in terms of providing standards of TB care to all TB patients irrespective of their source of care, in the last decade. Empirical evidence suggests that a very large number of patients seek private care, which, if not more, is equal to the share of patients seeking care in the public sector. National TB Elimination programme has seen a significant increase in notification from the private sector, during the last few years with the country notifying nearly 7 lakhs TB patients from the private sector for the first time in 2019. This was made possible through sustained efforts and many new interventions such as implementing Patient Provider Support Agency (PPSA) through the JEET Consortium and domestic resources, making notification non-notification mandatory, penalizing through Sections 269 and 270 of the Indian Penal Code, incentives to private providers for notification and reporting treatment outcome, and providing free drugs, diagnostics and public health action to the private sector patients.

### **Notification of TB patients from the Private Sector:**

In 2020, the country notified 5.49 lakhs TB patients from the private sector which is 30% of the total notification in the country. Around 51% of the target set by NTEP for private sector TB notification in 2020 was achieved.

### Impact of the Covid-19 pandemic on Private Sector TB notification

The Covid-19 pandemic had a major impact on the private sector healthcare, thereby significantly affecting TB notification. Due to the lockdown, essential health services faced a blow, and many private clinics and health facilities were closed down. Movement and transportation were affected and many patients could not get tested; many others were apprehensive of the dual stigma of TB and Covid. This has contributed to a 25% reduction in TB notification compared to the notification in 2019. However, timely mitigation measures were taken by the government through implementation of a 'Rapid Response Plan' and advocacy through State offices.

#### **Partnerships – Training & Implementation**

All States were sensitized on the "Guidance Document on Partnerships- 2019", between 6th June '20 and 30th July '20. A Central team consisting of NTEP officials from the Centre and States, WHO Consultants, partnership and procurement specialists from JEET partners were introduced to concepts of output-based contracting as one of the contracting methods, wherein service providers (private sector agencies) are paid based upon outcomes for the results (notifications, volume of testing, achievement of quality-of-care measures, etc) rather than for inputs (staffing costs, computers, transportation, etc).

The States were guided to determine service procurement costs based on market-based competition and to give due consideration to technical competence of the service providers during the procurement process. Review meetings with the States were conducted to monitor the status of PPSA contracting and partnerships.

Patient Provider Support Agencies (PPSAs) through domestic budgetary resources were approved for a total of 266 districts in 19 States (table of PPSA approved state wise enclosed in annexure). By end of 2020, PPSAs were contracted and operationalized in Madhya Pradesh, Bihar, Jharkhand, Maharashtra,

Mizoram and Chhattisgarh.

### Technical Support Units under NTEP for Private Sector Engagement:

The Programme has initiated processes of establishing Technical Support Units to further enhance Central and State capacity to engage with private sector.

Considering the estimated TB burden and the gap between private notifications and estimats for private TB burden, NTEP selected nine states (viz. Assam, Bihar, Karnataka, Maharashtra, Madhya Pradesh, Rajasthan, Tamilnadu, Uttar Pradesh and West Bengal) for intensified implementation of high impact TB interventions at scale. Success in these nine states is critical for India to meet its NSP targets as these nine states together account for 60% of the public-sector notification in the country, 62% of the existing gap in private sector notification (based on NSP targets); and 70% of all private TB treatment nation wide with exponential increase of various interventions. there is a need for varied competencies to deliver functions beyond clinical or routine public health measures.

To ensure successful implementation of innovative interventions, and to get desired output, it is key that the Centre and State Programme Units have sufficient capacity in managing areas viz., strategic purchasing, private sector engagement, Direct Benefit Transfers. multi-sectoral collaboration etc. An institutional mechanism such as a National Technical Support Unit (NTSU) and State Technical Support Units (STSUs) in 9 (nine) priority States has been considered as a framework to take on these tasks. The institutional strengthening through establishment of TSUs is a critical component of the NSP, and arguably the success of the private provider engagement strategy, contracting of services and scale up of the TB programme depends on the effective establishment of TSUs.CTD is in the process of finalizing agencies to establish1 NTSU and 9 STSUs in the up-coming months.

Engagement of NGOs and Private Providers through National Guideline on Partnerships

NGOs and Private Provider engagements were made countrywide across the 22 partnership options (as per 2014 Guidance) and 8 Partnership Options (as per 2019 Guidance). Most States and Districts continued to use the existing 22 partnership options as Programme faced challenges in transition from the previous guidelines to newer one.

State-wise and scheme wise information on these collaborations is placed at the end of this chapter in the table- State-wise and Partnership Option-wise details (FY 2020-21).

#### **Support by Developmental Partners**

### 1. Centre for Disease Control and Prevention (CDC)

CDC supports NTEP through external quality assurance programme for molecular technologies, End MDR TB Dharavi interventions, Airborne infection control measures and enhancing data management capacity at local level in Mumbai.

### **External Quality Assurance Programme for Molecular Testing Technologies:**

CDC along with FIND India and NTI, conducted external quality assurance (EQA) proficiency testing for CBNAAT scaling up to over 1200 testing sites.

#### The End MDR TB Dharavi (ETBD) Project

As DR-TB treatment outcomes and completion rates for patients in Dharavi slum were low, Municipal Corporation of Greater Mumbai (MCGM) partnered with CDC and SHARE India to develop a comprehensive project to improve patient outcomes.

#### The objectives were to:

Improve quality of care for DR-TB patients through monitoring Adverse Drug Reaction (ADR) and linking migrants to home TB programs, thereby preventing lost-to-follow-up

### Decrease community transmission of MDR TB.

The project uses new health-technology to detect ADR in their early stages with portable point-of-care (POC) audiometry (Shoebox audiometer) and electrocardiogram (ECG-Smart heart PRO) devices. This is expected to reduce medication-associated morbidity and yield better treatment outcomes. A total of 122 audiometry tests were conducted (86 baseline and 36 follow-up tests) as a part of pilot in January 2020.



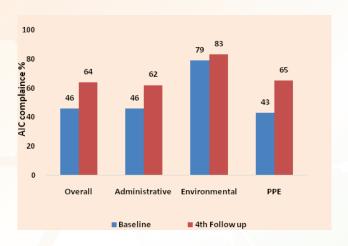


#### **Airborne Infection Control Unit (AICU):**

In collaboration with MCGM, CDC and SHARE INDIA established an AICU which has a microbiologist, an architect, a nursing professional, and a public health officer, to train health

institutes on implementing AIC measures. The aim was to strengthen the institutional capacity of health systems to institute best AIC practices, focusing on three principles: administrative/managerial, environmental, and personal protective equipment (PPE). Each institute received five on-site visits which later showed improvement in compliance from 46% (baseline) to 61% (fourth follow-up) (Figure

1). A follow-up meeting with MCGM engineers and architects was held on February 14, 2020 to integrate AIC activities within MCGM.



AIC compliance October 2016 - January 2020

#### Baseline and four follow up

- AIC assessments completed (October 2016 January 2020)
- 143 health institutes in 10 Mumbai districts assessed
- AIC compliance increased from 46% to 61%
- Over 3500 MCGM healthcare workers sensitized on AIC measures
- Motivated MCGM staff to conduct TB symptom screening - More than 1600 MCGM staff symptom screened

#### Maharashtra:

- 28 ART centers assessed in Mumbai, Thane and Pune districts
- 8 DR TB centers provided technical support for AIC compliance
- 28 Maternity homes assessed in Mumbai

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

CDC and SHARE India staffs held ELEVATE workshops for Mumbai District TB Centre (DTC) staff to provide hands on training on data analysis and build capacity for staff to use data for action.

In 2020, the team visited 24 districts of Mumbai to provide on-field support to use NIKSHAY data. Computer software updates were provided to enable DTCs to work on district data analysis. A Surveillance, Epidemiology, Monitoring & Evaluation (SEME) unit is functional since 1st October 2020 at Mumbai City TB office to routinely monitor and analyze district level data to improve programme performance and patient management.

# 2. Clinton Health Access Initiative (CHAI) and its affiliate William J Clinton Foundation (WJCF):

CHAI and WJCF have been providing technical, strategic, operational and analytical support to address India's TB burden through multiple initiatives at state and Central level.

Joint Effort for Elimination of Tuberculosis (JEET):

Since 2018, WJCF has been engaged in improving access to care and treatment for TB patients seeking care in the private healthcare sector under The Global Fund project facilitates private sector doctors to notify TB patients, broaden patient access to quality diagnostics, FDC for Pvt. Patients and counselling in the states of Delhi, Haryana, Madhya Pradesh, Rajasthan, Tamil Nadu, Gujarat and Bihar.

With launch of 9 new Patient Provider Support Agencies (PPSAs), JEET serves in 22 cities and collaborates with NTEP in 129 districts through a lite model.

Despite COVID-19 pandemic, many new private sector doctors were engaged in the project taking total engaged providers to 15,015 and total notified TB patients to 469,889.

### Private Sector Notification and Treatment Success, as reported by JEET Partners:

Partner Agency	Notification in 2020	Treatment Success (2019 cohort)
CHRI	166515	84%
FIND	64191	83%
WJCF	148497	74%

### Trends: Private Sector Notification and Treatment Success

Year	Notification (in lakhs)	Treatment Success (of the previous year's cohort)
2018	5.3	35%
2019	6.8	70%
2020	5.5	79%

Under a pilot launched in 2020, WJCF partnered with private sector labs to increase access to GeneXpert tests where over 45,000 patients were benefited.

Tie up with 1MG helped scale up FDC delivery to patients. Over 48,000 patients have received free FDC medication.

Treatment counselling of TB patients was also done through telephone and digital channels. 110,000+ patients have been counselled since 2018.

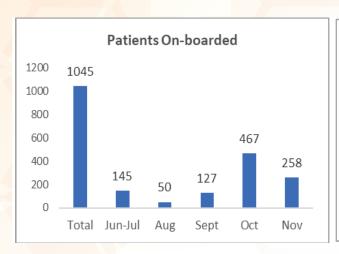
500+ Continued Medical Education seminars, meetings over video conferencing and webinars were conducted to encourage provide engagement.

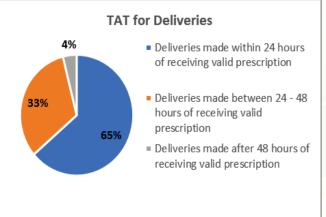
Innovations in Private Sector Engagement: Partnership with 1MG

CHAI with support from The Global Fund and Bill & Melinda Gates Foundation, partnered with 1MG, to evaluate patient-centric models

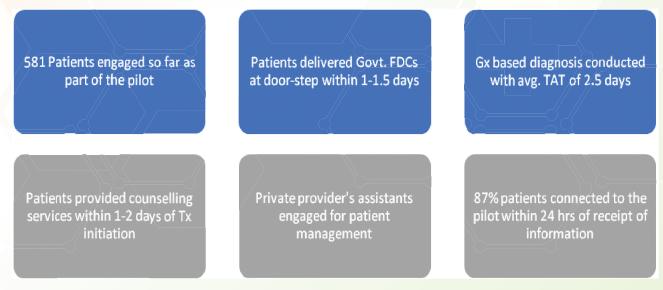
of service delivery and is working on two such projects:

Faridabad Pilot: 1MG performs all the functions of a PPSA agency and uses their capability of doorstep delivery reach for sample collection, report delivery, drug delivery and patient counselling. Notifications and follow-ups are facilitated through a mix of telecounsellors, and on-field treatment coordinators with the compounder's support.





Drug-Delivery Pilot: 1MG is delivering FDC medicine to patients' home, based on doctor's prescription and does passive refill monitoring. This is in line to create sustainable approaches to improve access to free government FDC drugs.



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

#### Technical support to Greater Chennai Corporation for TB Free Chennai Intervention:

Since the inception of the TB Free Chennai Intervention (TFCI) in 2014, CHAI has supported TFCI in design and implementation of innovative case-finding modalities. One such was the introduction of mobile diagnostic unit (MDU) with x-ray screening in vulnerable communities. CHAI facilitated introduction of AIenabled tele-radiology for dCXR interpretation, leading to drastic reduction in TAT for reading X-rays. During the COVID-19 response, these MDUs were repurposed for COVID monitoring and TB screening of quarantined individuals and fever camp visitors. The mHealth pilot with GCC will use digital media and some offline touch points to link symptomatic individuals to flexible care services.

# Foundation for Innovative New Diagnostics (FIND) India

FIND in partnership with the CTD continues to complement Government of India's efforts towards TB elimination has undertaken the following activities:

- Sustained service delivery;
- Enhanced capacity for DR –TB diagnosis

Under Global Fund grant, FIND is establishing 20 LC&DST laboratories across India. Five TB LC&DST laboratories were upgraded, validated and handed over to the NTEP. Upgrade work is underway for 15 labs. FIND supported 62 TB labs, by providing consumables, reagents and maintenance services for nearly 3,500 essential lab equipment.

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

With technical support from CDC Atlanta, FIND supported NTI to develop in-country capacity to manufacture large volumes of proficiency testing (PT) panels for CBNAAT EQA. In 2020, CBNAAT EQA was scaled up to all public sector labs and a few private labs. Over 2000 lab staff were trained virtually to implement CBNAAT EQA.

# Laboratory Information Management System (LIMS):

LIMS was designed to provide TB results, track sample and test work flows inside the lab. Besides providing data analytics, it also monitors HR availability, trainings, equipment maintenance, sample storage and bio medical waste management, including a call centre service to resolve issues. Integration of LIMS with Nikshay was formally announced on March 24, 2020. As of November 2020, 49 C&DST labs are actively using LIMS. A logistic module has already been developed and successfully tested.

### NABL accreditation using customized NABL TB SLMTA approach:

FIND is strengthening Quality Management System (QMS) at TB labs using a customized TB SLMTA mentoring approach for NABL (ISO15189) accreditation. Six sites were successfully applied for ISO 15189 NABL accreditation and await assessments by NABL. FIND is also providing technical assistance in upgrading TB C&DST laboratories including procuring equipment in selected sites of Maharashtra.

# **Networks for Optimized Diagnosis to End TB (NODE-TB):**

FIND, is facilitating NODE-TB in India, and has established a dataset, to guide NTEP in network planning, optimization and designing

efficient sample referral mechanisms. In 2019, analyses were conducted for the CBNAAT, TrueNat™, LPA, C&DST networks, across India. FIND proposes to scale up the diagnostic network optimisation exercise to 15 States in 2021-2024.

FIND is implementing project JEET across six states - Andhra Pradesh, Telangana, Karnataka, Punjab & Chandigarh, West Bengal & Himachal Pradesh - in 21 PPSA & 80 PPSA lite districts.

More than 47,550 patient notifications have been facilitated in FIND project geographies (Jan – Sep 2020),

Successful outcomes were reported for 83% of the patients diagnosed (Jan 2018 -Sep 2019).

# 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 microfinance/skilling programs, and socio-economic schemes in rural Karnataka (Kalaburagi, Yadgir and Bellary).

Nearly, 7000 presumptive TB cases have been identified and tested, resulting in diagnosis of 700 TB patients, all of whom were linked with treatment. Till date, 215 people have been linked to Nikshay Poshan Yojana (NPY), 25 with Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and two people with Income Generation Programs (IGP).

#### 3) Global Coalition Against TB (GCAT):

The Global Coalition Against TB is a multipartisan political forum that works to raise the political discourse on TB. Launched in 2012, 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 end the disease.

**GCAT Expert Group Meetings:** The Global Coalition Against TB organized meetings of its Expert Group to deliberate on the impact of COVID-19, subsequent lockdowns on TB services, and provide suggestions to the programme to further improve TB service delivery and aid the implementation of the NTEP's advisories to state health departments.

Encouraging Elected Leaders to Take Ownership of the TB Program: Based on the recommendations from the Expert Group meeting, five MPs from GCAT's Advisory Board organized district-level consultations with their respective District TB Officers and District Magistrates to discuss on-ground challenges faced by the programme and extend their support towards TB elimination efforts. Based on the discussions, the MPs requested the district administration to prioritize mitigation efforts including the need to expedite Nikshay Poshan Yojana payments and issue directives to private providers to ensure all cases are reported to the authorities.



MP, Gorakhpur, Mr. Ravi Kishan Shukla undertook a district-level consultation



Parliamentarians from the GCAT discuss their efforts in mitigating challenges to TB elimination efforts

### Leveraging Social Media to Raise Awareness about TB:

Members of the GCAT's Advisory Board regularly leveraged social media platforms on key occasions to generate awareness about TB.



Mr. Kalikesh Sing Deo, former MP, and member of GCAT issues video message on World TB Day



President of the GCAT, Mr. Dalbir Singh, issues video message on World TB Day

#### 4) Global Health Strategies (GHS):

GHS uses expertise in policy research and communications to enable evidence-based solutions on issues of public health importance. Supported by the Bill & Melinda Gates Foundation on its work toward TB elimination, GHS works closely with the Central TB Division (CTD) to raise the public discourse and build awareness on TB in India, through audience-specific communication materials and strategies.

### **Building Ownership of the TB Programme among State Legislators:**

In February 2020, GHS supported the Bihar State Health Society to organize a sensitization workshop for the Members of Legislative Council (Vidhan Parishad). 15 Members of Legislative Council (MLCs), three ministers including the state Health Minister participated in the event.

### **Generating awareness through Traditional** and Social Media:

Promoting accurate and nuanced reportage on TB: GHS continued to engage journalists from mainline publications at the national level and in select states, to encourage evidence-based reportage on TB.

GHS supported NTEP in organizing a national media workshop to sensitize journalists on the status of the TB programme and provide a platform for the media to interact with the NTEP leadership. The workshop was attended by over 25 journalists, resulting in over 60 article. In Uttar Pradesh a media workshop, was held before ACF exercise in November 2020. Over 300 journalists at the state and district level attended the workshop (both in person and virtually), resulting in over 150 articles.



Sensitization workshop for Member of Legislative Council, Bihar

GHS in collaboration with Central TB Division and State TB Cell (Delhi) organized a photo exhibition from March 9-14, 2020, at the Central Park in New Delhi, titled 'Courage and Resilience' with focus on the theme "TB Can Happen to Anyone" to raise awareness about stories of TB Survivors. The hashtag (#MeetTheTBSurvivors) generated over 1.5 million potential impressions and saw a reach of 1.2 million on Twitter durig that week.

Providing Social Media Support: Through

the year, GHS continued to support the NTEP and select STOs in generating awareness through their respective social media handles (on Twitter and Facebook) by creating state-specific content on a regular basis including around key occasions (e.g. World TB Day) as well as key thematic areas (e.g. impact stigma on care seeking and adherence).



Story of TB survivor displayed at photo-exhibition.

Sharing the Tracking TB Newsletter: GHS continued to amplify TB coverage through a fortnightly newsletter, "Tracking TB". The newsletter is shared with over 400 stakeholders including government officials, policymakers, technical experts, development partners and others.

#### Other support to the programme:

- Strategic Support to NTEP/State Units
- Supporting the NTEP in the development of Telemedicine
- Developing Communications Plan for the DISHA TB Dashboard
- Implementing the Community Engagement and Leadership Development (CELD) Model
- State Strategic Plan for TB Elimination in Rajasthan

 Developed a pocket book to guide the efforts pf the Gram Pradhan as part of CELD intervention.

#### 5. PATH

### Complementary Grant (Supported by BMGF)

Acting as a complementary grant to the efforts made through The Global Fund's intervention of 'Joint Effort for Elimination of TB' (JEET), the project aims to institutionalize sustainable private-sector engagement models at scale across India. Further, this investment will help institutionalize strategic contracting as a sustainable mechanism for private-sector engagement within NTEP.

### Orientation of key government officials in the state and district TB Cells

After the release of the Guidance Document on Partnerships (2019), a state-wise and inperson training for all key officials within the programme was planned. Support the Central TB Division in conducting online training sessions for all the States and UTs.

# Technical support to states for transition of JEET PPSAs

PATH is working closely with the CTD and States to provide technical support for proposing appropriate funding in State PIPs for PPSA and other activities. In Mumbai, PATH has assisted the Municipal Corporation of Greater Mumbai (MCGM) in piloting and operationalizing tools to make performance-based payments and monitoring tools for quality control of PPSA service delivery. In Maharashtra, PATH, in collaboration with JEET and state officials, is developing simple dashboards to monitor future PPSA activities. Based on uptake and utility, PATH will work

with the state to institutionalize these tools as a part of the regular monitoring and evaluation (M&E) framework. PATH provided need based support to various districts TB cells in transitioning the old partnership agreement to newer agreement as per revised guidelines.

#### Technical Assistance to Priority States -Uttar Pradesh and Maharashtra

#### **Uttar Pradesh**

PATH's primary role is to support and strengthen Regional TB Programme Management Units (RTPMU) strategically located in four different locations – Lucknow, Bareilly, Varanasi, and Agra. PATH's technical assistance include overall private-sector engagement activities in close collaboration with JEET, WHO, and other partners.

#### Maharashtra

#### Support provided in Mumbai

PATH has been technically supporting the City TB Officer (CTO) of the MCGM to ensure the verification and validation of the project outputs by measuring the performance of the NGOs contracted as PPSA. This has been critical to ensure timely payments. This large-scale exercise involves cross-verification from Nikshay, field validations, capacity-building of programme staff to manage complex transactions of monitoring, and interfacing with NGOs and other partners.

### Global Health Security Agenda (GHSA) (Supported by CDC)

Through the Global Health Security Agenda (GHSA) project, funded by the US Centre for Disease Control and Prevention (CDC), PATH implemented and strengthened the patient-centric 'test and refer' model of care for Mumbai's private-sector DR-TB patients. In

collaboration with the Municipal Corporation of Greater Mumbai (MCGM), the project, implemented in 13 municipal wards from October 2018 to March 2020, envisioned and demonstrated the feasibility of linking patients, diagnosed with DR-TB in the private sector to the public-sector centers for treatment.

Throughtherobustpatientsupportmechanism, the project offered DR-TB patients with high-quality and affordable treatment services that reduced out-of-pocket expenditure, and ensured treatment completion.

Of the 663 private-sector DR-TB patients registered; the project successfully linked 516 patients to public-sector facilities for treatment. Timely treatment initiation through a standardized regimen and a patient-centric support mechanism helped control DR-TB spread and improved treatment completion among patients.

Laboratory Quality Systems Strengthening

PATH along with FIND conducted 4<sup>th</sup> round of CBNAAT EQA in the month of Sep 2020. Nearly 1300 panels were manufactured and shipped to 1074 Public and 36 Private labs in India.

#### Creating an Ecosystem for Faster Diagnosis and Early Treatment Initiation (Supported by India Health Fund)

Sponsored by the India Health Fund (IHF), the project is a process innovation intended for faster diagnosis using TrueNat and early treatment initiation of TB and DR-TB at subdistrict level, and to provide proof of the scale of its proposed model. This is a unique project which has been driven across 5 CHCs in two different districts (Bahraich and Sambhal) of Uttar Pradesh. A total of five sites in two separate districts, Huzoorpur, Rampurwa (Tejwapur) and Mahasi, Bahraich District, and

Asmoli and Rajpura, Sambhal District, were selected for this project. The current project has been developed to monitor and evaluate the efficacy of TrueNat in the diagnosis of TB and DR-TB in five different CHCs.

The project is expected to provide with firsthand information to expand this technology to the general health system of India as a first-line diagnostic tool for tuberculosis. A total of 729 suspects in 2019-20 and 422 suspects in 2020-21 were tested at all 5 sites through TrueNat, the low number of tests this year attributed to the COVID-19 pandemic. The main objective of this project is to reduce the turnaround time (TAT) for diagnosis and initiation of treatment. According to observations, among patients tested within 0-1 days after the sputum sample was collected the turnaround period for 2019-20 and 2020-21 was 88% and 100% respectively. On the other hand, in 2019-20 and 2020-21, the initiation of treatment for positive MTB cases within a week was found to be 62 percent and 79 percent respectively. When we compared all of the above indicators, a substantial increase has been observed this year.

# 6) Resource Group for Education and Advocacy for Community Health (REACH):

In 2020, REACH continued to work across India through multiple projects and with a focus on ensuring uninterrupted care to TB-affected communities during the COVID-19 pandemic.

#### Engaging the private sector

As part of the 'TB-free Chennai' initiative, REACH continues to engage with the private sector in Chennai. Building on the successful model, with support from Advance Access & Delivery, REACH is currently working to integrate care and support services for Non-

Communicable Diseases (NCDs), in addition to TB, for people seeking care in the private sector. People with TB symptoms, people with TB and contacts of people with TB are screened for TB as well as for NCDs, and Diabetes and Hypertension in particular. They are subsequently linked to services as required, provided through 40 Nakshatra Centres that are housed at community and private hospitals in Chennai.

#### **Key achievements in 2020:**

Between January and November 2020, provided services to 5589 people with symptoms of TB (PwSTB) including 1649 free Chest X Rays and 3221 free CBNAAT tests Among 5589 PwSTB, 2223 were diagnosed with TB and 2210 initiated on treatment Provided direct treatment services to 1841 PwTB. Over 700 private practitioners actively engaged in the private sector response to fight TB through the initiative

Strengthening a community-led response to TB in India

#### Culmination of TB Call to Action project

In 2020, the TB Call to Action project, implemented in six key states – Assam, Bihar, Chhattisgarh, Jharkhand, Odisha and Uttar Pradesh – and supported by the United States Agency for International Development (USAID), came to an end. Through the project, REACH demonstrated several innovative models of engaging key actors including TB Champions and affected communities, elected representatives, industry leaders and the media.

#### Kickstart the Accountability Leadership by Local communities for Inclusive, Enabling Services (ALLIES) Project:

The ALLIES project, also supported by USAID,

builds on REACH's learnings that trained TB Champions are recognized as leaders within their communities and is being implemented in four priority states – Chhattisgarh, Jharkhand, Odisha and Tamil Nadu. Through this project, REACH will create a cadre of powerful community leaders who can advocate for rights-respectful, gender and age-responsive TB services and establish a community-owned accountability framework based on quality of care and quality of services.

#### **Key achievements in 2020:**

- The Community Accountability Framework (CAF) was developed and piloted through a Rapid Results Initiative. The CAF will be led by trained TB Champions, who will interface between people with TB and the NTEP at the subdistrict level, to understand the quality of care and quality of services, and provide holistic local solutions.
- REACH supported the scale-up and virtual sensitisation of TB survivors across the country, with TB Champions as cofacilitators.
- 279 new TB survivors were trained as TB Champions across four states.
- 308 TB Champions provided psychosocial support to people with TB and created awareness on bi-directional screening on TB/COVID-19.
- Nine district chapters, three each of the state-level survivor-led networks -TB Elimination from Jharkhand (TEJ), TB Mukt Chhattisgarh Foundation and Kalinga TB Survivors Network (KTSN) in Odisha - were formed.
- The first-ever stigma assessment is

underway, led by trained TB Champions in three districts of Jharkhand, Chhattisgarh and Odisha.

- Virtual meetings of survivor-led networks were held to provide feedback to states on the impact of COVID-19 on TB services.
- IEC materials developed on TB and COVID-19 were widely displayed and disseminated with the help of TB Champions and networks.

#### Strengthening TB survivor-led networks:

In July 2020, REACH began implementing a one-year project in Bihar with support from the Stop TB Partnership through the Challenge Facility for Civil Society (CFCS) 2020 mechanism. Through the project, REACH is supporting TB Mukt Vahini, the state's survivor-led network to grow and expand its operations across the state, and to establish a sustainable peer support network.

#### Key achievements in 2020:

Over 200 TB survivors were sensitised in 10 districts of the state, and four district chapters of TMV were formed.

Overall the membership of TMV has increased from 343 (as on 1 July 2020) to 550 (as on 5 December 2020).

# Empowering women for enhanced case finding:

In 2020, REACH began the Mentors for Community Health project, supported by the Stop TB Partnership through a TB REACH Wave 7 grant. The project has two major objectives: to empower women and to improve case-finding through a multi-pronged approach,

and is being implemented in four districts of Tamil Nadu. The project features an innovative learning system - CALL or Continuing Access to Learning Line - with modules on TB, other common health issues, financial literacy, domestic violence etc. Women access CALL through an IVRS-based system and do not require either smart phones or internet connectivity.

#### **Key achievements in 2020:**

To date, 190 Community Health Mentors and 100 Women TB leaders have been enrolled across the four project districts. The Women TB Leaders are based at OPDs and responsible for TB screening. They also support the NTEP by fixing sputum and transporting slides to labs for testing.

Till mid-November 2020, the project has screened 4 lakh people for symptoms of TB, tested 8200 people for TB and diagnosed 415 people with TB.

#### 7. World Health Partners (WHP):

WHP, a non-profit Indian society, has been providing operational, technical, analytical support to address the TB burden through multiple initiatives in districts and states:

#### **Public Private Interface Agency (PPIA):**

Through BMGF support, PPIA project in Patna (6.5 million population), Bihar engaged with private sector providers to increase case notification and improve treatment completion and adherence. The project successfully transitioned to government supported Patient Provider Support Agency (PPSA) in March 2020.

Deliverables	Achievement (2020)
TB Notifications	90,934
DR TB	1,720
Pediatric cases	16,949
Pulmonary cases	56,956
Microbiologically	16,921
confirmed	
Microbiological	29,420
testing of TB	
diagnosed	
Patients on anti	81,266
TB drugs	

#### Patient Provider Support Agency (PPSA):

Donor supported PPIA project is now being supported by government of Bihar. WHP won the PPSA award for cluster 1 and cluster 2 comprising 8 districts of Bihar, covering 28.7 million population. The project, set to begin on April 1, 2020 was delayed due to the COVID-19 pandemic and was launched on June 1, 2020. The project aims to treat 167,000 patients over a three-year period. The Bihar government will provide, on the basis of inputs from WHP, free medicines and a monthly nutrition allowance to patients, incentives to doctors and their staff, and GeneXpert tests.

District (s) Covered Bhojpur, Gaya, Nalanda, Patna, Bhagalpur, Katihar, Munger and Saharsa(2020)

Private Providers Engaged	1,304
TB Notifications	11,863
HIV Test done	10,855
Diabetic Test done	10,812
UDST done	8,838
Bank Details added (DBT)	10,123

### **Tuberculosis Health Action Learning Initiative (THALI):**

The USAID supported THALI project was implemented by WHP for a period of 4 years (2016-2020). During its implementation, THALI not only met its objective but also led to a path of newer models and components essential in eliminating TB. THALI focused on patient support services in 15 districts of 6 states (West Bengal, Jharkhand, Uttar Pradesh, Bihar, Gujarat and Punjab), covering a population of 44.02 million.

#### In 2020 (Jan-Sept):

- THALI conducted 14,220 household visits, sensitized 43,935 family members
- 7,900 patients enrolled in adherence technologies (99 dots, MERM and V-DOT) in Surat, Gujarat
- 7,150 TB patients screened for mental health in Surat and Ahmedabad
- >17,000 factory workers screened for tuberculosis in Ludhiana and Jalandhar, Punjab
- >1,200 TB patients linked with various social security schemes in Jharkhand

#### Closing the Gaps in TB Care Cascade (CGC):

The four-year project supported by USAID will be led by WHP and implemented by a consortium of WHP, Indian Institute of Public Health Gandhinagar (IIPHG), Everwell Health Solutions and Harvard Global Research Support Center-India (HGI). The project will work in the states of Gujarat (Gandhinagar and Surat) & Jharkhand (Ranchi and East Singhbhum), covering a population of 18 million. It will enable districts to monitor the TB care cascade and demonstrate quality

improvement interventions to address diagnostic and treatment gaps.

#### In 2020 (Oct-Nov), early achievements are:

Mental health screening: 667 patients screened for depression and anxiety, with 15% indicating mild or moderate symptoms of depression and 6% indicating mild or moderate symptoms of anxiety. Psychosocial interventions will be implemented for patients expressing moderate-severe symptoms of depression or anxiety.

Long-term follow up: 2,438 patients who successfully completed treatment were followed up on to assess TB recurrence. 273 patients were identified as presumptive TB, 216 patients were evaluated, and 21(10%) patients were diagnosed with recurrent TB.

# Joint Efforts for Elimination of Tuberculosis (JEET):

Currently, Global Fund supported JEET is being implemented by WHP as a sub recipient (SR) of FIND and CHAI in 7 districts of 4 states - West Bengal, Gujarat, Punjab and Bihar, covering 32.3 million population. Under JEET project, WHP engaged 4,979 private providers; conducted over 50 CMEs. Following are the results of effective engagement.

District (s) Covered	Kolkata, Howrah, Ahmedabad, Surat, Ludhiana, Jalandhar and Darbhanga (2020)
TB Notifications	25,044
Sputum samples collected	17,376
Free FDC access	7,162
Counselling visits conducted	27,673
Successful treatment outcome	28,775

#### 8. ECHO India

Project ECHO® creates ongoing communities of learning and practice with a focus on case-based learning and sharing of specialty knowledge and best-practices with the goal to improve healthcare in rural areas. The ECHO model of clinical training and continuing education links expert specialist teams at a centre of excellence 'hub' with primary care clinicians in local communities – the 'spokes' of the model. Specialists serve as mentors and colleagues, sharing their medical knowledge and expertise with local primary care clinicians.

ECHO India supports the NTEP through capacity building measures to expedite rollout of new policy decisions on ground. ECHO India's ECHO platform is being used for frequent interaction between NTEP and State and District TB Programme Managers. These interactive ECHO Model sessions ensures quick resolution of queries on ground and help in addressing challenges faced by districts and states by using the Case Based Learning and Didactic presentation for smooth implementation of the TB programme.

### In the year 2020-21, ECHO India had following key achievements:

- ECHO Supports through its 35 ECHO TB Hubs in India.
- Total New Hubs established: 29
- Induction training to all NTEP Staff: 158 participants form 10 states
- 14 State level hub trainings were organised to run the echo platform by STO/STDC team
- 508 spokes trained from all 14 states of NTEP Programe

- Total sessions supported: 906 (TB, COVID, TB HIV & TB Leprosy)
- Total participants reached: 79,620
- Pan India Training on Partnership Document: 14 sessions covering all the states and UTs and reached 1416 participants
- Pan India: ZTF Programme. Completed
   3 zonal level session and yet to complete
   2 more zonal level session. Total
   526participants reached
- Established two Centre of Excellence on Pediatric TB (CoEpTB) of Tripura, North East Zone
- Established two Centre of Excellence on Pediatric TB (CoEpTB) of West Bengal, East Zone
- Process initiated to launch additional 13 hubs
- Process initiated to establish another 44 hubs including RTPMU, STDC, IRL, STO offices of various states and Union Territories.
- 15. Southern Health Improvement Samity (SHIS)
- Improving Tuberculosis Case Detection by engaging Non-Formal Health Providers in remote Sunderban Islands of West Bengal.

# 9. Southern Health Improvement Samity (SHIS):

Southern Health Improvement Samity (SHIS), with its decade long experience in Tuberculosis Control Programme, has found and shown that

using innovative approaches by utilizing Non-Formal Health Providers can identify and reach people who are being missed by the National Tuberculosis Elimination Programme of India.

The community living in the Sunderban Delta region usually seeks early-stage healthcare from "friendly neighbourhood" Non-Formal Health Providers (NFHPs). SHIS as Sub-Recipient of Global Fund of Central TB Division, Government of India engaged the NFHPs to enable them to identify early TB symptomatics from this key population who would be then tested using X-Ray and Xpert MTB/RIF (CBNAAT) technology. Diagnosed TB cases among them would be referred promptly to NTEP for treatment.

The project was started from April, 2018. During the implementation phase of January 2020 to December 2020, SHIS was able to identify 723 TB Patients, 7 MDR cases and 11 HIV Reactive cases inspite of Covid-19 Pandemic situation.

Engaging with Non-Formal Health Providers has been shown to be effective in improving health services uptake and show positive impact in the implementation of the Practical Approach to Tuberculosis Elimination strategy.

From January, 2018 to December, 2020, the programme was able to achieve the following figures;

Sputum Collection and Transportation: 20348 out of 20020

X-Ray: 17560 out of 18018

CBNAAT: 981 out of 901

TB Patients Detected: 2047 out of 2003







NFHP Mr. Amin Sardar of Kanthalberia in his Clinic with a Presumptive TB Patient, MDR Patient during his initial Diagnosis in one of the NFHP Clinic, he is currently on Treatment., NFHP Re-Training Session on Referral of Presumptive TB in presences of Dr. Swapan Mondal, BMOH (sitting far right) of Hingalgunj Block

# 10. Saksham, Tata Institute of Social Sciences:

Saksham (which means "making capable") is a project of the Tata Institute of Social Sciences funded by the Global Fund since 2008 to support the Ministry of Health and Family Welfare in its fight against HIV and TB. Using the learnings accrued from the engagement with the HIV/AIDS epidemic, in 2015 Saksham Pravaah introduced psycho-social counselling for TB in government's TB control programme and has demonstrated the need for moving beyond the "bio-medical", "disease control" approach and addressing social determinants of TB.

Coverage	Numbers
States covered	4 Gujarat, Maharashtra,
	Manarashtra,
	Rajasthan, Karnataka
Saksham Pravaah	214
Counsellors	
Total DR-TB patients	68,072
supported (Oct15 -	
Dec20)	

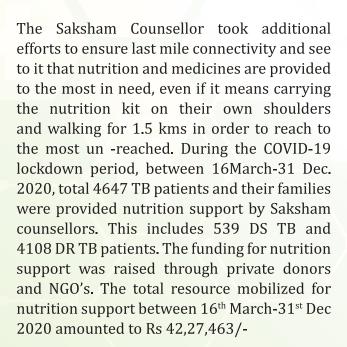
Saksham Pravaah counsellors provide home based counselling to support the DRTB patients in completing the treatment by addressing social determinants of TB and provide counselling on a range of issues including TB related Stigma and Discrimination, Gender based concerns and Mental Health.

### In 2020, key achievements under the Saksham is as follows

No. of DR-TB patients registered	11,272
% of patients continued on	94%
treatment	
No. of famiy care givers registered	10,840
for counselling	(94%)
No. of household contacts of DR-TB	3,936
patients counselled for testing	
No. of drug sensitive TB patients	170
diagnosed	
No. of drug resistant TB patients	114
diagnosed	
% of drug resistant TB patients	84%
who interrupted treatment and	
retrieved back on treatment	
No. of drug resistant TB patients	2,670
linked to government schemes	
No. of drug resistant TB patients	5,214
provided nutrition support	







The Saksham Counsellors also linked 1860 PwDRTBs to GoI Social Protection Schemes (ranging from Insurance schemes, Bank and India post account opening to pension scheme,





PAN card etc) to address the catastrophic expenses of not just DRTB but COVID 19 related loss of pay.

### 11. Karnataka Health Promotion Trust (KHPT):

KHPT is a not-for-profit entity that designs and implements patient-centric innovations across the continuum of care, engaging stakeholders in the community, public health facilities and the private sector, to work towards ending TB in collaboration with the NTEP. KHPT implements the USAID funded Breaking the Barriers (BTB) project, the Joint Effort for Elimination of Tuberculosis (JEET), funded by the Global Fund (GFATM), as a subrecipient to FIND. KHPT implemented USAID funded Tuberculosis Health Action Learning Initiative (THALI), which was recently concluded.

### **Strengthening Community Responses to TB** in the time of COVID-19

When the COVID-19 pandemic and the lockdown restricted resulting access to medication, healthcare services and even basic essentials for the vulnerable communities including TB patients, frontline staff of both KHPT and its partner TB Alert India (TBAI) worked on community-led patient-centric interventions and leveraged their extensive networks to mobilize resources and support in project intervention geographies, including humanitarian aid, outreach and counselling services, and awareness through communication material development.

Community structures support vulnerable populations across Karnataka, Telangana and AP during lockdown



KHPT felicitated 21 community structure members who had supported COVID-19 relief efforts through their exemplary efforts towards providing food, provision kits, and masks, counselling community members, and referrals to COVID hospitals. They were given a certificate and a memento recognizing them as Community COVID Warriors.

#### **THALI Learnings and Dissemination**

In THALI. conceptualized KHPT the Differentiated Care Model with the goal of a TB free India and a reduction in morbidity and mortality due to TB". The DCM model uses a Risk and Needs Assessment (RANA) tool to prioritize the patients and seven categories of high-priority patients are listed for special care, including the elderly, patients living alone, patients with diabetes, HIV or DRTB, those using alcohol and those having been treated for TB before. Out of 5937 TB patients in the intervention sites, 53% were administered RANA and 41% of them were categorized as at-risk under DCM. 84.9 percentage of DCM patients who are provided Care and Support, have been declared to have successful treatment outcomes. This model has been recognized by the CTD.

In community engagement, a total of 607 HICs have been established in Karnataka, Telangana and AP. 408 community structures were engaged with during the project period. 3351 TB symptomatic patients were referred by community structures out of which 10.5% were found to have TB disease; In THALI districts of Karnataka, Telangana and AP, a total of 531 patient advocates have been identified. These patient advocates are also being sensitized to help other patients and families to address stigma, discrimination and to adhere to treatment



THALI learnings disseminated through state-level online workshops

KHPT organized a series of three webinars in collaboration with CTD and USAID to inform the implementation strategies of the Breaking the Barriers (BTB) project. The webinars offered expert perspectives on the risks of vulnerabilities of migrant populations, the urban poor and mining and industrial workers.

Some of the key learnings from the webinar series that BTB seeks to integrate include, strengthening and leveraging community-based and led models, strengthening of governance and health care systems, ensuring multisectoral coordination, and adopting a targeted policy approach to address TB.

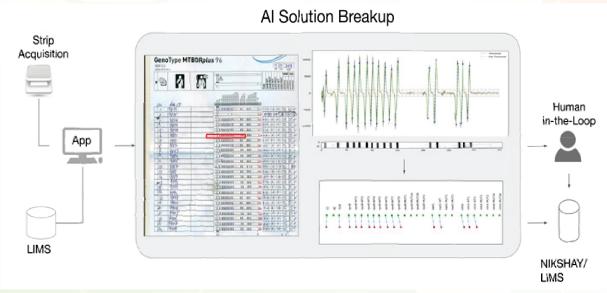
# 12. Wadhwani Institute for Artificial Intelligence (Wadhwani AI)

TRACE-TB Project [Transformative Research and Artificial Intelligence (AI) Capacity for Elimination of TB and Responding to Infectious Diseases. Artificial Intelligence (AI) has started to transform healthcare and

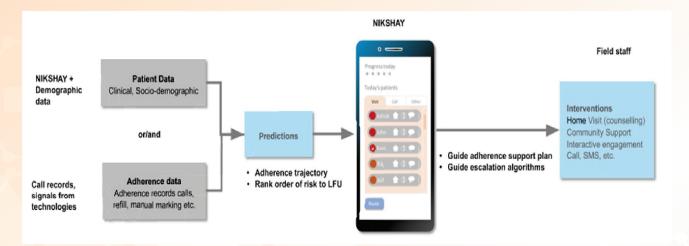
infectious disease control. It has the potential to drive game-changing improvements in TB care as well. AI and Machine Learning (ML) techniques are aided by growing availability and scale of digital applications used for patients longitudinally from diagnosis to cure. TRACE-TB project funded by USAID/India and implemented by Wadhwani AI, intends to leverage digital advancements and will develop several AI solutions to augment or automate interventions across the TB Cascade of care and facilitate build of enabling system for sustainable use of AI under NTEP.

#### Key highlights of the activities carried out by Wadhwani AI is described below:

A consultative workshop was conducted on 29th February 2020with CTD, USAID, WHO and other stakeholders, to understand the needs of the NTEP. The process led to identification of AI solutions that can contribute to GoI's overall efforts to end TB in the country.



A solution to read, interpret and transmit results of Line Probe Assay (LPA) using AI/ML methods has been prioritized and development has been initiated. Such an AI solution aids in early diagnosis and appropriate treatment of DR-TB patients, by reducing time and improving accuracy of test results. Technical Proof of Concept has been demonstrated in August 2020. To stabilize performance of the AI solution on the larger and geographically representative data set, additional data collection from NTEP laboratories has been accomplished.



A solution to predict lost to follow up (LFU) using machine learning methods has been prioritized and development initiated, with a view to stratify TB patients at risk of LFU and help staff to make proactive decisions for differentiated care for TB patients who are at highest risk of LFU. Technical Proof of Concept has been demonstrated in August 2020. Further data collection is ongoing to stabilize AI performance on more representative geographies.

Scoping exercise was carried out with NIKSHAY team of CTD to understand the need to make NIKSHAY AI ready. As part of this process, EHR standardization of NIKSHAY has been taken up as a task in priority. SNOMEDCT, MDDS, ICD10 have been identified for EHR standardization of NIKSHAY. To move this process, consultations have been done with NIKSHAY team, eHeatlh, Everwell and C-DAC.

#### 13. The Union:

#### **Corporate TB Pledge:**

The Corporate TB Pledge (CTP) initiative, launched in April2019 is a collaborative initiative between the NTEP and Corporate Sector entities, to jointly work towards the shared vision of TB Elimination in the country. CTP aims to engage the corporates and business associations effectively and meaningfully, for industry-led sustainable solutions to end TB in workplace and community settings. Corporate sector entities are encouraged to use their resources (human

and financial), and the pledge members are supported with technical assistance for designing and implementing the TB elimination initiatives at their workplaces and Communities, thereby increasing the number of notifications and improving access to treatment to the patients.

CTP currently has 108 Corporate Members as part of the pledge, along with 7 Business associations on board. Companies have signed up at different tiers, specifying their levels of commitment with 24 under the Silver tier, 61 under Gold, 15 under Platinum and 8 under the Diamond category. Through this effort, more than one million people have been screened for TB symptoms by CTP members and around 30,000 symptomatics have been tested for TB through corporate interventions. Around USD 3 million have been leveraged from corporate resources, for TB including management of 7 Microscopy centres, 6 CBNAAT/Gene Expert Machines, 3 Mobile X-ray Vans and Nutritional Support to about 300 patients.



Apollo Tyres Foundation being felicitated at the launch ceremony of Corporate TB Pledge initiative

#### Highlights of the Year:

The year marked a range of activities conducted to mobilise corporates to join the pledge and commit the resources towards the mission. Over the last one year, CTP secretariat, hosted at The Union, undertook numerous activities towards this end:

#### Formation of DR-TB Consortium:

DR-TB consortium was formed to facilitate public private and Private-private partnership to support NTEP efforts in DR-TB care; acting as an interface between different sectors. Current members include, logistics companies, private labs, pharma and diagnostic companies in DR-TB consortium. The group meets every quarter to review progress and plan new activities and projects in DR-TB space. A virtual meeting of DR-TB Consortium, was organised in September 2020, to restart engagement with partners after a prolonged gap due to COVID-19. The event was attended by 45 CTP and non-CTP members from both health and non-health sectors, focussed on the needs and priority areas to galvanise corporate sector support and ensure public, private partnerships to take the vision of TB free India to a next level. The event showcased innovative solutions being proposed by four corporates partners namely, Mylan Pharmaceuticals, Johnsons and Johnsons, Roche and Cepheid India in DR-TB space.

#### Online Platform:

To connect with companies easily and to facilitate interaction between corporate partners and other stake holders as well as to provide a common platform to corporates to access TB related information, CTP online platform is being developed.

#### State level Webinars:

During the year, two state level webinars were organised. The first one was organised on 25<sup>th</sup> September 2020, with Gujarat as the focus state. The two-hour Webinar was attended by representatives from over 50 organizations from corporate, Government and development sector and DDG TB Dr KS Sachdeva delivered the keynote address. The PAcT (Partnership for Action against Tuberculosis) webinar was jointly organized by Apollo Tyres, CII Gujarat chapter, Federation of Kuchh Industries Association (FOKIA) USAID and The Union.



The second state level webinar was organised on 14th December 2020, with Assam as focussed state the key note address was

delivered by DDG TB and the webinar was attended by more than 60 participants from over 30 companies. The webinar was jointly organized by the State TB Cell (Assam), Indian Tea Association (ITA), Goodricke Tea, USAID and The Union.

#### **Partnership with Business Associations:**

CTP secretariat signed a Letter of Intent (LOI) with Federation of Kutch Industries Association (FOKIA) to mobilize new CTP members to work on TB. CTP secretariat is also working to formalize association with CII and Indian Tea Association (ITA).

#### TB Free Transhipment Locations Campaign:

Apollo Tyres Foundation, a diamond member of Corporate TB Pledge (CTP) initiative, organized one of its kind "TB free Transhipment Locations" campaign focussed at reaching out to the trucking and migrant communities in India. The campaign was launched by organizing a webinar in partnership with Central TB Division, state TB Cell Gujarat, CII Gujarat, Federation of Kuchh Industries Association (FOKIA), USAID and The Union.

The two-week campaign entailed both virtual and physical outreach activities including webinar successfully reaching out to over 60,000 people directly and close to 3 lac people indirectly at 31 different locations in 19 states. 1310 TB testing were facilitated during the campaign to identify 52 TB patients. 51 of these TB patients were put on treatment successfully.

### New Projects supported by Corporate Partners:

 Medanta Hospital expanded its mobile X-ray project to Lucknow, Ranchi and Patna. This is in addition to Pataudi, Haryana.

- GAIL India funded a modified project on active case finding in Pata, district Auraiya UP, the project is being implemented by Public Health Foundation of India (PHFI). The project entails deployment of Swasthya Sahayak technology for community screening for tuberculosis in the district Auraiya and district Firozabad.
- Ambuja Cement Foundation initiated TB integration activities in their health project at three new locations.
- Nayara Energy approved funding for family nutrition kits for all TB patients on treatment in Devbhumi Dwarka district of Gujarat.

#### 14. USAID-NISHTHA/Jhpiego

USAID's flagship health system strengthening project NISHTHA, implemented by Jhpiego is working across twelve states Viz, Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Assam, Manipur, Meghalaya, Mizoram, Sikkim, Arunachal Pradesh, Tripura and Nagaland for strengthening comprehensive primary healthcare services. In partnership with National TB Elimination Programme (NTEP) at central and state level, NISHTHA is working towards integrating TB services at Ayushman Bharat Health and Wellness Centers (AB-HWCs) with an aim to bring quality and affordable TB services closer to people's homes. Given below are the key areas of support provided by NISHTHA:

**Operational Guidelines for Integrating TB services at AB-HWCs**: Working closely with Central TB Division (CTD) and NHM, NISHTHA supported in developing the operational guidelines for integrating TB services at AB-HWCs. The operational guidelines highlights the what, who and how for integrating TB at AB-HWCs. The guideline were launched by

Hon'ble Health Minister on December 28, 2020 and is being rolled out across the country.

**Collaborative Framework for Management of Tuberculosis in Pregnancy**: Working closely with Central TB Division and Maternal and Child Health Division (MCH), NISHTHA supported in developing collaborative framework for management of TB in Pregnancy. The collaborative framework will be launched and rolled out across the country in 2021.

Sensitization of TB survivors: NISHTHA is partnering with CTD forsensitizing and empowering TB survivors to become TB champions across 12 NISHTHA intervention states who will play a key role in creating awareness among the communities on TB prevention and adherence to TB treatment. Overall 650 TB survivors are trained across NISHTHA states till December, 2020

Learning resource package for training of Community Health Officers (CHOs) on TB: NISHTHA in partnership with CTD is developing a Learning Resources Package for training of CHOs on TB. The LRP will be rolled out in the first quarter of 2021 for training the CHOs who lead the primary healthcare teams at AB-HWCs.



CHO providing medicines as per prescription by Doctor to TB patient at HWC Chippon, Guna, MP

planning, immunization, and tuberculosis, the models of primary healthcare delivery will also incorporate social determinants of health. The project will also leverage the expertise of the private sector while engaging with communities. Besides this, it will test, build,



ASHA from HWC Amlyahat, Rajgarh, MP filling CBAC form and counselling TB patient at the community level

**Vulnerability Score Cards for differential TB care:** In partnership with CTD, NISHTHA has developed vulnerability score cards which is part of differential care package for TB patients. Theses scorecards would be used for screening of high-risk TB patients for advanced care.

#### 15. Project SAMAGRA:

Flagship initiativecommitted to establish resilient urban health systems in India

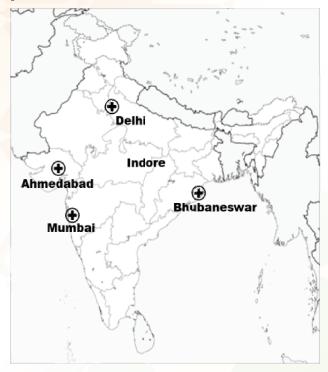
#### Overview:

SAMAGRA is a partnership between USAID and partners led by Population Services International (PSI). It aims to create a resilient urban health ecosystem that is responsive, affordable, and equitable, and provides quality preventive, promotive, and curative primary health care to the urban poor, especially women, children, and other vulnerable populations. While there is emphasis on reproductive, maternal newborn and child health, family

and replicate an urban resilience model with primary health/ community health as one of its key levers. Resilience has become an important goal for cities, particularly in the face of climate change, natural disasters and especially now, in the wake of the COVID-19 pandemic. SAMAGRA is poised to be at the forefront of this paradigm shift in viewing healthcare& act as a one-stop centre for innovative and scalable urban health solutions in India.

#### Our Reach:

The project target for this year (October 2020 to September 2021) is to cover 750,000 vulnerable urban poor populations through various interventions cities of Ahmedabad, Bhubaneswar, Delhi, Indore, and Mumbai and is expected to scale up to 50 cities in a phase-wise manner over the five-year project period.



#### Implementing Partner (s):

SNEHA, MAMTA, CURE India, World Health Partners, C3, PSI India, MPVHA, SAATH

#### **Achievements:**

The year 2020-early 2021 is reflective of the power of collaborative work done on COVID-19-related interventions in five cities that have complemented the efforts of the local state governments. Despite the lockdown & challenges posed by the pandemic, USAIDfunded SAMAGRA partners rose to the occasion to train frontline, community & health-workers on COVID-19 preparedness, response and to implement regular project activates such as suspected COVID-19 cases referred for TB diagnosis. The project also undertook awareness campaigns among urban poor communities & ensured vulnerable populations always had access to health services.

In line with GoI's directives (especially on bi-directional screening among TB & COVID patients), ensured vulnerable population had access to essential TB and other key primary healthcare services.

Provided greater support on COVID-19 preparedness & protocols to the local bodies.

Trained frontline, community & healthcare workers on COVID response& community outreach for other services around TB

Increased advocacy with local government on the state of healthcare services, especially on TB.

Aided in distribution of Personal Protective Equipments (PPE) to health facilities.

Ensured supply of rations to urban poor families.

As a result of this continuous field movements and monitoring, in February 2021, of the 120 presumptive COVID-19 patient referred for TB testing, 71 diagnosed as TB.

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#### **Current Activities and Future Plans:**

Larger goal is to augment the service delivery plans & efforts of NTEP especially for urban poor populations. Project SAMAGRA in partnerships with the city administration, NGOs and private sector entities to ensure essential TB awareness and services.

Reaching out to urban poor and vulnerable with TB, in Ahmedabad, Bhubaneshwar, Delhi, Indore and Mumbai cities

SAMAGRA is implementing the field-level activities complying with the COVID-19 protocols especially among people with symptoms of TB. In the identified cities, the process of mapping/updating the mapping

of vulnerable households is continuing for presumptive TB cases. Based on the mapping, implementationstrategiesarebeingformulated to saturate coverage through household visits. Community outreach activities are in progress and are being further scaled up through multiple ways including household/field visits and using technological solutions. Constant follow-ups are being undertaken for testing and treatment of the identified and diagnosed cases respectively. Also, mapping of facilities and service providers, related to TB, both from the public and private sectors is also being undertaken to strengthen the referral systems for easy access to affordable service within reach.

### **Best Practices and Success Stories**

# **CHAPTER 17**



Hon'ble Minister of Health, Dr. Harsh Vardhan & Hon'ble Minister of State, Shri Ashwini Kumar Choubey issued the Certificate of Appreciation to States on 24<sup>th</sup> June 2020



### **Best Practices and Success Stories**

## **CHAPTER 17**

#### **Andaman & Nicobar Island**

#### 1. Doorstep TB Treatment Service Delivery during COVID-19 Pandemic in South Andaman district of the Union Territory of Andaman and Nicobar Islands

South Andaman district is one of the three districts of Andaman & Nicobar Islands. It has three 'tehsils' namely "Port Blair", "Ferrargunj" and Little Andaman". During the national and regional lock downs due to COVID-19 pandemic, the districts ensured the continuum of care of TB patients by door-step treatment service delivery. The activity has covered all the TB cases that were on treatment between April to July 2020.

South Andaman district struggled with limited transportation facilities and severe network connectivity issues during the national and regional lock down owing to COVID-19 pandemic. To overcome these challenges, the district administration planned for doorstep TB treatment service delivery from the month of April 2020, until July 2020. Health department vehicles and National TB Elimination Programme (NTEP) vehicles were used to deliver drug supply from District Drug Stores to the Peripheral Health Institutions (PHIs). The medicines thus reaching the PHIs were collected by NTEP staff, Accredited Social Health Activists (ASHAs), Auxiliary Nurse Midwives (ANMs), Anganwadi Workers (AWWs) and distributed at the patient's door step. Medicines were supplied for a period of one month. Medication for co-morbidity medications, if needed were also supplied along with TB medicines. The staff involved in the door-step treatment service delivery were given 'Pink Passes' by the district administration to ensure hassle free mobility to ensure care of TB patient during COVID-19

pandemic. The whole activity further boosted the motivation and added momentum to the strong NTEP team of South Andaman district in striving to achieve the goal of TB elimination by the year 2025.

#### **Assam**

## 2. A medical officer turning to be a TB Champion, Assam

"I feel proud to work as a Patient Care Provider for TB patients and contribute towards the cause of the needy TB patients." This is the statement of Dr. Amar Ivoti Deka, Medical & Health Officer- who himself got infected by Mycobacterium Tuberculosis while providing his dedicated service in Boghara, State Dispensary in Morigaon district of Assam. Later, Dr. Deka took full course of TB medicine and got cured from the disease. However, he is committed towards the fight against this disease and became a TB champion doctor to provide best care to TB patients of the rural community. He said, "I suffered from the disease so can feel the pain of a TB patient". As a TB champion he is very much aware about the effectiveness of medicine available under the NTEP which in turn would contribute towards successful treatment and help in curbing the spread of this disease.



Dr. Amar Jyoti Deka, Medical & Health Officer-I of Morigaon District

Dr. Deka also got the state level recognition as 'a best practiced physician' and able to pick the award on behalf of "Boghara State Dispensary". Dr. Deka also commented that the benefit of monthly honorarium (Rs. 500/-) to TB patients till completion of treatment under Nikshay Poshan Yojana is an important initiative of the government towards elimination of TB by 2025.

# 3. Corporate Social Responsibility – National Thermal Power Corporation's support towards TB elimination

In 2016, an initiative was undertaken with the aim to garner support from National Thermal Power Corporation (NTPC), Salakati in Kokrajhar district, Assam under their Corporate Social Responsibility Scheme. The proposal for installation of a digital X-ray machine was forwarded to NTPC in order to strengthen the diagnostic services in this tribal district under the initiative of District TB Centre, Kokrajhara. NTPC, Salakati donated one digital X-Ray machine with CR System to District TB Centre, Kokrajhar in 2020. After discussion with State TB Cell and District TB Centre the X-Ray machine was installed in Tulshibil SHC located in a remote area of the district which also caters to a large population of neighboring district of Dhubri as well which again is an aspirational district of Govt of India. The machine was inaugurated by Mr. Rakesh Kumar, Group General Manager (GGM), NTPC, Salakati, Kokrajhar on 03/03/2020 in presence of District Administrative and Health Officers with a motto "End TB by 2025". The machine has also been linked up with 'Chief Minister Free Diagnosis Services', Assam so that the poor people of hard to reach area may receive the services.





#### **Bihar**

# 4. Socio-Economic Rehabilitation under the Livelihood Enhancement Programme (LEP) to the neediest DR-TB patients.

Damien Foundation India Trust (DFIT) is a charitable Non-Governmental Organization established for TB and Leprosy Control Activities in India. It is working in partnership with the Government of Bihar since the year 2014 having established a TB Research Centre at Darbhanga, Bihar.

The Damien Foundation believes in Socio-Economic rehabilitation under the Livelihood Enhancement Programme (LEP). It provides holistic rehabilitation for persons affected by tuberculosis. The livelihood support is given by DFIT as an innovation to the most needy DR-TB patients to generate some income for their livelihood who are not able to do any physical intensive work due to Multi Drug Resistant Tuberculosis.

The organization has provided livelihood support to 36 MDR-TB patients in 6 districts namely Darbhanga, Muzaffarpur, Madhubani, Saharsa, Samastipur and Supaul of the Bihar between periods of 2017 to 2020. The support provided includes:

Setting up of shops/petty shops for groceries, refreshment, utensils, cosmetics, bicycle repair, cobbler and barber. Provision of sewing machines, four-wheeled vendor carts, cyclerickshaw and tricycle.

beneficiaries identified were considering the land ownership, type of housing, breadwinner's, TB infection, etc. The support projects were subject to a maximum of Rs. 25,000 per person, two most-deserving persons per district in a year. The types of support offered were decided in consultation the potential beneficiaries, assessing the available resources/skills and existing options and circumstances. Some of them were offered physical infrastructure (e.g. shops), while others were given the required accessories/tools in addition. Three-fourths of the beneficiaries who received the livelihood support belonged to the age group of 20-39 years. About 80% of those who received support were men and those from rural areas.

All the livelihood support projects offered till date were found to be sustaining at the end the year 2020. The beneficiaries were able to earn an income of about Rs. 6000-7500 per month from these initiatives, which had enhanced their economic, nutritional and social status post TB infection.







#### **Himachal Pradesh**

## 5. "Sunday ACF by ASHA-strategy to fast track Ending TB:

Himachal Pradesh government has set up an ambitious goal of meeting the targets of Ending Tuberculosis by 2021. State came out with its own strategies and launched a new scheme "Mukhya Mantri Kshay Rog Nivaran Yojna" (MMKRNY) with a major focus to fill the gap in the infrastructure, knowledge gap among general population about TB and systematic screening of population about TB symptoms on a campaign mode. Sunday ACF activity by ASHA is one of the components of MMKRNY.

Intervention: Himachal Pradesh State has a network of 7,736 ASHA who are supporting State in implementation of all national health programs and schemes as front-line workers. In NTEP, their role was limited to DOT provider so far. With an objective of early diagnosis of TB cases, Department of Health& Family Welfare rolled out "Sunday ACF activity by ASHA" across the State in December 2019 under Mukhya Mantri Kshay Rog Nivaran Yojna. Each ASHA visits 20 households and screens at least 80 persons for any symptoms of TB on every Sunday. ASHA also collects and transports the samples to nearest microscopy centres.

Financial Impact: Rs 100 is given as honorarium to ASHA per activity day. Funds are made available in Mukhayamantri Kshay Rog Nivaran Yojna under State Budget.

Results: Standard Operational Guidelines for Sunday ACF has been prepared. Interview checklists with standardised questionnaire are administered to the public. Orientation of Block Medical Officers and NTEP supervisory staff has been conducted across the districts. Health workers network and ASHA network has been trained at block and PHI level. Logistics has been provided to each ASHA. Reporting mechanism from ASHA to HSC, PHI, Block, District and State on a standardised formats and protocols is being implemented. Supervisory format for Sunday ACF also has been finalized. Till date 56.82 lakh people has been screened; 12,018 samples were examined in nearest microscopy centres and CBNAAT sites. As a result, an additional 202 TB cases were found positive.





#### **Jharkhand**

## 6. Tuberculosis snatched the adolescence, not the commitment to win over

The life of 13-year-old Komal Kumari from Ranchi came to a halt when she had to give up her studies, friends, and dreams of a teenager. She was first diagnosed with pulmonary tuberculosis in early 2013, when she was in 9<sup>th</sup> grade. The age, when teenagers watch movies and making memories; but, Komal was struggling with TBdisease. Although she completed Category-I treatment, treatment failed because she was infected with the Multi Drug-Resistant TB (MDR-TB) bacilli.



Treatment initiation and Launch of Bedaquiline containing regimen by PS, Health Jharkhand



Post treatment in Sep 2020

Komal was diagnosed with MDR TB in late 2013. This was not Komal's story alone. In early 2014, her close friend and elder sister Kajol

(16 years old), was also diagnosed with MDR TB. The parents were shattered The parents along with two daughters went to Varanasi for treatment. They lived there for two years and continued their treatment, but failed to win over the threat of illness. However, they never lost hope and faith in God.

They came back to Ranchi with a heavy heart and prayed god to get out of this disease. In 2016, they arrived at Itki TB Sanatorium with a history of past treatment and the existing condition.

Over the time, MDR TB worsened and converted into Extremely Drug-Resistant TB (XDR TB). Both sisters were put into the Itki TB Sanatorium. They were placed on treatment for XDR-TB under the supervision of Dr.Anindya Mitra. It had been two years since the treatment DR-TB, but the sign of improvement among both sisters was grim.

In 2018, new medicine for XDR TB, Bedaquiline was launched across the country and also in Jharkhand. Both Komal and Kajol were placed on new regimen on 24 March 2018 (World TB Day). They were the first two patients from Jharkhand who were placed on new drug regimen (Bedaquiline).

Positive effect of the drug and continued support from Itki TB Sanatorium, increased the trust of both patients and their parents. Both regained a lot of weight>15 kg over a period of two years and declared cured on 24<sup>th</sup> September 2020. They are now happy to enjoy a normal life and are in the process to restart their studies. They are happy to overcome this disease after a very long battle of 7 years.

#### Kerala

7. Airborne Infection Control (AIC) help desk at all hospitals established for preventing TB transmission:

75 Taluk/District hospitals in public sector in state Kerala have established AIC help desk (Cough Corners) since Jan 1<sup>st</sup> 2020. Till date, 324 private hospitals had AIC help desks. AIC help desk incorporates hand wash and temperature screening zone. AIC help desks might have prevented transmission of many infectious diseases within hospital and to health care workers. All patients having respiratory symptoms are screened and given basic education on cough hygiene.





## 8. 561 Local Self Government (LSG) areas free of Childhood TB in Kerala:

The state government has launched "Kerala TB Elimination Mission" as 'people's Movement against TB' through community ownership and social mobilization. Kerala TB Elimination Mission is being implemented through the stewardship of Local Self Government Bodies with the theme "My TB free Panchayat".

Of the 1034 LSG Heads, 1021 (98.7%) were sensitised on TB Elimination Mission initially. Among the LSG bodies, 951 (92%) formed TB Elimination Task Forces. TB Elimination Task Forces chaired by LSG head plans and reviews TB Elimination activities of that Panchayat/Municipality/Corporation. Nutritional support projects for TB patients worth INR. 27, 25,711 was implemented from LSGs own fund. Treatment Support Groups were formed in 334 (36%) LSGs. TB messages reached 7428886 / 8560731 (87%) households in the state. All welfare and developmental activities including addressing determinants of TB are being done through LSG mechanisms.

TB data is analyzed at Panachayat level for surveillance purpose. Out of 1034 LSGs (Grama Panchayat/Municipality/ Corporation), 561 LSGs had zero paediatric TB, 709 LSGs had Zero Drug Resistant TB and 688 LSGs had Zero lost to follow up for 12 consecutive months in 2019. All these LSGs were declared AKSHAYA KERALAM award by Shri K K Shailaja, Hon'ble Health Minister of Kerala on October 2, 2020.

Analysing data at Village/Panchayat level will help to identify trends and programme performance which will help for local planning and solutions. This will also develop competitive spirit to ensure Political Stewardship which will lead to Social Mobilization.

Uttar Pradesh blazes the trail by setting up

MoU with Postal Department for TB Samples Transportation

#### **Uttar Pradesh**

## 9. Partnering with Indian Postal Department to transport TB sample:

Lucknow, April 23, 2020 assortment of new schemes and programs are being launched to accomplish the resolution of the Hon'ble Prime Minister Shri Narendra Modi to eliminate Tuberculosis (TB) by year 2025.





MoU signing ceremony on 23rd April 2020

In accordance with fulfilling the vision of Hon'ble Prime Minister, the State created the first ever sustainable modal of TB sample transportation to the concerned labs in all 75 districts of the state. This comprehensive agreement was formally signed between the State Tuberculosis Department and the Indian

Postal Department at Swasthya Bhavan on 23/4/2020. Earlier these samples were sent by the courier services, which led to delay in identification of patients and commencement of treatment. Removing this bottle neck State TB cell adopted an out of box approach by implementing this new system.

According to this agreement, the postal department will work to deliver samples from about 2300 authorized TB sample collection centres to 145 CBNAAT machine centres within 24 hours. Samples will reach Culture & Drug Sensitivity Testing laboratories in 48 hours located in eight districts of the state (Lucknow, Agra, Aligarh, Bareilly, Meerut, Varanasi, Gorakhpur and Etawah). Initially four districts were selected for the first phase of the Pilot project. Notably this pilot was conducted in the first phase in Lucknow, Agra, Badaun and Chandauli districts. After getting encouraging results from the pilot, this system was implemented pan state from May, 2020.

टीबी रोगियों के लिए जिले में हुई शुरुआत,जल्द शुरू होगी दवा

## डाक विभाग पहुंचाएगा जांच के लिए सैम्पल



अमेठी | हिन्दुस्तान संवाद

अजेजी हिन्दुस्तान खंवाद के लिए भेजे जाने वाले नमूनों को आंख के लिए भेजे जाने वाले नमूनों को अब के लिए भेजे जाने वाले नमूनों को अब जोजा आएंगे और मरीजों की दख जरूद युक्त हो बंदोनों जिनसे बंदा जरूद युक्त हो बंदोनों जिनसे बंद्र का जरूद युक्त हो बंद्र के स्वत्या कि स्वत्या इंड्र के स्वत्या के स्वत्या कि स्वत्या इंड्र के स्वत्या के स्वत्या के स्वत्या कि दीकों के मरीजों के सैम्मल लेख लक्त पर्युचाने की जिम्मदारी हाल विश्वा उद्याग्या इसके लिए धारतीय हाक लिया और इसके सिंग्स का स्वत्या अस्त्रा स्वा समझौता हुआ है। इसके वीवारियों को

लेकर 3 जुलाई को डीटीमी सुलतानपुर में हैम्पल ट्रोपोटेंडन संबंधित प्रशिक्षण कार्यक्रम आर्थाजित किया गया था। जिसमें डाक विभाग के अधिकारियों का कर्मचारियों ने हिस्सा लिया। सिविनाट लीक टेक्नीशियन में अर्थाम ने बाला कि टीट्से को जंध के लिए, मरीजों के बलगम का नमुना राजकीय टीबी क्लीनिक जनपद अर्थाटी से विभाग पोस्ट आपिक्स के कर्मचारियों जाएगा। इसी क्रकार इलाज लें हों को स्थानिक कार्याद अर्थाटी के क्रिक्टा के क्रक्त जाराया। कारण। इसी क्रकार इलाज लें हों तीगियों के फालीअप कल्वर वाले नमुने को

**5** जिले में डाक विभाग द्वारा मरीजों के सैम्पल भेजने की शुरुआत हो गई है। इससे टीबी पाए जाने पर मरीजों के इलाज में काफी सहूलियत मिल सकेगी।

डा . बीएल जायसवाल जिला क्षय रोग अधिकारी अमेठी

ने बताया कि अमेटी जिले में भी डीटीसी से इस मोजना की शुरू आत हो चुकी है। जल्द ही सभी टीवू पर भी वह सुविधा शुरू हो आएगी। डीडीएस इंचार्ज अरविंद त्रिपादों ने कार्यक्रम के शुरूआत के अवसर पर बताया कि जल्द ही सभी टीवू पर तैनाद एसटीएलएस एवं लेब टेबनीशियन को प्रशिक्षत करके पैकिंग सामग्री वितादित की जाएगी।



#### 10. Adoption of paediatric age group TB patients under mentorship of Hon'ble **Governor of Uttar Pradesh**

Hon'ble Governor of Uttar Pradesh Smt. Anandiben Patel took the noble initiative by adopting a girl child affected with TB and appealed all citizens to support this initiative. The staff at the Raj Bhawan followed it by adopting 21 more children from Lucknow on 25<sup>th</sup> August 2020. All the children adopted by concerned staff of Governor House will be in physical proximity with the children to support them effectively.

Hon'ble Governor reinforced the message that the concerned staff would be accountable for continued & uninterrupted access to the available diagnostic and treatment facilities under NTEP along with additional nutritional support throughout the treatment duration.

**66** The Governor appealed to responsible citizens of the state that- "Adopting a child is not an obligation, it is primarily a moral responsibility of capable persons to contribute to the society by sharing their resources with the marginalized and deserving segment of the society. 99

She concluded with the remark that it is not feasible for the State Government to eliminate this decease solely. She exhorted the people to pitch in and make this a mass effort to fulfill the dream of 'TB Free UP by 2025.'

Hon'ble Chief Minister of State, Shri Yogi Adityanath reciprocated the initiative at the state level by adopting a TB patient. Hon'ble Health Minister of State, Sri Jai Pratap Singh also urged all ministers and legislators of State Government to adopt at least one TB patient and help to achieve the target of ending TB set



by Government of India. In persuasion of the commitment shown by the highest authorities of the State, total 12,322 TB affected children have been adopted by various officials and organisations till date and the process is still going on to benefit more children as an endeavour to make the State TB free.

#### Rajasthan

#### 11. Crusader for fight against Tuberculosis:

Before he goes to bed at night, he checks the test results of his presumptive TB patients through the 'Nikshay' App in his mobile, so that he can call them in the morning for initiation of treatment. And when he wakes up in the morning, he first opens the Nikshay App to ensure whether the bank account of his patients has been validated in PFMS or not. Meet Dr Arjun Singh Shekhawat (HF code 026072), a private practitioner practicing in the heart of Sikar town of Rajasthan. In 2017, 2018, 2019 and 2020, he has notified a total of 883 TB patients. All the 224 DSTB patients notified by him in 2020 know their HIV status and 222 patients know their diabetes status. He sends the specimens of nearly all the diagnosed TB patients to DTC for DST by CBNAAT and supervises personally to ensure that bank account details of all his patients is available and seeded in Nikshay and keeps

enquiring from the patients whether they have received their incentives of NPY or not. Treatment outcome has been assigned to all the 151 patients notified by him in first 2 quarters of 2020. NTEP 4 FDC medicines have also been kept at his clinic and he advises all his patients to use it, and then is prescribed and dispensed to the patients who are willing for it. Previously he used to do all the activities related to entries in Nikshay with the help of his medical staff, regularly facilitated by the

DTO, PPM Coordinator and WHO-NTEP Consultant, but now he is also supported by a hub-agent of PPSA under JEET project. initiatives have His helped to ensure equal access for private TB patients to good quality improved treatment



treatment, Dr Arjun Singh Shekhawat

results and reduced costs of care. He is least worried about the payment of incentives to PPs. His commitment for TB patients – their notification, public health actions, NPY, etc. has set an exemplary example for other private practitioners of the district to follow, very much required to fulfil the dream of Prime Minister to eliminate TB by 2025.

# **Multi-sectoral Convergence for TB Elimination**

# **CHAPTER 18**



MoU signing ceremony between Mo Health and Family Welfare and Mo Labour and Employment on 25<sup>th</sup> September 2020



# **Multi-sectoral Convergence for TB Elimination**

# **CHAPTER 18**

revention, diagnosis and management of TB require multi-sectoral collaboration and resources. Appropriate coordination mechanisms among the governments (central, state and local governments), intergovernmental agencies. governmental organizations, private health care providers, affected citizens and the civil society is a pre-requisite to achieve the ambitious target of TB elimination by 2025 in a mission mode. A high-level National TB elimination effort beyond the health sector with clearly defined objectives, scope, implementation timelines and milestones, measurable outcomes, and service levels is the need of the hour to enable accountability and fulfilment of the vision and goal towards ending TB and can be achieved through-

- Working across ministries/ stakeholders in "Mission mode".
- Addressing social determinants through multi-sectoral approach;
- Mapping of key populations and strategies for some populations;
- Prioritized locally-defined groups for active case finding (ACF) within urban, rural and tribal areas.

The existence of Government initiatives such as Ayushman Bharat, Public Distribution System (PDS), supplementary nutrition programs, Smart Cities, Ujjwala Yojana, Swachh Bharat, etc. with major resources, high-level support and momentum, provide major opportunities for collaborations for ending TB objectives.

#### Roles and Responsibilities of Stakeholders:

The MoHFW has constituted an Inter-

ministerial Coordination Committee with all line Ministries of Government of India for Elimination of TB by 2025. In pursuance to that, the two Inter-Ministerial Coordination (IMC) meetings have already been organized in 2018 and 2019 subsequently by the MoHFW under the Chairpersonship of Secretary, MoHFW to extend the collaboration under the key thematic areas, viz. Integration of TB services in existing health facilities, Extend social support to TB patients, Awareness generation, TB preventive measures, Workplace intervention and Corporate Social Responsibilities (CSR) through PSUs under various Ministries.

Since the initiative taken by the Ministry of Health & Family Welfare, five MoUs have been signed by MoHFW. The latest two MoU's being signed with M/o Labour and Employment on 25<sup>th</sup> Sep 2020 and with M/o Department of North Eastern Region on 8<sup>th</sup> Oct 2020. A joint action plan has also been developed and shared with States by NTEP to collaborate with various existing schemes of M/o Tribal Affairs.

Further, similar MoUs with seven other line Ministries are under process and the draft MoUs have been shared with M/o (Rural Development, Panchayati Raj, Skill Development and Entrepreneurship, Road Transport & Highways, Social Justice & Empowerment and M/o Women & Child Development.

# Registration of Health Facilities as PHIs in Nikshay Portal:-

Around 647 health facilities existing in different Ministries have been registered in Nikshay portal and providing TB services.

Health Facilities existing under various Ministries	No. of facility registered in Nikshay providing TB services
ECHS	114
CGHS	72
Coal	9
ESI	231
Labour	67
Mines	30
NTPC	7
Railways	110
Shipping	7
TOTAL	647

Department of Post: - MoU with Department of Post, Delhi was signed in 2018 for pilot testing of TB specimen transportation in Delhi. State level MoUs have been signed by Uttar Pradesh, Himachal Pradesh and Punjab based on the specific specimen transportation requirements of Districts within the concerned State.

Ministry of Defence (Department of Ex-Servicemen Welfare): - 114 Ex-Servicemen Contributory Health Scheme (ECHS) Polyclinics out of total 426 polyclinics across the Country have been registered in Nikshay providing TB services and integration of remaining ECHS polyclinics is underway at State/UT level.

Ministry of Rural Development: -NTEP monitoring indicators have been integrated with the District Development Coordination and Monitoring Committee (DISHA) portal of M/o Rural Development to be reviewed at State and District Level for efficient programme implementation.

#### Other Initiatives:-

Constitution of National Technical Working Group-National Technical Working Group on Collaboration between NTEP and Corporate Hospitals and Laboratories has been constituted under the Chairpersonship of Dr. Naresh Trehan for ensuring Standards of Care and Diagnosis in Corporate Hospitals and Laboratories.

**DR-TB Consortium-** DR-TB Consortium was constituted and the Blue sky consultation was organized in February 2020 in presence of representatives from pharma companies, diagnostics chains, and hospitals in DR-TB space to mobilize the corporates to join the Corporate TB Pledge (CTP) and channelize their activities towards a common vision of TB free India.

Subsequent meetings of the Consortium were conducted in September 2020 and January 2021 to assess the progress made by the members in the DR-TB space in terms of new ideas and technology in DR-TB testing and treatment domain.

Interventions in association with CII: - A MoU has been signed with Confederation of Indian Industry (CII), a collective representative of the industry, in February 2020 to provide a strategic approach to test and treat TB at workplaces and support TB affected employees in the corporate organizations. A pan India 'TB Free Workplaces Campaign' has been launched in August 2020 in association with CII to engage the business leadership and provide a forum for convergence for the industry's response to TB thereby ensuring a healthier workforce. Regional Round tables across all the States are also being conducted to create platforms to sensitize companies and organizations with large workforces on TB.

#### Interventions in association with ILO:-

A TB training manual for workplaces- A TB training manual has been developed and is being used in training of peer educators in coal India, ONGC and other private sector companies

Development of customized communication material in the form of posters, short videos and a film developed on TB prevention, treatment adherence for advocacy

#### **Corporate Sector Engagement:**

Corporate TB Pledge - The Corporate TB Pledge (CTP) initiative, launched in April 2019 is a collaborative initiative between the NTEP and Corporate Sector entities, to jointly work towards the shared vision of TB Elimination in the country. CTP aims to engage the corporates and business associations effectively and meaningfully, and for industry-led sustainable solutions to end TB in workplace and community settings.



CTP currently has 108 Corporate Members as part of the pledge with tiered levels of commitment. Through this effort, more than one million people have been screened for TB symptoms by CTP members and around 30,000 symptomatic people were tested for TB through corporate interventions.

#### TB Free Transhipment Locations Campaign:

Apollo Tyres Foundation organized one of its kind "TB free Transhipment Locations" campaign for reaching out to the trucking and migrant communities in India. The campaign was launched by organizing a webinar in partnership with Central TB Division, state TB Cell Gujarat, CII Gujarat, Federation of Kutch Industries Association (FOKIA), USAID and The Union.

The two-week campaign entailed both virtual and physical outreach activities at 31 different locations in 19 States. Out of 1310 TB facilitated during the campaign, 52 TB patients were identifies and put on treatment successfully. Microscopy Centres at three locations were also launched during the campaign.



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## New Initiatives supported by Corporate Partners:

**Medanta Hospital** has expanded its mobile X-ray project to Lucknow, Ranchi and Patna.

GAIL India has funded a modified project on active case finding in Patna, Auraiya district of UP and the project is being implemented by Public Health Foundation of India (PHFI). The project entails deployment of Swasthya Sahayak for community screening for tuberculosis in the district Auraiya and district Firozabad.

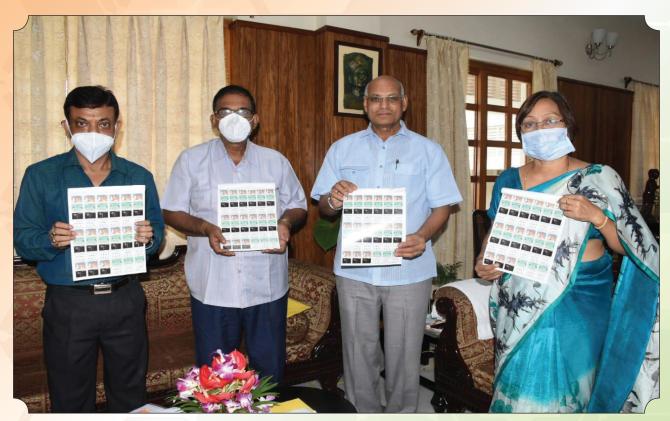
**Ambuja Cement** Foundation initiated TB integration activities in their health project at three new locations.

CUBE Highways Ltd. has funded the State TB Cell Andhra Pradesh for making 2 Mobile TB Diagnostic Vans roadworthy and ready for Screening and testing camps. The Vans are being used for ACF activities in various districts of Andhra Pradesh. 164 Cases were detected out of 3781 tests done.



# NIKSHAY SAMPARK- National TB Call Centre

# **CHAPTER 19**



Hon'ble Governor of Tripura as Patron of TB Association Tripura launched TB Seal on the occasion of TB Seal Sale Campaign on 02.10.2020.

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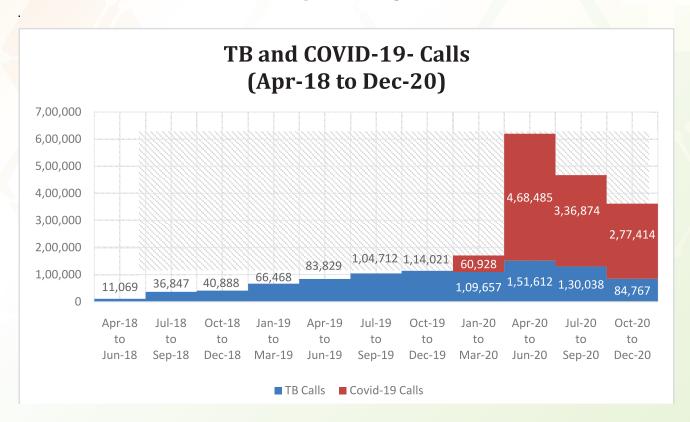
# NIKSHAY SAMPARK- National TB Call Centre

## **CHAPTER 19**

TB Helpline, managed by Central TB Division, Ministry of Health and Family Welfare. It is operating from two sites of Noida & Mumbai, 7 days in a week from 7 am to 11 pm. The National TB Call Centre has been operating since May-2018 and has both inbound and outbound services provided in 14 languages for all States UTs.



National TB Call Centre provides support to Citizens, TB Patients, Public and Private Health Providers for TB related information, TB patient grievance management, Counselling/Treatment Adherence & also receives Feedback of TB patients being treated under NTEP.



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National TB Call Centre Performance (May-18 to Dec-20):

- Total Calls handled (TB): 30.11 Lakhs
  - a) Inbound Calls (TB): 9.33 Lakhs
  - b) Outbound Calls (TB): 20.77Lakhs
- Inbound Calls (Hepatitis): 898
- Inbound Calls COVID-19: 11.43 Lakhs

National TB Call Centre is providing following services:

- 1. Resolving queries related to TB for Citizens, TB Patients, Public Health provider and Private health provider.
  - a. Information to Citizens/TB patients on TB disease, sign and symptoms, TB services available under NTEP.
  - b. Information on available service delivery points for TB diagnosis & treatment services.
  - c. Information on free drugs/ diagnostics, schedule of the treatments,precautions and care related to treatment.
  - d. Information on Nikshay Poshan Yojana to the patients during treatment period.
  - e. Inbound calls from Public Health Sector staff.
  - f. Inbound calls from Private Health sector staff, Validation of Notification of TB patients, Verification of information on linkage for free drugs / vouchers, Verification of incentives information / linkage, Verification of Treatment details / outcomes.

- g. Inbound Calls from Chemist regarding validation of linkage for free drugs / vouchers, verification of information on monthly refill.
- 2. Reporting and management of TB Services related Grievances.
- 3. Resolving queries of Citizens/ Patients related to Hepatitis under National Viral Hepatitis Control Programme (NVHCP):
  - a) Providing information on support centres, signs and symptoms, diagnosis.
  - b) Providing information on dosage frequency and treatment schedule.
- 4. Tele-Counselling to notified TB patients and providing information on:
  - a) TB infection control measures including use of mask and cough etiquettes
  - b) Contract tracing in families of TB patients
  - c) Care of children below 6 years, who are in contact of TB patient
  - d) Comorbidity testing
  - e) Importance of adherence to TB treatment
  - f) Information on Adverse Drug Reaction
  - g) Follow-up examination and its importance
  - h) Information on patient transfer facility

- i) Information on Nutrition, Nikshay Potion Yojana (NPY)
- j) Information on National TB Call Centre support facility for patients

## 5. Survey of TB patients on NTEP services:

- a) Objective of this process is to collect feedback from TB patients registered in NIKSHAY portal about satisfaction in terms of TB service utilization under National TB Elimination Programme (NTEP)
- b) NTEP has devised ranking criteria for State/UTs based on programme performance indicators to identify improvement areas for better service experience to the Patients.

# 6. Role of National TB Call Centre in COVID-19 response:

- a) National TB Call Centre is also contributing significantly to the National Pandemic of COVID-19. It has started supporting COVID-19 Toll free 1075 since 16th March 2020 on 24\*7 basis. Supports to '1075' are closely monitored by Central TB Division.
- b) It is spreading awareness about COVID-19 and its prevention guidelines. General Public is seeking information related to COVID-19, sign and symptoms, prevention from infection, eligibility for testing Centres Test availability. sanitizer and mask related queries, diagnostic facility centres,

precautionary measures, COVID-19 hospitals, lockdown updates, travel related information, food, and other essential supplies. People also seeking information on government guidelines/advisories. Emergency cases where the caller is not getting support locally it is being escalated by the call centre to appropriate authorities to provide required support.

- c) The call center agents are ensuring that all guidelines provided by the Union Health Ministry, National Center for Disease Control (NCDC) and Indian Council of Medical Research (ICMR) are followed clearly communicated to the caller and provide the relevant support
- d) National TB Call Center responded 11.43 Lakhs calls of COVID-19 queries till Dec-2020.

## 7. Role of National TB Call Centre in COVID-19 Vaccination:

National TB Call Centre is supporting Co-Win Software Support technical helpline (0120-4473222) which provides support to the users of Co-Win application (Application for COVID-19 vaccination tracking) for the Co-Win software related queries and complaints.

National TB Call Centre is committed to support the Nation in responding to COVID-19 Pandemic and is making consistent effort to achieve the goal of End TB by 2025.



# TB & COVID-19

# **CHAPTER 20**



Bidirectional screening of TB & COVID

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### TB & COVID-19

## **CHAPTER 20**

#### **Background**

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus (SARS-CoV-2), which has spread rapidly throughout the world. In March 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a pandemic. The pandemic has severely ravaged health systems, and economic and social progress globally.

In India, 11,385,339 confirmed COVID-19 cases and over 1, 58,725 deaths have been reported as of 15<sup>th</sup> March 2021.¹COVID-19 most commonly manifests as fever, dry cough, shortness of breath and tiredness. Most people (~80%) experience mild disease and recover without hospitalization, while around 20% may become more seriously ill.

#### **Impact of COVID-19 on TB Services:**

Globally, India is currently ranked third by number of new COVID-19 cases confirmed daily per million people<sup>2</sup> while the cumulative number of confirmed cases in India is over 11.3 million<sup>3</sup>.Due to high transmissibility of COVID-19 and its acute presentation in vulnerable populations as well as its potential to spread in geometric progression called for extraordinary measures for containment. The countrywide lockdown adversely impacted routine health care services including those for management of TB. Patients were unable to access routine health services due to the restriction imposed as an emergency response measure. Individuals with symptoms of TB were not able to reach doctors/hospitals/ diagnostic centres for getting themselves tested. With transportation across the country coming to a halt, specimens of patients could not be transported to laboratories, nor were drug supplies being made. A much greater impact was felt by the private sector since most smaller clinics and health facilities remained closed for much of the year 2020, owing to the pandemic. With nearly half the patients in the country approaching the private sector as the first point of care, TB case finding efforts were drastically affected. Moreover, the human resources and infrastructure under NTEP were also re-purposed to manage the Covid pandemic. The restrictions imposed have hampered surveillance, monitoring & evaluation which resulted in compromising the quality of services.

The fact that the clinical presentation of COVID-19 is similar to that of TB (fever, cough, breathlessness), posed more concern for TB programme. Not only was it important to differentiate one disease from the other, but the dual stigma being faced by TB patients also had to be addressed.

The overall effect was a 25% decrease in TB notification in the year 2020 as compared to 2019.

Modelling analysis project an additional 6.3 million cases of TB and an additional 1.4 million TB deaths attributable to COVID-19 pandemic between 2020 and 2025. An additional 525,000 TB deaths are expected in 2020 compared to 2018 as a result of the COVID-19 pandemic. Global TB incidence and deaths in 2021 would increase to 2013 and 2016 levels respectively – a setback of 5-8 years in the fight against TB. COVID-19 has affected the whole cascade of care and prevention for TB.

<sup>1</sup> https://www.mohfw.gov.in/

<sup>2</sup> https://www.worldometers.info/coronavirus/#countries

<sup>3</sup> https://mohfw.gov.in/

## Efforts from NTEP to mitigate the impact of the COVID-19 Pandemic on TB Services:

The Programme Division deployed all possible efforts to ensure uninterrupted TB services across the country. Initial responses were focused on essential services such as ensuring uninterrupted supply of drugs for patients on treatment and maintaining diagnostic Innovative approaches services. deployed, including the use of community health workers to aid in specimen collection and transportation and home delivery of TB medicines, transporting sputum specimens for testing along with the COVID-19 specimen, use of mobile phone services for treatment adherence monitoring. and real-time. community-led monitoring initiatives for COVID-19 and TB. Further, to mitigate the impact of COVID-19 pandemic on TB Epidemic and National TB Elimination Programme (NTEP) activities in India, a detailed Rapid Response Plan has been prepared with the following objectives and circulated amongst all States/UTs:

- a. To implement rapid response measures for normalizing and expanding coverage of TB services to pre-COVID-19 levels and beyond
- b. To revitalize TB elimination efforts of the country by adopting novel strategic
- c. interventions to accelerate the NTEP response.

Bi-directional screening of TB and Covid was initiated to aid in case finding of both the diseases. In 2020, 24% of the TB patients knew their Covid-19 status. Of those who were tested, less than 1% were found to be positive for both TB and Covid -19.

#### NTEP's role in the COVID-19 Response:

Keeping national interest as the topmost priority, the programme division took a conscious decision to offer its existing multidisease platform technologies to ramp up the COVID-19 testing capacity of the country. The Programme extended logistics support for deployment and operationalization of rapid molecular diagnostic platform, Truenat. Existing 367 Truenat machines available at NTEP sites and additional 547 Truenat Duo machines procured for NTEP by the MoHFW were deployed in States/UTs to help ramping up the COVID-19 testing capacity. Truenat supplies were prioritized in view of COVID-19 situation in the States and State level procurement of Truenat chips and CBNAAT cartridges for COVID-19 testing over and above allocated from central level, was also facilitated by NTEP.

Additionally, existing CBNAAT machines colocated at 135 Biosafety level 2/3 facilities under NTEP were re-purposed for COVID testing. NTEP also facilitated virtual trainings on testing of samples for Covid-19 on Trunat and CBNAAT for laboratory staff at all levels.

**Health System Strengthening:** To mitigate the effect of Covid-19 on the programmatic activities of NTEP, an urgent need was felt to ensure seamless delivery of non-COVID-19 health services to the community.

Global Fund has approved USD 20 Million Grant for Mitigating COVID-19 impact on HIV, TB, malaria programmes and to strengthen national COVID response. The activities approved under NTEP includes:

**1. Health System Strengthening**: Augmenting the diagnostic capacity

by provisioning point of care multidisease platform technologies capable of testing TB & COVID-19. To strengthen the health system and to mitigate the adverse impact of COVID-19, Global Fund has **USD** 9,700,000 approved for procurement of 159 GeneXpert (CBNAAT) Instruments. These machines have the increased diagnostic capacity significantly with the ability to perform an additional 9200COVID-19 tests and 4600 TB tests per day. Given that CBNAAT is a multiplex technology, going forward this capacity can continue to be utilized for the TB programmeand any future infectious disease emergencies. This has strengthened the health system for a better response towards the overall improvement of health and also mitigating the effect of COVID-19.

- 2. Infection Prevention and Control (IPC): The peripheral Health Care Workers (HCWs) especially all laboratory staff are at high risk of exposure to COVID-19 due to their proximity to patients and biological material which could be potentially infected with COVID-19.
- **3. Global Fund has approved USD 5,860,000** to partially finance procurement of PPE **for 20,536 field NTEP staff working** at all laboratories across the country for one year. This has boosted the confidence among staff for continued service delivery and also prevention from COVID-19 infection.

# Central TB Division -Nodal point for the COVID-19 Emergency Response& Health Systems Preparedness Project:

CTD has been designated as the nodal pointfor implementation of the 'India COVID-19 Emergency Response and Health System Preparedness Project' amounting to Rs. 15000 crore approved by the Government of India. The project objective is to prevent, detect and respond to the threat posed by COVID-19 and strengthen national health systems for preparedness in India.

A Project Secretariat was set up in CTD (supported through World Bank, AIIB and ADB) under the supervision of DDG (TB) for COVID-19 response to facilitate smooth coordination and implementation of various components of the COVID-19 project through the implementation agencies, namely National Health Mission (NHM), National Centre for Disease Control (NCDC), Indian Council of Medical Research (ICMR) / Department of Health Research (DHR), Central Procurement Division (CPD) and Ministry of Railways (MoR).

## Activities performed by CTD under the India COVID-19 ER & HSPP:

A total of 12 lakhs Truenaat chips (11.49 lakh Truenat COVID-19 Screening chips and 51,000 Truenat COVID-19 confirmatory chips) and 1 Lakh Gene Xpert Cartridges have been procured and supplied to States to strengthen the diagnosis of COVID testing. CTD worked closely with NHM, NCDC, CPD, ICMR &MoR to facilitate implementation of different components under the project. CTD also facilitated coordination amongst the Department of Economic Affairs (DEA), Ministry of Finance (MoF) and various MDB's such as World Bank-AIIB, ADB, and Bilateral Agencies such as JICA and other IFIs. Regular

review of activities (Physical and Financial Progress) were conducted by implementation agencies under the project through organizing Project Steering Committee meetings at MoHFW/Tripartite Review Meetings with DEA and regular updates were given to PMO. The Central TB Division also reviewed proposals from various MDB's/ agencies for supporting the Emergency COVID-19 Response and proposed PM-ASBY scheme.

Finally, the Central TB Division has also facilitated the establishment of a "National Programme Management Unit (NPMU)" through NHSRC which is currently based in the Central TB Division and will coordinate the various Covid response activities of the MoHFW.

#### Way Forward:

While the Covid-19 pandemic had an adverse impact on the overall case finding of TB, it

also presented us with many opportunities. The increased diagnostic capacity conducted as a response to the pandemic will go a long way in health system strengthening and enhancing the case finding efforts of TB. The many behavioural practices adopted by the public, such as better cough hygiene, wearing of masks in public places, and physical distancing- can also help cut down the transmission of TB, if sustained through proper advocacy. Both the Government, as well as the people, are now better adapted to deal with infectious disease emergencies. The i-GOT and e-Sanjeevani platforms of the Govt. of India have found better acceptance for online trainings and consultations. Many Infectious Disease hospitals are in the making, and there is a renewed focus on curbing respiratory infectious diseases. Strategic use of the resources and practices adopted to fight the corona virus, will also prove very useful in the battle against TB.

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## 1. Summary of Programme Performance

### 1.1 Presumptive TB Cases examination

	B 1.0	Pro	esumptive TB Cases e	xamination	
State	Population (Lakhs)	Microscopy	Molecular Tests (NAAT)	Total	Rate
Andaman & Nicobar Islands	3.9	2449	1233	3682	945
Andhra Pradesh	525.4	385061	227319	612380	1166
Arunachal Pradesh	16.4	6397	3606	10003	610
Assam	350.5	94446	29579	124025	354
Bihar	1247.6	203146	46165	249311	200
Chandigarh	11.7	11299	4676	15975	1362
Chhattisgarh	300.3	129292	46541	175833	585
Dadra & Nagar Haveli & Daman & Diu	8	7835	3800	11635	1447
Delhi	190.5	96987	55250	152237	799
Goa	15.4	10730	2155	12885	836
Gujarat	697.6	738943	72882	811825	1164
Haryana	294.4	163058	40643	203701	692
Himachal Pradesh	75	86993	44383	131376	1752
Jammu & Kashmir	145	115979	22630	138609	956
Jharkhand	394.8	166921	22838	189759	481
Karnataka	685.1	319122	208667	527789	770
Kerala	344.4	198776	59141	257917	749
Ladakh	3.4	1786	1136	2922	850
Lakshadweep	0.7	778	374	1152	1738
Madhya Pradesh	843.6	446538	76375	522913	620
Maharashtra	1257.4	728115	156354	884469	703
Manipur	31.2	3526	2431	5957	191
Meghalaya	36.6	14717	6728	21445	586
Mizoram	12.6	5148	5475	10623	842
Nagaland	20.7	6558	4649	11207	541
Odisha	463.2	520052	65526	585578	1264
Puducherry	15	9370	2636	12006	802
Punjab	306.7	110833	34225	145058	473
Rajasthan	799.2	356887	51858	408745	511
Sikkim	6.6	5081	5482	10563	1611
Tamil Nadu	814	532368	111933	644301	792

	2	Pre	sumptive TB Cases e	xamination	
State	Population (Lakhs)	Microscopy	Molecular Tests (NAAT)	Total	Rate
Telangana	379.2	216953	45761	262714	693
Tripura	39.6	17991	5146	23137	585
Uttar Pradesh	2324.3	980494	140865	1121359	482
Uttarakhand	116.3	52697	7822	60519	520
West Bengal	999.1	815795	98342	914137	915
India	13775.4	7563121	<mark>1714626</mark>	9277747	674
Data Source: Annexure M	& CBNAAT/ TrueNAA	AT Monthly indicate	or sheet		

1.2 TB Case Notification rate and achievement against target cases

State	Target Tl	Target TB patients expected to be notified	expected d	TB pa	TB patients notified	ified	TB cas	TB case notification rate	ation	Achiev Notificat	Achievement in TB Case Notification against target cases	B Case it target
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	290	10	009	478 (100%)	0 (0%)	478	123	0	123	478 (81%)	(%0) 0	478 (80%)
Andhra Pradesh	00006	25000	115000	46901 (73%)	17164 (27%)	64065	68	33	122	46901 (52%)	17164 (69%)	64065 (56%)
Arunachal Pradesh	3450	50	3500	2521 (100%)	1 (0%)	2522	154	0	154	2521 (73%)	1 (2%)	2522 (72%)
Assam	50100	9200	59800	29135 (83%)	6126 (17%)	35261	83	17	101	29135 (58%)	6126 (63%)	35261 (59%)
Bihar	00006	100000	190000	51606 (52%)	47388 (48%)	98994	41	38	79	51606 (57%)	47388 (47%)	98994 (52%)
Chandigarh	0069	009	7500	3766 (88%)	528 (12%)	4294	321	45	366	3766 (55%)	528 (88%)	4294 (57%)
Chhattisgarh	35000	20000	55000	20952 (71%)	8387 (29%)	29339	70	28	86	20952 (60%)	8387 (42%)	29339 (53%)
Dadra and Nagar Haveli and Daman and Diu	1450	150	1600	883 (92%)	82 (8%)	965	110	10	120	883 (61%)	82 (55%)	962 (%09)
Delhi	80000	30000	110000	59553 (69%)	27289 (31%)	86842	313	143	456	59553 (74%)	27289 (91%)	86842 (79%)
Goa	2400	800	3200	1337 (81%)	323 (19%)	1660	87	21	108	1337 (56%)	323 (40%)	1660 (52%)
Gujarat	115000	80000	195000	77252 (64%)	43308 (36%)	120560	111	62	173	77252 (67%)	43308 (54%)	120560 (62%)
Haryana	00009	34000	94000	41257 (66%)	21440 (34%)	62697	140	73	213	41257 (69%)	21440 (63%)	(67%)
Himachal Pradesh	16000	2000	18000	12156 (91%)	1268 (9%)	13424	162	17	179	12156 (76%)	1268 (63%)	13424 (75%)
Jammu & Kashmir	14000	4000	18000	7958 (90%)	872 (10%)	8830	55	9	61	7958 (57%)	872 (22%)	8830 (49%)
Jharkhand	43000	22000	65000	30190 (66%)	15315 (34%)	45505	76	39	115	30190 (70%)	15315 (70%)	45505 (70%)

	Target T	Target TB patients	expected	TB pa	TB patients notified	ified	TB cas	TB case notification	ation	Achieve Notificat	Achievement in TB Case Notification against target	'B Case st target
State	3	namour ag on	T .					Iare			cases	
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Karnataka	85000	20000	135000	48679 (74%)	17106 (26%)	65785	71	25	96	48679 (57%)	17106 (34%)	65785 (49%)
Kerala	22000	6000	28000	15054 (72%)	5781 (28%)	20835	44	17	09	15054 (68%)	5781 (96%)	20835 (74%)
Ladakh	460	100	260	232 (97%)	7 (3%)	239	67	2	70	232 (50%)	(%/) /	239 (43%)
Lakshadweep	20	0	20	20 (100%)	(%0) 0	20	30	0	30	20 (100%)	#DIV/0!	20 (100%)
Madhya Pradesh	150100	00006	240100	104390 (76%)	33258 (24%)	137648	124	39	163	104390 (70%)	33258 (37%)	137648 (57%)
Maharashtra	150000	120000	270000	95642 (60%)	64021 (40%)	159663	76	51	127	95642 (64%)	64021 (53%)	159663 (59%)
Manipur	2500	1000	3500	1137 (73%)	426 (27%)	1563	36	14	20	1137 (45%)	426 (43%)	1563 (45%)
Meghalaya	5250	750	0009	3456 (83%)	683 (17%)	4139	94	19	113	3456 (66%)	683 (91%)	4139 (69%)
Mizoram	3900	100	4000	2203 (94%)	131 (6%)	2334	175	10	185	2203 (56%)	131 (131%)	2334 (58%)
Nagaland	4250	750	2000	2806 (80%)	681 (20%)	3487	136	33	168	2806	681 (91%)	3487 (70%)
Odisha	55000	10000	65000	40360 (88%)	5268 (12%)	45628	87	11	66	40360 (73%)	5268 (53%)	45628 (70%)
Puducherry	4400	100	4500	2674 (97%)	88 (3%)	2762	179	9	185	2674 (61%)	88 (88%)	2762 (61%)
Punjab	55000	17000	72000	34526 (75%)	11672 (25%)	46198	113	38	151	34526 (63%)	11672 (69%)	46198 (64%)
Rajasthan	130000	95000	225000	95914 (70%)	41429 (30%)	137343	120	52	172	95914 (74%)	41429 (44%)	137343 (61%)
Sikkim	1600	50	1650	1146 (86%)	180 (14%)	1326	175	27	202	1146 (72%)	180 (360%)	1326 (80%)

State	Target T	Target TB patients ex to be notified	expected d	TB pa	TB patients notified	rified	TB cas	TB case notification rate	ıtion	Achieve Notificat	Achievement in TB Case Notification against target cases	rB Case st target
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Tamil Nadu	00006	55000	145000	54013 (77%)	16291 (23%)	70304	99	20	98	54013 (60%)	16291 (30%)	70304 (48%)
Telangana	52000	30000	82000	40526 (64%)	22683 (36%)	63209	107	09	167	40526 (78%)	22683 (76%)	63209 (77%)
Tripura	3450	50	3500	1999 (97%)	72 (3%)	2071	51	2	55	1999 (58%)	72 (144%)	2071 (59%)
Uttar Pradesh	375000	225000	000009	242323 (66%)	124318 (34%)	366641	104	53	158	242323 (65%)	124318 (55%)	366641 (61%)
Uttarakhand	20300	11700	32000	14247 (71%)	5753 (29%)	20000	122	49	172	14247 (70%)	5753 (49%)	20000 (63%)
West Bengal	105000	35000	140000	61796 (78%)	17243 (22%)	79039	62	17	79	61796 (59%)	17243 (49%)	79039 (56%)
India	1923120	1923120 1075910	2999030	1249088 (69%)	556582 (31%)	1805670	91	40	131	1249088 (65%)	556582	1805670 (60%)

TB Patients Notification is based on notification by diagnosing PHI. Data Source: Nikshay – Data extracted as on 12th February 2021

1.3 Notified TB Patients - Characteristics

	Type of Case	f Case	Site of	Site of disease	Basis of I	Basis of Diagnosis		Diagnostic Test	ic Test	
State	New	Previous- ly Treat	Pulmo- nary	Extra Pul- monary	Microbi- ologically Confirmed	Clinically Diagnosed	Micros- copy	Molecu- lar tests	Chest X-ray	Others
Andaman & Nicobar Islands	390 (90%)	42 (10%)	292 (61%)	186 (39%)	284 (59%)	194 (41%)	141 (29%)	143 (30%)	70 (15%)	124 (26%)
Andhra Pradesh	54646 (88%)	7497 (12%)	47385 (74%)	16680 (26%)	32855 (51%)	31210 (49%)	4846 (8%)	27952 (44%)	18129 (28%)	13138 (21%)
Arunachal Pradesh	2045 (87%)	315 (13%)	1668 (66%)	854 (34%)	1400 (56%)	1122 (44%)	724 (29%)	676 (27%)	474 (19%)	648 (26%)
Assam	30456 (89%)	3750 (11%)	26374 (75%)	8887 (25%)	17072 (48%)	18189 (52%)	8626 (24%)	8425 (24%)	11201 (32%)	7009 (20%)
Bihar	88465 (92%)	7932 (8%)	79881 (81%)	19113 (19%)	35430 (36%)	63564 (64%)	17232 (17%)	18056 (18%)	53234 (54%)	10472 (11%)
Chandigarh	3722 (89%)	478 (11%)	2029 (47%)	2265 (53%)	1972 (46%)	2322 (54%)	1347 (31%)	610 (14%)	338 (8%)	1999 (47%)
Chhattisgarh	26685 (92%)	2255 (8%)	21304 (73%)	8035 (27%)	11596 (40%)	17743 (60%)	7796 (27%)	3680 (13%)	12638 (43%)	5225 (18%)
Dadra and Nagar Haveli and Daman and Diu	(%98) 262	130 (14%)	299 (62%)	366 (38%)	446 (46%)	519 (54%)	185 (19%)	261 (27%)	216 (22%)	303 (31%)
Delhi	73725 (88%)	9721 (12%)	40239 (46%)	46603 (54%)	46420 (53%)	40422 (47%)	18050 (21%)	27128 (31%)	16984 (20%)	24680 (28%)
Goa	1503 (93%)	113 (7%)	928 (56%)	732 (44%)	900 (54%)	760 (46%)	328 (20%)	569 (34%)	174 (10%)	589 (35%)
Gujarat	94457 (81%)	22531 (19%)	90787 (75%)	29773 (25%)	45105 (37%)	7545 <mark>5</mark> (63%)	32378 (27%)	12467 (10%)	53234 (44%)	22481 (19%)
Haryana	53763 (88%)	7586 (12%)	41949 (67%)	20748 (33%)	35210 (56%)	27487 (44%)	15019 (24%)	19798 (32%)	12609 (20%)	15271 (24%)
Himachal Pradesh	11269 (87%)	1745 (13%)	8530 (64%)	4894 (36%)	9071 (68%)	4353 (32%)	4393 (33%)	4649 (35%)	1178 (9%)	3204 (24%)
Jammu & Kashmir	7763 (89%)	953 (11%)	5214 (59%)	3616 (41%)	4345 (49%)	4485 (51%)	2435 (28%)	1899 (22%)	1662 (19%)	2834 (32%)
Jharkhand	41845 (93%)	2933 (7%)	37903 (83%)	7602 (17%)	18804 (41%)	26701 (59%)	12495 (27%)	6269 (14%)	21524 (47%)	5217 (11%)

State		000	City of discovery	diconco	Pacie of I	Pacie of Diagnosis		Diagnostic Tost	C Toet	
State	27 62	1ype of case	ore or	Ilsease	Dasis of	Jaginosis		Diagnost	ור ובאר	
	New	Previous- ly Treat	Pulmo- nary	Extra Pul- monary	Microbi- ologically Confirmed	Clinically Diagnosed	Micros- copy	Molecu- lar tests	Chest X-ray	Others
Karnataka	55663 (88%)	7529 (12%)	44942 (68%)	20843 (32%)	38465 (58%)	27320 (42%)	13889 (21%)	24355 (37%)	11269 (17%)	16272 (25%)
Kerala	19100 (93%)	1423 (7%)	12426 (60%)	8409 (40%)	12382 (59%)	8453 (41%)	7732 (37%)	4522 (22%)	1121 (5%)	7460 (36%)
Ladakh	194 (83%)	40 (17%)	138 (58%)	101 (42%)	128 (54%)	111 (46%)	60 (25%)	(88 (28%)	(%8)	105 (44%)
Lakshadweep	18 (90%)	2 (10%)	18 (90%)	2 (10%)	12 (60%)	8 (40%)	2 (10%)	10 (50%)	7 (35%)	1 (5%)
Madhya Pradesh	119458 (89%)	14885 (11%)	107960 (78%)	29688 (22%)	55831 (41%)	81817 (59%)	29898 (22%)	25751 (19%)	61409 (45%)	20590 (15%)
Maharashtra	135017 (90%)	14699 (10%)	101234 (63%)	58429 (37%)	75082 (47%)	84581 (53%)	25155 (16%)	46025 (29%)	48425 (30%)	40058 (25%)
Manipur	1368 (90%)	159 (10%)	943 (60%)	620 (40%)	878 (56%)	685 (44%)	406 (26%)	468 (30%)	330 (21%)	359 (23%)
Meghalaya	3494 (90%)	369 (10%)	2514 (61%)	1625 (39%)	2365 (57%)	1774 (43%)	96 <mark>6</mark> (23%)	1396 (34%)	832 (20%)	945 (23%)
Mizoram	1932 (88%)	260 (12%)	1069 (46%)	1265 (54%)	1334 (57%)	1000 (43%)	148 (6%)	1186 (51%)	199 (9%)	801 (34%)
Nagaland	3016 (89%)	381 (11%)	2352 (67%)	1135 (33%)	1709 (49%)	1778 (51%)	784 (22%)	925 (27%)	900 (26%)	878 (25%)
Odisha	41372 (92%)	3712 (8%)	32709 (72%)	12919 (28%)	25505 (56%)	20123 (44%)	18118 (40%)	7369 (16%)	9702 (21%)	10439 (23%)
Puducherry	2170 (91%)	225 (9%)	1784 (65%)	978 (35%)	1966 (71%)	796 (29%)	1096 (40%)	853 (31%)	133 (5%)	680 (25%)
Punjab	40230 (89%)	5103 (11%)	31578 (68%)	14620 (32%)	26309 (57%)	19889 (43%)	13662 (30%)	12562 (27%)	9672 (21%)	10302 (22%)
Rajasthan	115367 (86%)	18015 (14%)	101286 (74%)	36057 (26%)	65652 (48%)	71691 (52%)	39930 (29%)	25555 (19%)	49122 (36%)	22736 (17%)
Sikkim	1015 (90%)	119 (10%)	857 (65%)	469 (35%)	855 (64%)	471 (36%)	178 (13%)	675 (51%)	218 (16%)	255 (19%)
Tamil Nadu	29960	7562 (11%)	51655 (73%)	18649 (27%)	43914 (62%)	26390 (38%)	25351 (36%)	18447 (26%)	12013 (17%)	14493 (21%)

	Type o	Type of Case	Site of	Site of disease	Basis of 1	Basis of Diagnosis		Diagnostic Test	ic Test	
State	New	Previous- ly Treat	Pulmo- nary	Extra Pul- monary	Microbi- ologically Confirmed	Clinically Diagnosed	Micros- copy	Molecu- lar tests	Chest X-ray	Others
Telangana	55024 (90%)	6078 (10%)	48160 (76%)	15049 (24%)	30381 (48%)	32828 (52%)	13528 (21%)	16738 (26%)	22184 (35%)	10759 (17%)
Tripura	1811 (88%)	236 (12%)	1579 (76%)	492 (24%)	1426 (69%)	645 (31%)	822 (40%)	604 (29%)	258 (12%)	387 (19%)
Uttar Pradesh	319916 (90%)	35557 (10%)	274956 (75%)	91685 (25%)	137306 (37%)	229335 (63%)	89088 (24%)	47896 (13%)	172217 (47%)	57440 (16%)
Uttarakhand	17383 (89%)	2048 (11%)	14012 (70%)	5988 (30%)	8415 (42%)	11585 (58%)	6658 (33%)	1711 (9%)	7673 (38%)	3958 (20%)
West Bengal	(89%)	8687 (11%)	54732 (69%)	24307 (31%)	52241 (66%)	26798 (34%)	36620 (46%)	15452 (20%)	10338 (13%)	16629 (21%)
India	1553131 (89%)	195070 (11%)	1291986 (72%)	513684 (28%)	843066 (47%)	962604 (53%)	450086 (25%)	385150 (21%)	621693 (34%)	348741 (19%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> February 2021	ta extracted c	ıs on 12 <sup>th</sup> Febi	ruary 2021							

1.4 Patient Transfer Status & Treatment Initiation Status

State         Patients notified notified           & Nicobar         478           adesh         64065           Pradesh         2522           Pradesh         35261           98994         98994           rh         4294           rh         29339           rh         4294           rh         4260           rh         45505           rh         45505		109 109 98 365 3195 292 340	484 47652 2591 31587	Private 0	Total 484	Public	Private	Total
a Pradesh 64065 chal Pradesh 64065 chal Pradesh 2522 chal Pradesh 2522 transport 35261 transport 4294 tisgarh 4294 tisgarh 29339 and Nagar Haveli 965 aman and Diu 86842 tr 120560	4 343 25 350 501 1604 193 231 1916	10 1099 98 365 3195 292 340 48	484 47652 2591 31587 54422	0	494	(7070)		
a Pradesh 64065  chal Pradesh 2522  1 35261  98994  igarh 4294  tisgarh 29339  and Nagar Haveli 965  aman and Diu 86842  tt 120560  tt 120560  na 62697	343 25 350 501 1604 193 231 1916 72	98 365 3195 292 340 48	47652 2591 31587 54422	17160	r F F	456 (94%)	(NA)	456 (94%)
chal Pradesh 2522  t 35261  garh 98994  igarh 4294  tisgarh 29339  and Nagar Haveli 965  aman and Diu 86842  tt 120560  tt 120560  na 62697	25 350 501 1604 193 231 1916 72	98 365 3195 292 340 48	2591 31587 54422	/ TO1	64821	46459 (97%)	17082 (99%)	63541 (98%)
igarh tisgarh tisgarh and Nagar Haveli and Nagar Haveli and Diu 86842 1660 tt 120560 tt 120560 tt 13424 u & Kashmir and the Hadesh t	350 501 1604 193 231 1916 72	365 3195 292 340 48	31587	4	2595	2503 (97%)	4 (100%)	2507 (97%)
igarh       4294         tisgarh       29339         and Nagar Haveli       965         aman and Diu       86842         tt       120560         na       62697         u & Kashmir       8830         tand       45505	501 1604 193 231 1916 72	3195 292 340 48	54422	3689	35276	30023 (95%)	3556 (96%)	33579 (95%)
ligarh     4294       tisgarh     29339       tand Nagar Haveli     965       aman and Diu     86842       at     1660       at     120560       na     62697       u & Kashmir     8830       nand     45505	1604 193 231 1916 72	292 340 48	1	47266	101688	48548 (89%)	46738 (99%)	95286 (94%)
tisgarh 29339 aman and Diu 86842 at 1660 at 120560 at 120560 at 62697 at 62697 at 62697 at 62697 at 62697 at 62697	193 231 1916 72	340	2703	279	2982	2563 (95%)	241 (86%)	2804 (94%)
aman and Diu 86842  1660  at 120560  at 62697  at 62697  at 8830  at 8830	231 1916 72	48	22238	7248	29486	21832 (98%)	7192 (99%)	29024 (98%)
86842  1660  at 120560  na 62697  chal Pradesh 13424  u & Kashmir 13424  and 45505	1916		707	75	782	691 (98%)	74 (99%)	765 (98%)
rat 120560 yana 62697 achal Pradesh 13424 mu & Kashmir 8830 khand 45505	72	1410	57895	18441	76336	51408 (89%)	13860 (75%)	65268 (86%)
a 62697 al Pradesh 13424 & Kashmir 8830 and 45505	0000	55	1336	307	1643	1275 (95%)	303 (66%)	1578 (96%)
62697 Pradesh 13424 (ashmir 8830 45505	2033	437	80322	38642	118964	78221 (97%)	38402 (99%)	116623 (98%)
Ashmir 8830 45505 45505	2026	3679	46152	18198	64350	41035 (89%)	17164 (94%)	58199 (90%)
(ashmir 8830 45505	235	479	13018	650	13668	12757 (98%)	629 (97%)	13386 (98%)
45505	78	174	8321	605	8926	7962 (96%)	296 (99%)	8558 (96%)
בסנוני	997	808	31012	15035	46047	29590 (95%)	14935 (99%)	44525 (97%)
Nafilataka 05/85 14,	1476	684	52162	12831	64993	49957 (96%)	11948 (93%)	61905 (95%)
Kerala   20835   32	322	376	17896	2993	20889	17334 (97%)	2808 (94%)	20142 (96%)
Ladakh   239   12	12	20	230	17	247	225 (98%)	17 (100%)	242 (98%)
Lakshadweep 20 2	2	1	19	0	19	19 (100%)	(NA)	19 (100%)
Madhya Pradesh 137648 120	1201	2467	108846	30068	138914	104285 (96%)	29295 (97%)	133580 (96%)
Maharashtra 159663 335	3359	606	104089	53124	157213	97867 (94%)	50877 (96%)	148744 (95%)
Manipur 1563 7	7	40	1411	185	1596	1338 (95%)	146 (79%)	1484 (93%)
Meghalaya 4139 65	65	75	3727	422	4149	3524 (95%)	408 (97%)	3932 (95%)
Mizoram 2334 2	2	38	2162	208	2370	1914 (89%)	167 (80%)	2081 (88%)
Nagaland 3487 37	32	52	2832	675	3507	2798 (99%)	675 (100%)	3473 (99%)

	TB	Trans-	Trans-	Net TB	Net TB Patients Notified	otified	Net TB Pati	Net TB Patients initiated on treatment	ı treatment
State	Patients notified	ferred Out	ferred In	Public	Private	Total	Public	Private	Total
0disha	45628	386	272	41887	3627	45514	40758 (97%)	3485 (96%)	44243 (97%)
Puducherry	2762	1546	26	1270	2	1272	1197 (94%)	1 (50%)	1198 (94%)
Punjab	46198	750	1696	36204	10940	47144	33817 (93%)	10549 (96%)	44366 (94%)
Rajasthan	137343	1540	1764	97290	40277	137567	88520 (91%)	38875 (97%)	127395 (93%)
Sikkim	1326	26	26	1269	87	1356	1243 (98%)	87 (100%)	1330 (98%)
Tamil Nadu	70304	481	2018	56959	14882	71841	54864 (96%)	14372 (97%)	(9638 (96%)
Telangana	63209	962	604	41369	21648	63017	40129 (97%)	21337 (99%)	61466 (98%)
Tripura	2071	10	153	2212	2	2214	2132 (96%)	1 (50%)	2133 (96%)
Uttar Pradesh	366641	2451	10077	266601	107666	374267	246878 (93%)	105560 (98%)	352438 (94%)
Uttarakhand	20000	718	988	15442	4676	20118	14782 (96%)	4499 (96%)	19281 (96%)
West Bengal	79039	927	1303	71448	2962	79415	(%96) 08989	7456 (94%)	76136 (96%)
India	1805670	35986	35986	1325765	479905	1325765 479905 1805670	1247584 (94%)	463339 (97%)	463339 (97%) 1710923 (95%)
		-				-			

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

Data Source: Nikshay – Data extracted as on 12th February 2021

1.5 Paediatric TB cases notification & Treatment initiation status

	Doodle	twic TD	of and the	Not no o	Total TD	***************************************			
State	r acula notif diag	notified (Based On diagnosing PHI)	d On HI)	net paed notified	notified (Based On current PHI)	current	Paedia	Paediatric Patients initiated on treatment	itiated
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	18	0	18	18	0	18	18 (100%)	(NA)	18 (100%)
Andhra Pradesh	1222	1001	2223	1463	831	2294	1430 (98%)	824 (99%)	2254 (98%)
Arunachal Pradesh	279	1	280	285	3	288	280 (98%)	3 (100%)	283 (98%)
Assam	883	258	1141	1007	123	1130	941 (93%)	114 (93%)	1055 (93%)
Bihar	2570	6040	8610	2795	5943	8738	2552 (91%)	5907 (99%)	8459 (97%)
Chandigarh	329	28	387	245	15	260	(%96) 232	14 (93%)	249 (96%)
Chhattisgarh	092	539	1299	855	453	1308	842 (98%)	452 (100%)	1294 (99%)
Dadra and Nagar Haveli and Daman and Diu	54	7	61	40	7	47	39 (98%)	7 (100%)	46 (98%)
Delhi	7465	1951	9416	7249	1437	9898	(% <mark>88</mark> ) 6889)	1190 (83%)	7579 (87%)
Goa	48	8	56	51	5	26	51 (100%)	5 (100%)	56 (100%)
Gujarat	2795	3278	6073	3002	2881	2976	3018 (98%)	2873 (100%)	5891 (99%)
Haryana	2056	1265	3321	2454	1036	3490	2240 (91%)	981 (95%)	3221 (92%)
Himachal Pradesh	481	35	516	515	24	539	498 (97%)	21 (88%)	519 (96%)
Jammu & Kashmir	462	46	508	473	36	209	450 (95%)	36 (100%)	486 (95%)
Jharkhand	957	1291	2248	666	1276	2275	957 (96%)	1270 (100%)	2227 (98%)
Karnataka	1858	1188	3046	2143	853	2996	2076 (97%)	831 (97%)	2907 (97%)
Kerala	484	305	789	625	169	794	616 (99%)	165 (98%)	781 (98%)
Ladakh	5	0	5	4	1	2	4 (100%)	1 (100%)	5 (100%)
Lakshadweep	0	0	0	0	0	0	NA	NA	NA
Madhya Pradesh	9689	3412	10308	7598	2795	10393	7428 (98%)	2771 (99%)	10199 (98%)
Maharashtra	4891	4994	9885	5707	4022	9729	5362 (94%)	3826 (95%)	9188 (94%)
Manipur	51	22	73	62	12	74	58 (94%)	7 (58%)	(%88) 59
Meghalaya	168	97	265	198	29	265	190 (96%)	63 (94%)	253 (95%)
Mizoram	120	11	131	125	9	131	117 (94%)	6 (100%)	123 (94%)

State	Paedia notifi diag	aediatric TB patients notified (Based On diagnosing PHI)	ıtients d On HI)	Net paed notified	Net paediatric TB patients* notified (Based On current PHI)	patients* 1 current	Paedia	Paediatric Patients initiated on treatment	nitiated
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Nagaland	158	30	188	162	22	189	160 (99%)	27 (100%)	187 (99%)
Odisha	1462	317	1779	1535	239	1774	1491 (97%)	231 (97%)	1722 (97%)
Puducherry	62	7	86	44	0	44	43 (98%)	(NA)	43 (98%)
Punjab	2023	767	2790	2174	069	2864	2096 (96%)	661 (96%)	2757 (96%)
Rajasthan	3882	3101	6983	4085	2895	0869	3760 (92%)	2840 (98%)	(%56) (099)
Sikkim	46	12	58	52	5	09	55 (100%)	5 (100%)	60 (100%)
Tamil Nadu	1516	1434	2950	1638	1352	2990	1604 (98%)	1315 (97%)	2919 (98%)
Telangana	1221	792	2013	1293	702	1995	1256 (97%)	(%86) (89%)	1943 (97%)
Tripura	39	1	40	47	0	47	44 (94%)	(NA)	44 (94%)
Uttar Pradesh	10648	10440	21088	12726	8961	21687	11740 (92%)	8864 (99%)	20604 (95%)
Uttarakhand	650	318	968	723	234	957	703 (97%)	229 (98%)	932 (97%)
West Bengal	1669	819	2488	2188	314	2502	2107 (96%)	291 (93%)	2398 (96%)
India	58275	43815	102090	64676	37414	102090	60850 (94%)	36517 (98%)	97367 (95%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> February 2021	ted as on 1.	2 <sup>th</sup> Februai	y 2021						

1.6 Tribal TB cases notification & Treatment initiation status

State	Districts mapped	Tribal TB	B patients notified	notified	Net Tri	Net Tribal TB patients notified	tients	Tribal TB Pa	Tribal TB Patients initiated on treatment	n treatment
	as Tribal district	Public	Private	Total	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	1	52	0	52	62	0	62	79 (100%)	(NA)	79 (100%)
Andhra Pradesh	8	7048	1381	8429	7160	1239	8399	(%86) 5669	1234 (100%)	8229 (98%)
Arunachal Pradesh	14	2134	0	2134	2197	1	2198	2117 (96%)	1 (100%)	2118 (96%)
Assam	7	5612	456	8909	5659	458	6117	5512 (97%)	455 (99%)	5967 (98%)
Chhattisgarh	19	8883	1118	10001	9471	1153	10624	6363 (99%)	1146 (99%)	10509 (99%)
Dadra and Nagar Haveli and Daman and Diu	1	587	56	643	437	53	490	427 (98%)	52 (98%)	479 (98%)
Gujarat	14	14531	4081	18612	15716	3969	19685	15362 (98% <mark>)</mark>	3948 (99%)	19310 (98%)
Himachal Pradesh	3	141	0	141	286	3	289	283 (99%)	2 (67%)	285 (99%)
Jammu & Kashmir	3	239	10	249	280	22	302	275 (98%)	19 (86%)	294 (97%)
Jharkhand	15	17424	8411	25835	17738	8229	25967	16668 (94%)	8185 (99%)	24853 (96%)
Karnataka	3	1536	124	1660	2208	33	2241	2082 (94%)	33 (100%)	2115 (94%)
Kerala	4	316	96	412	843	38	881	832 (99%)	33 (87%)	(%86) 298
Ladakh	2	232	7	239	230	17	247	225 (98%)	17 (100%)	242 (98%)
Lakshadweep	1	20	0	20	19	0	19	19 (100%)	(NA)	19 (100%)
Madhya Pradesh	25	19981	4344	24325	21567	3071	24638	21031 (98%)	2954 (96%)	23985 (97%)
Maharashtra	15	8929	1940	10869	10802	1372	12174	10385 (96%)	1333 (97%)	11718 (96%)
Manipur	9	612	122	734	861	92	937	826 (96%)	75 (99%)	901 (96%)
Meghalaya	7	3456	683	4139	3726	422	4148	3523 (95%)	408 (97%)	3931 (95%)
Mizoram	8	2202	131	2333	2162	208	2370	1914 (89%)	167 (80%)	2081 (88%)
Nagaland	11	2806	681	3487	2832	675	3507	2798 (99%)	675 (100%)	3473 (99%)
0disha	13	16654	1688	18342	18181	1091	19272	17832 (98%)	1067 (98%)	18899 (98%)
Rajasthan	8	12406	2022	14428	13963	2227	16190	13024 (93%)	2177 (98%)	15201 (94%)
Sikkim	1	39	0	39	73	0	73	72 (99%)	(NA)	72 (99%)

State	Districts mapped	Tribal T	Tribal TB patients notified	notified	Net Tr	Net Tribal TB patients notified	itients	Tribal TB Pa	Tribal TB Patients initiated on treatment	on treatment
	as Tribal district	Public	Private	Total	Public	Private	Total	Public	Private	Total
Tamil Nadu	9	337	20	357	009	23	623	591 (99%)	23 (100%)	614 (99%)
Telangana	6	6030	3221	9251	5848	3348	9196	(%26) 0895	3329 (99%)	(%86) 6006
Tripura	2	159	1	160	197	0	197	193 (98%)	(NA)	193 (98%)
Uttar Pradesh	4	2803	243	3046	3093	337	3430	(%26) 0667	332 (99%)	3322 (97%)
India	210	135153		165989	146212	28065	174277	30836   165989   146212   28065   174277   141083 (96%)   27665 (99%)   168748 (97%)	27665 (99%)	168748 (97%)
Thous are no notified Thildel districted to Ctates of Dilan Chandison Daniel Dollis Con Howard Dudied Historich Heavelthand & Wort Daniel	Tribal dietric	to in the Ct	otoc of Dib	or Chandie	rarh Dolhi	Соз Пож	Duding	house Duniel IItt	and thong 0 Most	Dongal

There are no notified Tribal districts in the States of Bihar, Chandigarh, Delhi, Goa, Haryana, Puducherry, Punjab, Uttarakhand & West Bengal Data Source: Nikshay – Data extracted as on 12th February 2021

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

	TB	Cases Notified	pa	Paed	Paediatric TB Cases Notified	ases	Total TB Cas	Total TB Cases initiated on treatment	eatment
State	Male	Female	Trans Gender	Male	Female	Trans Gender	Male	Female	Trans Gender
Andaman & Nicobar Islands	291	187	0	8	10	0	271 (93%)	180 (96%)	(NA)
Andhra Pradesh	41984	22048	33	1086	1137	0	41121 (98%)	21664 (98%)	33 (100%)
Arunachal Pradesh	1316	1202	4	127	153	0	1272 (97%)	1173 (98%)	4 (100%)
Assam	23673	11567	21	209	631	1	22512 (95%)	11096 (96%)	21 (100%)
Bihar	62478	36441	75	4975	3625	10	58989 (94%)	34699 (95%)	69 (95%)
Chandigarh	2357	1931	9	182	203	2	2199 (93%)	1820 (94%)	6 (100%)
Chhattisgarh	18708	10614	17	616	683	0	18494 (99%)	10505 (99%)	17 (100%)
Dadra and Nagar Haveli and Daman and Diu	614	351	0	18	43	0	585 (95%)	346 (99%)	(NA)
Delhi	45804	40976	62	3535	5875	9	35962 (79%)	33942 (83%)	45 (73%)
Goa	940	719	1	29	27	0	904 (96%)	701 (97%)	1 (100%)
Gujarat	77359	43142	59	3029	3041	3	75514 (98%)	42450 (98%)	58 (98%)
Haryana	37930	24737	30	1374	1946	1	34443 (91%)	22867 (92%)	27 (90%)
Himachal Pradesh	8294	5122	8	206	309	1	8108 (98%)	5025 (98%)	8 (100%)
Jammu & Kashmir	5207	3619	4	218	290	0	5027 (97%)	3489 (96%)	4 (100%)
Jharkhand	31131	14366	8	1248	1000	0	30153 (97%)	14025 (98%)	8 (100%)
Karnataka	41822	23913	20	1571	1472	3	39820 (95%)	22966 (96%)	42 (84%)
Kerala	13602	7225	8	382	407	0	13142 (97%)	7054 (98%)	8 (100%)
Ladakh	133	105	1	4	1	0	132 (99%)	103 (98%)	1 (100%)
Lakshadweep	10	10	0	0	0	0	10 (100%)	10 (100%)	(NA)
Madhya Pradesh	86909	50662	77	5469	4832	7	83354 (96%)	49151 (97%)	(%66) 92
Maharashtra	87478	72089	96	3944	5931	10	82216 (94%)	68215 (95%)	91 (95%)
Manipur	1014	548	1	29	44	0	948 (93%)	506 (92%)	1 (100%)
Meghalaya	2396	1739	4	130	134	1	2277 (95%)	1647 (95%)	4 (100%)
Mizoram	1294	1040	0	99	65	0	1121 (87%)	633 (60%)	(NA)
Nagaland	2119	1363	5	101	87	0	2099 (99%)	1353 (99%)	5 (100%)

	TB	TB Cases Notified	pa	Paedi	Paediatric TB Cases Notified	Cases	Total TB Cas	Total TB Cases initiated on treatment	reatment
State	Male	Female	Trans Gender	Male	Female	Trans Gender	Male	Female	Trans Gender
Odisha	306908	14907	25	830	947	2	29803 (97%)	14533 (97%)	25 (100%)
Puducherry	1914	847	1	38	48	0	1778 (93%)	795 (94%)	(%0) 0
Punjab	26549	19608	41	1068	1715	7	25021 (94%)	18652 (95%)	36 (62%)
Rajasthan	66206	46696	48	3713	3270	0	83392 (92%)	43865 (94%)	44 (92%)
Sikkim	722	604	0	27	31	0	(%86) 602	(%66) 965	(NA)
Tamil Nadu	48269	22006	29	1509	1440	1	46469 (96%)	21398 (97%)	29 (100%)
Telangana	38803	24375	31	853	1158	2	37774 (97%)	23829 (98%)	29 (94%)
Tripura	1558	511	2	25	15	0	1498 (96%)	499 (98%)	2 (100%)
Uttar Pradesh	214697	151758	186	9757	11324	6	202877 (94%)	144908 (95%)	170 (91%)
Uttarakhand	11780	8209	11	372	595	1	11390 (97%)	(%26) 8662	11 (100%)
West Bengal	53012	26001	26	1079	1409	0	50728 (96%)	24914 (96%)	26 (100%)
India	1113462	691238	026	48127	53898	67	1052112 (94%)	657907 (95%)	904 (93%)

Data Source: Nikshay – Data extracted as on 12<sup>th</sup> February 2021

1.8 Gender-disaggregated data on Treatment outcomes

	9		0700					17.	
	IB Ca	I B Cases Notified	-2019		success kare			Death Rate	
State	Male	Female	Trans Gender	Male	Female	Trans Gender	Male	Female	Trans Gender
Andaman & Nicobar Islands	353	248	0	279 (79%)	205 (83%)	0 (NA)	17 (5%)	13 (5%)	(NA)
Andhra Pradesh	66611	33167	124	58619 (88%)	30411 (92%)	106 (85%)	2991 (4%)	959 (3%)	6 (5%)
Arunachal Pradesh	1628	1387	5	1298 (80%)	1153 (83%)	5 (10 <mark>0</mark> %)	46 (3%)	32 (2%)	(%0) 0
Assam	32606	16119	40	26736 (82%)	13675 (85%)	33 (83%)	1446 (4%)	481 (3%)	2 (5%)
Bihar	82188	44190	122	61112 (74%)	33783 (76%)	94 (7 <mark>7</mark> %)	2267 (3%)	1041 (2%)	1 (1%)
Chandigarh	1952	1578	10	1537 (79%)	1343 (85%)	10 (100%)	74 (4%)	49 (3%)	(%0) 0
Chhattisgarh	28473	14966	41	23616 (83%)	12870 (86%)	35 (85%)	1221 (4%)	448 (3%)	4 (10%)
Dadra and Nagar Haveli and Daman and Diu	619	407	0	551 (89%)	367 (90%)	0 (NA)	17 (3%)	19 (5%)	(NA)
Delhi	51575	45548	89	34135 (66%)	33554 (74%)	29 (66%)	1 <mark>5</mark> 53 (3%)	775 (2%)	1 (1%)
Goa	1394	940	2	1051 (75%)	781 (83%)	1 (50%)	43 (3%)	32 (3%)	0 (0%)
Gujarat	101713	54418	92	83963 (83%)	47215 (87%)	74 (80%)	5545 (5%)	1942 (4%)	2 (2%)
Haryana	45325	28627	81	34482 (76%)	23282 (81%)	63 (78%)	2233 (5%)	778 (3%)	3 (4%)
Himachal Pradesh	11243	6647	21	(%88) 8686	6040 (91%)	16 (76%)	638 (6%)	241 (4%)	1 (5%)
Jammu & Kashmir	6743	4739	25	5628 (83%)	4107 (87%)	22 (88%)	197 (3%)	111 (2%)	(%0) 0
Jharkhand	39679	17795	26	30138 (76%)	13606 (76%)	42 (75%)	1056 (3%)	353 (2%)	1 (2%)
Karnataka	58101	32011	88	44875 (77%)	26619 (83%)	(%92) 29	4308 (7%)	1629 (5%)	2 (6%)
Kerala	17117	8514	13	13929 (81%)	7231 (85%)	11 (85%)	1369 (8%)	490 (6%)	1 (8%)
Ladakh	225	196	0	193 (86%)	168 (86%)	0 (NA)	13 (6%)	13 (7%)	(NA)
Lakshadweep	17	9	0	9 (53%)	5 (83%)	0 (NA)	2 (12%)	0 (0%)	(NA)
Madhya Pradesh	119228	67883	185	91160 (76%)	55367 (82%)	147 (79%)	4345 (4%)	1593 (2%)	5 (3%)
Maharashtra	126223	96781	203	99726 (79%)	78756 (81%)	155 (76%)	6756 (5%)	3287 (3%)	7 (3%)
Manipur	1703	974	3	1166 (68%)	664 (68%)	2 (67%)	48 (3%)	30 (3%)	0 (0%)
Meghalaya	3130	2168	5	2377 (76%)	1726 (80%)	1 (20%)	154 (5%)	77 (4%)	0 (0%)
Mizoram	1719	1324	2	1074 (62%)	946 (71%)	2 (100%)	39 (2%)	16 (1%)	0 (0%)

	TB Ca	TB Cases Notified-2019	-2019		Success Rate			Death Rate	
State	Male	Female	Trans Gender	Male	Female	Trans Gender	Male	Female	Trans Gender
Nagaland	2836	1968	9	2284 (81%)	1659 (84%)	6 (100%)	88 (3%)	30 (2%)	(%0) 0
Odisha	35390	17599	63	30407 (86%)	15629 (89%)	55 (87%)	2032 (6%)	775 (4%)	3 (5%)
Puducherry	1096	222	1	852 (78%)	474 (85%)	1 (100%)	(%8) 28	32 (6%)	(%0)0
Punjab	34342	24979	78	26954 (78%)	20575 (82%)	58 (74%)	1928 (6%)	1014 (4%)	3 (4%)
Rajasthan	116266	57748	146	90649 (78%)	47443 (82%)	106 (73%)	4110 (4%)	1221 (2%)	5 (3%)
Sikkim	827	629	0	(20 (26%)	514 (78%)	0 (NA)	43 (5%)	22 (3%)	(NA)
Tamil Nadu	78661	34824	129	63553 (81%)	29869 (86%)	106 (82%)	4462 (6%)	1232 (4%)	8 (6%)
Telangana	44087	26984	82	38502 (87%)	24430 (91%)	72 (88%)	1860 (4%)	731 (3%)	2 (6%)
Tripura	2280	652	0	1852 (81%)	(83%)	0 (NA)	136 (6%)	41 (5%)	(NA)
Uttar Pradesh	303051	198550	450	241711 (80%)	166280 (84%)	360 (80%)	14492 (5%)	(%8) (3%)	19 (4%)
Uttarakhand	14805	10295	27	11889 (80%)	8763 (85%)	24 (89%)	(82 (2%)	278 (3%)	1 (4%)
West Bengal	75518	36074	71	(80%) (80%)	29463 (82%)	57 (80%)	4333 (6%)	1459 (4%)	2 (3%)
India	1508724	891627	2260	1197227 (79%)	739606 (83%)	1790 (79%)	70 <mark>6</mark> 34 (5%)	27282 (3%)	85 (4%)
		,							

Data Source: Nikshay – Data extracted as on 12<sup>th</sup> February 2021

2. TB - Comorbidities 2.1 TB - HIV

	TR natient	TB natients with known HIV status [%]	status (%)	TR-H	TR-HIV co-infected natients	atients
State			(o) chang		d management on the	Carrona
	Public	Private	Total	Diagnosed	Put on ART*	Put on CPT*
Andaman & Nicobar Islands	435 (90%)	0 (NA)	435 (90%)	4	3 (75%)	1 (25%)
Andhra Pradesh	47107 (99%)	17012 (99%)	64119 (99%)	3586	3485 (97%)	3545 (99%)
Arunachal Pradesh	2378 (92%)	4 (100%)	2382 (92%)	5	(%0)0	(%0) 0
Assam	27763 (88%)	2655 (72%)	30418 (86%)	211	174 (83%)	197 (93%)
Bihar	45418 (83%)	38018 (80%)	83436 (82%)	1524	1329 (87%)	1150 (75%)
Chandigarh	2582 (96%)	247 (89%)	2829 (95%)	146	135 (92%)	146 (100%)
Chhattisgarh	21659 (97%)	6691 (92%)	28350 (96%)	864	465 (93%)	498 (100%)
Dadra and Nagar Haveli and Daman and Diu	694 (98%)	74 (99%)	(%86) 892	11	10 (95%)	10 (95%)
Delhi	46320 (80%)	8691 (47%)	55011 (72%)	941	858 (91%)	924 (98%)
Goa	1319 (99%)	243 (79%)	1562 (95%)	50	41 (82%)	46 (92%)
Gujarat	79649 (99%)	34995 (91%)	114644 (96%)	2775	2534 (91%)	2642 (95%)
Haryana	43424 (94%)	15718 (86%)	59142 (92%)	630	550 (87%)	535 (85%)
Himachal Pradesh	12924 (99%)	644 (99%)	13568 (99%)	110	100 (91%)	92 (83%)
Jammu & Kashmir	7958 (96%)	(%96) 625	8537 (96%)	9	63 (104%)	61 (101%)
Jharkhand	27844 (90%)	11533 (77%)	39377 (86%)	313	216 (69%)	292 (93%)
Karnataka	50777 (97%)	11571 (90%)	62348 (96%)	4342	4121 (95%)	4324 (100%)
Kerala	16762 (94%)	2557 (85%)	19319 (92%)	246	218 (89%)	244 (99%)
Ladakh	226 (98%)	12 (71%)	238 (96%)	1	0 (0%)	0 (0%)
Lakshadweep	19 (100%)	0 (NA)	19 (100%)	0	0 (NA)	0 (NA)
Madhya Pradesh	103061 (95%)	23686 (79%)	126747 (91%)	1315	1229 (93%)	1307 (99%)
Maharashtra	100982 (97%)	49416 (93%)	150398 (96%)	5743	5529 (96%)	5706 (99%)
Manipur	1111 (79%)	74 (40%)	1185 (74%)	109	103 (94%)	105 (97%)
Meghalaya	3241 (87%)	287 (68%)	3528 (85%)	131	118 (90%)	117 (89%)
Mizoram	2000 (93%)	166 (80%)	2166 (91%)	288	294 (102%)	297 (103%)
Nagaland	2655 (94%)	519 (77%)	3174 (91%)	262	244 (93%)	263 (100%)

Change	TB patients	TB patients with known HIV status (%)	status (%)	TB-H	TB-HIV co-infected patients	ıtients
State	Public	Private	Total	Diagnosed	Put on ART*	Put on CPT*
Odisha	41547 (99%)	3544 (98%)	45091 (99%)	584	548 (94%)	(%66) 225
Puducherry	1251 (99%)	2 (100%)	1253 (99%)	19	19 (100%)	19 (100%)
Punjab	34810 (96%)	10307 (94%)	45117 (96%)	970	907 (93%)	623 (88%)
Rajasthan	92574 (95%)	35230 (87%)	127804 (93%)	1283	1231 (96%)	1247 (97%)
Sikkim	1218 (96%)	85 (98%)	1303 (96%)	8	8 (100%)	8 (100%)
Tamil Nadu	26053 (98%)	11044 (74%)	67097 (93%)	2436	2309 (95%)	2366 (97%)
Telangana	40862 (99%)	21210 (98%)	62072 (99%)	1927	1609 (83%)	1182 (61%)
Tripura	2096 (95%)	2 (100%)	2098 (95%)	24	23 (95%)	24 (100%)
Uttar Pradesh	248799 (93%)	91108 (85%)	339907 (91%)	2356	2159 (92%)	2204 (94%)
Uttarakhand	13633 (88%)	3345 (72%)	16978 (84%)	218	192 (88%)	211 (97%)
West Bengal	69287 (97%)	6595 (83%)	75882 (96%)	758	(88%)	734 (97%)
India	1250438 (94%)	407864 (85%)	1658302 (92%)	33884	31490 (93%)	32027 (95%)
4						

<sup>\*-</sup> Source of data - NACP Monthly Progress Reports.

The proportion of patients initiated on ART and CPT obtained from NACP monthly progress reports was extrapolated to TB-HIV coinfected patients' data obtained from Nikshay

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

				•		
		Presumptive TB Cases	ses	Pa	Paediatric TB Patients	nts
State	Examined	With known HIV status*	HIV positive cases among tested*	Notified	With known HIV status	HIV positive patients among tested
Andaman & Nicobar Islands	3682	582 (16%)	1 (0.2%)	18	17 (94%)	(0.0%)
Andhra Pradesh	612380	373783 (61%)	4380 (1.2%)	2294	2250 (98%)	39 (1.7%)
Arunachal Pradesh	10003	1748 (17%)	1 (0.1%)	288	266 (92%)	1 (0.4%)
Assam	124025	29419 (24%)	158 (0.5%)	1130	882 (78%)	3 (0.3%)
Bihar	249311	38785 (16%)	520 (1.3%)	8738	6265 (72%)	59 (0.9%)
Chandigarh	15975	10007 (63%)	30 (0.3%)	260	250 (96%)	2 (0.8%)
Chhattisgarh	175833	22456 (13%)	577 (2.6%)	1308	1235 (94%)	8 (0.6%)
Dadra and Nagar Haveli and Daman and Diu	11635	5304 (46%)	32 (0.6%)	47	45 (96%)	(%0'0)
Delhi	152237	27878 (18%)	94 (0.3%)	9898	6243 (72%)	17 (0.3%)
Goa	12885	8271 (64%)	192 (2.3%)	56	54 (96%)	1 (1.9%)
Gujarat	811825	382527 (47%)	1208 (0.3%)	5976	5352 (90%)	48 (0.9%)
Haryana	203701	96147 (47%)	604 (0.6%)	3490	3212 (92%)	12 (0.4%)
Himachal Pradesh	131376	18243 (14%)	7 (0.0%)	539	531 (99%)	1 (0.2%)
Jammu & Kashmir	138609	(%9) 8962	19 (0.2%)	209	482 (95%)	3 (0.6%)
Jharkhand	189759	28718 (15%)	216 (0.8%)	2275	1717 (75%)	3 (0.2%)
Karnataka	527789	177057 (34%)	2843 (1.6%)	2996	2798 (93%)	65 (2.3%)
Kerala	257917	17909 (7%)	172 (1.0%)	794	718 (90%)	3 (0.4%)
Ladakh	2922	94 (3%)	0 (0.0%)	5	5 (100%)	(%0'0)
Lakshadweep	1152	6 (1%)	0 (0.0%)	0	NA	NA
Madhya Pradesh	522913	193688 (37%)	826 (0.4%)	10393	9145 (88%)	(%2'0) 09
Maharashtra	884469	397577 (45%)	2707 (0.7%)	9729	9118 (94%)	124 (1.4%)
Manipur	5957	1582 (27%)	66 (4.2%)	74	44 (59%)	1 (2.3%)
Meghalaya	21445	4672 (22%)	64 (1.4%)	265	174 (66%)	1 (0.6%)
Mizoram	10623	1623 (15%)	181 (11.2%)	131	118 (90%)	4 (3.4%)
Nagaland	11207	2680 (24%)	83 (3.1%)	189	174 (92%)	2 (1.1%)

State Odisha Puducherry	Examined					
Odisha Puducherry	•	With known HIV status*	HIV positive cases among tested*	Notified	With known HIV status	HIV positive patients among tested
Puducherry	585578	137703 (24%)	407 (0.3%)	1774	1742 (98%)	13 (0.7%)
n:1	12006	(%23) 9879)	21 (0.3%)	44	40 (91%)	1 (2.5%)
Funjab	145058	46210 (32%)	496 (1.1%)	2864	2771 (97%)	14 (0.5%)
Rajasthan	408745	218413 (53%)	557 (0.3%)	0869	6510 (93%)	54 (0.8%)
Sikkim	10563	546 (5%)	9 (1.6%)	09	57 (95%)	(%0.0)
Tamil Nadu	644301	430028 (67%)	2013 (0.5%)	2990	2554 (85%)	23 (0.9%)
Telangana	262714	120325 (46%)	2235 (1.9%)	1995	1929 (97%)	40 (2.1%)
Tripura	23137	1044 (5%)	16 (1.5%)	47	43 (91%)	1 (2.3%)
Uttar Pradesh	1121359	307517 (27%)	577 (0.2%)	21687	18644 (86%)	53 (0.3%)
Uttarakhand	60519	9139 (15%)	67 (0.7%)	957	781 (82%)	4 (0.5%)
West Bengal	914137	448454 (49%)	838 (0.2%)	2502	2323 (93%)	11 (0.5%)
India	9277747	3574334 (39%)	22217 (0.6%)	102090	88489 (87%)	671 (0.8%)

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

2.3 Intensified TB case finding activities in ICTC Centres

	The state of the s	Clie	Clients attending ICTC Centres	itres
State	voncautes (exc. pregnant women)	Referred for TB testing	Diagnosed with TB	Put on treatment
Andaman & Nicobar Islands	17837	157 (1%)	29 (18%)	7 (24%)
Andhra Pradesh	385545	41905 (11%)	2147 (5%)	2103 (98%)
Arunachal Pradesh	8984	345 (4%)	59 (17%)	1 (2%)
Assam	92727	5593 (6%)	755 (13%)	416 (55%)
Bihar	252037	20959 (8%)	4020 (19%)	458 (11%)
Chandigarh	43007	128 (0%)	16 (13%)	1 (6%)
Chhattisgarh	174918	12992 (7%)	541 (4%)	402 (74%)
Dadra and Nagar Haveli and Daman and Diu	27234	626 (2%)	393 (63%)	66 (17%)
Delhi	230649	9760 (4%)	245 (3%)	156 (64%)
Goa	17692	890 (2%)	22 (2%)	16 (73%)
Gujarat	692196	66862 (10%)	2739 (4%)	2318 (85%)
Haryana	337955	13382 (4%)	2386 (18%)	339 (14%)
Himachal Pradesh	87136	3935 (5%)	117 (3%)	64 (55%)
Jammu & Kashmir	29205	317 (1%)	32 (10%)	2 (6%)
Jharkhand	133897	10992 (8%)	1386 (13%)	370 (27%)
Karnataka	1083873	88712 (8%)	3336 (4%)	3031 (91%)
Kerala	295145	12974 (4%)	157 (1%)	67 (43%)
Ladakh	0	0 (NA)	0 (NA)	0 (NA)
Lakshadweep	0	0 (NA)	0 (NA)	0 (NA)
Madhya Pradesh	321217	24985 (8%)	1378 (6%)	1179 (86%)
Maharashtra	2134441	199696 (9%)	9215 (5%)	8106 (88%)
Manipur	44323	1233 (3%)	18 (1%)	5 (28%)
Meghalaya	14855	185 (1%)	49 (26%)	25 (51%)
Mizoram	24645	1879 (8%)	58 (3%)	13 (22%)
Nagaland	42999	1997 (5%)	261 (13%)	74 (28%)
Odisha	534164	56316 (11%)	2091 (4%)	1481 (71%)

		Clic	Clients attending ICTC Centres	ıtres
State	ICIC attendees (excl. pregnant women)	Referred for TB testing	Diagnosed with TB	Put on treatment
Puducherry	41360	1849 (4%)	16 (1%)	12 (75%)
Punjab	341542	19455 (6%)	740 (4%)	258 (35%)
Rajasthan	554682	31769 (6%)	1704 (5%)	803 (47%)
Sikkim	7412	94 (1%)	25 (27%)	3 (12%)
Tamil Nadu	2038940	152446 (7%)	3194 (2%)	2923 (92%)
Telangana	332001	25146 (8%)	1368 (5%)	1225 (90%)
Tripura	31196	1202 (4%)	46 (4%)	2 (4%)
Uttar Pradesh	911551	55148 (6%)	5671 (10%)	2523 (44%)
Uttarakhand	63193	3194 (5%)	247 (8%)	178 (72%)
West Bengal	604647	24171 (4%)	1141 (5%)	563 (49%)
India	11953205	891294 (7%)	45602 (5%)	29190 (64%)
Data Source: Nikshay – MPR reports submitted by	submitted by NACP			

2.4 Intensified TB case finding activities in ART centre

State	PLHIV attending ART centre	PLHIV screened for TB	PLHIV with presumptive TB	PLHIV referred for TB diagnosis test	PLHIV tested for TB	PLHIV diagnosed with TB	PLHIV microbiologically confirmed	PLHIV eligible for IPT	PLHIV initiated on IPT
Andaman & Nicobar Islands	703	703 (100%)	5 (1%)	5 (100%)	5 (100%)	3 (60%)	3 (100%)	39	22 (56%)
Andhra Pradesh	927871	863110 (93%)	37169 (4%)	30919 (83%)	30073 (97%)	2065 (7%)	1529 (74%)	75248	67378 (90%)
Arunachal Pradesh	411	260 (63%)	17 (7%)	17 (100%)	17 (100%)	3 (18%)	1 (33%)	106	2 (2%)
Assam	36758	36756 (100%)	658 (2%)	455 (69%)	291 (64%)	116 (40%)	27 (23%)	3402	599 (18%)
Bihar	370889	340156 (92%)	9905 (3%)	6364 (64%)	45 <mark>56</mark> (72%)	1183 (26%)	592 (50%)	40370	11359 (28%)
Chandigarh	26275	26166 (100%)	411 (2%)	411 (100%)	381 (93%)	64 (17%)	16 (25%)	3487	1291 (37%)
Chhattisgarh	84548	83414 (99%)	3755 (5%)	3104 (83%)	2922 (94%)	469 (16%)	409 (87%)	7572	1693 (22%)
Delhi	205836	194441 (94%)	2760 (1%)	2042 (74%)	1673 (82%)	717 (43%)	310 (43%)	21296	2918 (14%)
Goa	20408	17054 (84%)	234 (1%)	159 (68%)	159 (100%)	16 (10%)	14 (88%)	586	395 (67%)
Gujarat	434111	432919 (100%)	29735 (7%)	19980 (67%)	19647 (98%)	1956 (10%)	870 (44%)	12797	6942 (54%)
Haryana	71049	(97%)	824 (1%)	824 (100%)	737 (89%)	322 (44%)	211 (66%)	9392	5067 (54%)
Himachal Pradesh	25447	25120 (99%)	247 (1%)	246 (100%)	246 (100%)	43 (17%)	34 (79%)	1146	1029 (90%)
Jammu & Kashmir	30533	30533 (100%)	87 (0%)	87 (100%)	65 (75%)	46 (71%)	13 (28%)	290	218 (37%)
Jharkhand	72003	65262 (91%)	1659 (3%)	1377 (83%)	1380 (100%)	200 (14%)	135 (68%)	3973	1341 (34%)

V d on	1	21.0	5	0	8	(%(	8	1		7	5 (	7	(%)	5	6
PLHIV initiated on IPT	35041 (57%)	1312 (22%)	15115 (76%)	(36%)	2943 (26%)	(%0٤) 689	4703 (50%)	1044 (20%)	4231 (44%)	0 (NA)	10285 (49%)	10137 (40%)	19 (11%)	26865 (57%)	29449 (59%)
PLHIV eligible for IPT	61462	2882	19993	174962	11146	2318	9418	5275	9644	W/N#	21027	25644	178	47258	49903
PLHIV microbiologically confirmed	1844 (57%)	86 (44%)	319 (49%)	1410 (38%)	31 (46%)	5 (63%)	60 (65%)	104 (62%)	210 (80%)	8 (44%)	421 (79%)	586 (54%)	1 (100%)	1513 (62%)	1025 (78%)
PLHIV diagnosed with TB	3233 (7%)	196 (12%)	(%2) (29)	3692 (6%)	68 (29%)	8 (11%)	93 (23%)	168 (48%)	264 (8%)	18 (9%)	535 (20%)	1084 (13%)	1 (8%)	2460 (7%)	1306 (8%)
PLHIV tested for TB	45277 (95%)	1609 (92%)	9285 (90%)	65630 (91%)	237 (85%)	70 (43%)	400 (84%)	350 (92%)	3441 (97%)	192 (100%)	2741 (88%)	8544 (99%)	13 (57%)	36889 (91%)	16804 (96%)
PLHIV referred for TB diagnosis test	47523 (86%)	1753 (88%)	10318 (98%)	72452 (83%)	278 (81%)	163 (98%)	479 (37%)	381 (100%)	3561 (97%)	192 (100%)	3111 (89%)	8290 (88%)	23 (100%)	40548 (62%)	17478 (33%)
PLHIV with presumptive TB	55299 (6%)	1986 (2%)	10511 (7%)	86983 (6%)	345 (0%)	167 (1%)	1287 (3%)	381 (1%)	3656 (4%)	192 (3%)	3478 (2%)	8727 (4%)	23 (2%)	65708 (8%)	53644 (16%)
PLHIV screened for TB	965228 (96%)	89745 (95%)	151479 (93%)	1340802 (94%)	(%62) (79%)	16374 (95%)	48671 (98%)	44514 (99%)	92087 (89%)	(%8 <i>L</i> )	194916 (95%)	236689 (94%)	1235 (100%)	814006 (93%)	342922 (81%)
PLHIV attending ART centre	1009545	94015	163090	1427079	99698	17263	49660	44973	103000	6968	205627	252961	1235	871389	421207
State	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Odisha	Puducherry	Punjab	Rajasthan	Sikkim	Tamil Nadu	Telangana

					4				
State	PLHIV attending ART centre	PLHIV screened for TB	PLHIV with presumptive TB	PLHIV referred for TB diagnosis test	PLHIV tested for TB	PLHIV diagnosed with TB	PLHIV microbiologically confirmed	PLHIV eligible for IPT	PLHIV initiated on IPT
Tripura	7403	6932 (94%)	140 (2%)	140 (100%)	121 (86%)	15 (12%)	8 (53%)	1080	509 (47%)
Uttar Pradesh	564951	557345 (99%)	11629 (2%)	11562 (99%)	11301 (98%)	1439 (13%)	717 (50%)	51609	29887 (58%)
Uttarakhand	25132	19564 (78%)	651 (3%)	611 (94%)	390 (64%)	134 (34%)	55 (41%)	2849	603 (21%)
West Bengal	206236	201288 (98%)	3521 (2%)	2570 (73%)	2400 (93%)	295 (12%)	198 (67%)	11046	5909 (53%)
India	7867543	7384695 (94%)	395794 (5%)	287723 (73%)	267846 (93%)	22869	12765 (56%)	690858	341710 (49%)

Data Source: Nikshay – MPR reports submitted by NACP

Union Territories of Dadra Nagar Haveli and Daman and Diu, Ladakh & Lakshadweep – Have no ART Centr<mark>es. Their PLHIV patients (if any) are</mark> included in the State of Gujarat, Jammu & Kashmir and Kerala respectively.

2.5 TB-Diabetes

Crate	TB patients wi	with known DM status (%)	tatus (%)	TB - D nosed a	TB - DM Patients diag- nosed among tested (%)	s diag- ced (%)	TB- DM Anti-di	patients i	TB- DM patients initiated on Anti-diabetic treatment (%)
51415	Public	Private	Total	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	424 (88%)	NA	424 (88%)	86 (20%)	NA	86 (20%)	50 (58%)	NA	50 (58%)
Andhra Pradesh	44510 (93%)	16186 (94%)	60696 (94%)	5178 (12%)	1673 (10%)	6851 (11%)	3362 (65%)	1113 (67%)	4475 (65%)
Arunachal Pradesh	2129 (82%)	4 (100%)	2133 (82%)	46 (2%)	(%0)	46 (2%)	15 (33%)	NA	15 (33%)
Assam	21456 (68%)	1955 (53%)	23411 (66%)	1564 (7%)	217 (11%)	1781 (8%)	516 (33%)	108 (50%)	624 (35%)
Bihar	32977 (61%)	34211 (72%)	67188 (66%)	1701 (5%)	1880 (5%)	3581 (5%)	638 (38%)	427 (23%)	1065 (30%)
Chandigarh	2441 (90%)	176 (63%)	2617 (88%)	202 (8%)	10 (6%)	212 (8%)	81 (40%)	1 (10%)	82 (39%)
Chhattisgarh	19937 (90%)	4396 (61%)	24333 (83%)	1628 (8%)	162 (4%)	1790 (7%)	(40%)	67 (41%)	716 (40%)
Dadra and Nagar Haveli and Daman and Diu	(%86) 099	(%26) 69	729 (93%)	35 (5%)	1 (1%)	36 (5%)	25 (71%)	(%0)	25 (69%)
Delhi	41477 (72%)	10253 (56%)	51730 (68%)	3259 (8%)	1268 (12%)	4527 (9%)	1579 (48%)	365 (29%)	1944 (43%)
Goa	1314 (98%)	216 (70%)	1530 (93%)	211 (16%)	21 (10%)	232 (15%)	191 (91%)	10 (48%)	201 (87%)
Gujarat	78410 (98%)	33800 (87%)	112210 (94%)	4167 (5%)	170 <mark>7</mark> (5%)	5874 (5%)	3262 (78%)	1205 (71%)	4467 (76%)
Haryana	39730 (86%)	14404 (79%)	54134 (84%)	2940 (7%)	(%9) 988	3826 (7%)	1455 (49%)	352 (40%)	1807 (47%)
Himachal Pradesh	12873 (99%)	632 (97%)	13505 (99%)	1072 (8%)	32 (5%)	1104 (8%)	822 (77%)	27 (84%)	849 (77%)
Jammu & Kashmir	7157 (86%)	441 (73%)	7598 (85%)	438 (6%)	20 (5%)	458 (6%)	179 (41%)	(30%)	185 (40%)

i	TB patients w	with known DM status (%)	tatus (%)	TB - D nosed a	TB - DM Patients diag- nosed among tested (%)	s diag- ted (%)	TB- DM Anti-dia	patients abetic trea	TB- DM patients initiated on Anti-diabetic treatment (%)
State	Public	Private	Total	Public	Private	Total	Public	Private	Total
Jharkhand	20144 (65%)	11626 (77%)	31770 (69%)	1061 (5%)	1144 (10%)	220 <mark>5</mark> (7%)	405 (38%)	249 (22%)	654 (30%)
Karnataka	49130 (94%)	10525 (82%)	59655 (92%)	6464 (13%)	1368 (13%)	7832 (13%)	4199 (65%)	510 (37%)	4709 (60%)
Kerala	16365 (91%)	2429 (81%)	18794 (90%)	5118 (31%)	79 <mark>2</mark> (33%)	5910 (31%)	2859	354 (45%)	3213 (54%)
Ladakh	184 (80%)	5 (29%)	189 (77%)	1 (1%)	(%0)	1 (1%)	(%0)	NA	(%0)
Lakshadweep	19 (100%)	NA	19 (100%)	4 (21%)	NA	4 (21%)	4 (100%)	NA	4 (100%)
Madhya Pradesh	94501 (87%)	20476 (68%)	114977 (83%)	4269 (5%)	759 (4%)	5028 (4%)	1753 (41%)	259 (34%)	2012 (40%)
Maharashtra	96507 (93%)	47810 (90%)	144317 (92%)	6340 (7%)	2901 (6%)	924 <mark>1</mark> (6%)	3761 (59%)	1295 (45%)	5056 (55%)
Manipur	759 (54%)	8 (4%)	767 (48%)	111 (15%)	2 (25%)	113 (15%)	33 (30%)	1 (50%)	34 (30%)
Meghalaya	2911 (78%)	264 (63%)	3175 (77%)	103 (4%)	(%0)	103 (3%)	57 (55%)	NA	57 (55%)
Mizoram	1688 (78%)	48 (23%)	1736 (73%)	(%9) 66	6 (13%)	105 (6%)	38 (38%)	6 (100%)	44 (42%)
Nagaland	1788 (63%)	312 (46%)	2100 (60%)	81 (5%)	14 (4%)	(%2) 26	28 (35%)	4 (29%)	32 (34%)
Odisha	39773 (95%)	3245 (89%)	43018 (95%)	3185 (8%)	196 (6%)	3381 (8%)	1954 (61%)	145 (74%)	2099 (62%)
Puducherry	1243 (98%)	1 (50%)	1244 (98%)	346 (28%)	1 (100%)	347 (28%)	337 (97%)	1 (100%)	338 (97%)
Punjab	33517 (93%)	9448 (86%)	42965 (91%)	3503 (10%)	(%2)	4183 (10%)	1507 (43%)	264 (39%)	1771 (42%)
Rajasthan	85883 (88%)	33736 (84%)	119619 (87%)	2681 (3%)	1247 (4%)	3928 (3%)	1552 (58%)	468 (38%)	2020 (51%)

	TB patients w	TB patients with known DM status (%)	tatus (%)	TB - D nosed a	TB - DM Patients diag- nosed among tested (%)	s diag- ted (%)	TB- DM Anti-di	patients i petic trea	TB- DM patients initiated on Anti-diabetic treatment (%)
State	Public	Private	Total	Public	Private	Total	Public	Private	Total
Sikkim	1207 (95%)	83 (95%)	1290 (95%)	(%8) 96	7 (8%)	103 (8%)	58 (60%)	(%98) 9	64 (62%)
Tamil Nadu	54041 (95%)	10940 (74%)	64981 (90%)	13760 (25%)	2367 (22%)	16127 (25%)	9497 (69%)	1320 (56%)	10817 (67%)
Telangana	38679 (93%)	19748 (91%)	58427 (93%)	2629 (7%)	1021 (5%)	3650 (6%)	2011 (76%)	559 (55%)	2570 (70%)
Tripura	1701 (77%)	1 (50%)	1702 (77%)	266 (16%)	(%0)	266 (16%)	116 (44%)	NA	116 (44%)
Uttar Pradesh	188833 (71%)	77486 (72%)	266319 (71%)	9159 (5%)	3624 (5%)	12783 (5%)	3075 (34%)	739 (20%)	3814 (30%)
Uttarakhand	8812 (57%)	1241 (27%)	10053 (50%)	653 (7%)	83 (7%)	736 (7%)	232 (36%)	32 (39%)	264 (36%)
West Bengal	65176 (91%)	6535 (82%)	71711 (90%)	7918 (12%)	745 (11%)	8663 (12%)	5094 (64%)	452 (61%)	5546 (64%)
India	1108356 (84%)	372710 (78%)	1481066 (82%)	903 <mark>7</mark> 4 (8%)	24834 (7%)	1152 <mark>08</mark> (8%)	51394 (57%)	10345 (42%)	61739 (54%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> February 2021	extracted as on 12 <sup>th</sup> Fe	bruary 2021							

2.6 TB-Tobacco

State	TB patie	TB patients with known Tobacco usage status (%)	Tobacco )	Tobacc	Fobacco users identified amongst screened (%)	entified ed (%)	Tobac Tobacco	co users li cessation	Tobacco users linked with Tobacco cessation centres (%)
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	393 (81%)	NA	393 (81%)	78 (20%)	NA	78 (20%)	15 (19%)	NA	15 (19%)
Andhra Pradesh	42873 (90%)	15135 (88%)	58008 (89%)	7098 (17%)	(%9) 996	8064 (14%)	1271 (18%)	182 (19%)	1453 (18%)
Arunachal Pradesh	2078 (80%)	4 (100%)	2082 (80 <mark>%</mark> )	171 (8%)	(%0)	171 (8%)	75 (44%)	NA	75 (44%)
Assam	19926 (63%)	1830 (50%)	21756 (62%)	6024 (30%)	338 (18%)	6362 (29%)	1032 (17%)	125 (37%)	1157 (18%)
Bihar	29490 (54%)	17500 (37%)	46990 (46%)	4098 (14%)	1925 (11%)	6023 (13%)	683 (17%)	53 (3%)	736 (12%)
Chandigarh	2402 (89%)	174 (62%)	2576 (86%)	213 (9%)	10 (6%)	223 (9%)	74 (35%)	2 (20%)	76 (34%)
Chhattisgarh	18647 (84%)	3247 (45%)	21894 (74%)	6033 (32%)	388 (12%)	6421 (29%)	3159 (52%)	99 (26%)	3258 (51%)
Dadra and Nagar Haveli and Daman and Diu	484 (68%)	49 (65%)	533 (68%)	71 (15%)	5 (10%)	76 (14%)	49 (69%)	4 (80%)	53 (70%)
Delhi	33722 (58%)	(%88 (33%)	39760 (52%)	2636 (8%)	196 (3%)	2832 (7%)	699 (27%)	18 (9%)	717 (25%)
Goa	1172 (88%)	46 (15%)	1218 (74%)	59 (5%)	(%0)	59 (5%)	6 (10%)	NA	6 (10%)
Gujarat	75868 (94%)	32621 (84%)	108489 (91%)	13693 (18%)	3016 (9%)	16709 (15%)	4706 (34%)	607 (20%)	5313 (32%)
Haryana	36169 (78%)	11722 (64%)	47891 (74%)	2218 (6%)	618 (5%)	2836 (6%)	728 (33%)	92 (15%)	820 (29%)
Himachal Pradesh	12393 (95%)	525 (81%)	12918 (95%)	1831 (15%)	54 (10%)	1885 (15%)	1129 (62%)	38 (70%)	1167 (62%)
Jammu & Kashmir	(082 (13%)	337 (56%)	6434 (72%)	583 (10%)	20 (6%)	603 (9%)	220 (38%)	3 (15%)	223 (37%)
Jharkhand	19709 (64%)	3493 (23%)	23202 (50%)	3179 (16%)	322 (9%)	3501 (15%)	968 (30%)	30 (8%)	638 (29%)
Karnataka	44485 (85%)	8082 (63%)	52567 (81%)	8452 (19%)	446 (6%)	8898 (17%)	2306 (27%)	101 (23%)	2407 (27%)

Stafe	TB patie	ients with known Tobacco usage status (%)	Tobacco	Tobacc	Tobacco users identified amongst screened (%)	entified ed (%)	Tobaco Tobacco	co users li cessation	Tobacco users linked with Tobacco cessation centres (%)
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Kerala	14721 (82%)	2021 (68%)	16742 (80%)	2202 (15%)	151 (7%)	2353 (14%)	1321 (60%)	92 (61%)	1413 (60%)
Ladakh	175 (76%)	5 (29%)	180 (73%)	1 (1%)	(%0)	1 (1%)	NA	NA	NA
Lakshadweep	19 (100%)	NA	19 (100%)	2 (11%)	NA	2 (11%)	2 (100%)	NA	2 (100%)
Madhya Pradesh	71880 (66%)	12526 (42%)	84406 (61%)	11476 (16%)	892 (7%)	12368 (15%)	1807 (16%)	168 (19%)	1975 (16%)
Maharashtra	84982 (82%)	33247 (63%)	118229 (75%)	9857 (12%)	1225 (4%)	11082 (9%)	3109 (32%)	246 (20%)	3355 (30%)
Manipur	749 (53%)	8 (4%)	757 (47%)	233 (31%)	2 (25%)	235 (31%)	29 (12%)	(%0)	29 (12%)
Meghalaya	3011 (81%)	273 (65%)	3284 (79%)	1144 (38%)	212 (78%)	1356 (41%)	113 (10%)	17 (8%)	130 (10%)
Mizoram	1663 (77%)	44 (21%)	1707 (72%)	658 (40%)	22 (50%)	680 (40%)	338 (51%)	3 (14%)	341 (50%)
Nagaland	2121 (75%)	311 (46%)	2432 (69%)	258 (12%)	61 (20%)	319 (13%)	66 (26%)	5 (8%)	71 (22%)
Odisha	38653 (92%)	3142 (87%)	41795 (92%)	8186 (21%)	232 (7%)	8418 (20%)	2884 (35%)	94 (41%)	2978 (35%)
Puducherry	1231 (97%)	1 (50%)	1232 (97%)	201 (16%)	(%0)	201 (16%)	198 (99%)	NA	198 (99%)
Punjab	32306 (89%)	8162 (75%)	40468 (86%)	1656 (5%)	155 (2%)	1811 (4%)	220 (13%)	12 (8%)	232 (13%)
Rajasthan	75965 (78%)	29379 (73%)	105344 (7 <mark>7</mark> %)	6484 (9%)	20 <mark>11</mark> (7%)	8495 (8%)	1495 (23%)	401 (20%)	1896 (22%)
Sikkim	877 (69%)	(%69) 09	937 (69%)	131 (15%)	8 (13%)	139 (15%)	11 (8%)	5 (63%)	16 (12%)
Tamil Nadu	49244 (86%)	9841 (66%)	59085 (82%)	10085 (20%)	862 (9%)	10947 (19%)	2503 (25%)	130 (15%)	2633 (24%)
Telangana	37607 (91%)	19188 (89%)	56795 (90%)	5999 (16%)	1106 (6%)	7105 (13%)	2566 (43%)	439 (40%)	3005 (42%)
Tripura	1476 (67%)	(%0)	1476 (67%)	229 (16%)	NA	229 (16%)	18 (8%)	NA	18 (8%)

State	TB patie	TB patients with known Tobacco usage status (%)	Tobacco )	Tobacco among	Tobacco users identified amongst screened (%)	entified ed (%)	Tobaco Tobacco	co users li cessation	Tobacco users linked with Tobacco cessation centres (%)
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Uttar Pradesh	154597 (58%)	34574 (32%)	34574 (32%)   189171 (51%)	17534 (11%)	3683 (11%)	21217 (11%)	2759 (16%)	238 (6%)	2997 (14%)
Uttarakhand	7502 (49%)	760 (16%)	8262 (41%)	1049 (14%)	80 (11%)	1129 (14%)	309 (29%)	12 (15%)	321 (28%)
West Bengal	58775 (82%)	6046 (76%)	64821 (82%)	13800 (23%)	833 (14%)	14633 (23%)	4184 (30%)	281 (34%)	4465 (31%)
India	983462 (74%)	260391 (54%)	124385 <mark>3</mark> (69%)	147622 (15%)	19839 (8%)	167461 (13%)	41052 (28%)	3497 (18%)	44549 (27%)

Data Source: Nikshay – Data extracted as on 12<sup>th</sup> February 2021

2.7 TB-Alcohol

State	TB patie	ents with known Alcohol usage status (%)	Alcohol	Alcoho	Alcohol users identified amongst screened (%)	ntified ed (%)	Alcoh Dead	Alcohol users linked with Deaddiction centres (%)	Alcohol users linked with Deaddiction centres (%)
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	393 (81%)	NA	393 (81%)	61 (16%)	NA	61 (16%)	17 (28%)	NA	17 (28%)
Andhra Pradesh	41433 (87%)	14584 (85%)	56017 (86%)	5447 (13%)	804 (6%)	6251 (11%)	947 (17%)	158 (20%)	1105 (18%)
Arunachal Pradesh	2082 (80%)	4 (100%)	2086 (80%)	107 (5%)	(%0)	107 (5%)	55 (51%)	NA	55 (51%)
Assam	18814 (60%)	1735 (47%)	20549 (58%)	3594 (19%)	156 (9%)	3750 (18%)	904 (25%)	100 (64%)	1004 (27%)
Bihar	27919 (51%)	16648 (35%)	44567 (44%)	759 (3%)	170 (1%)	929 (2%)	207 (27%)	20 (12%)	227 (24%)
Chandigarh	2359 (87%)	163 (58%)	2522 (85%)	130 (6%)	7 (4%)	137 (5%)	68 (52%)	1 (14%)	(%05) 69
Chhattisgarh	18134 (82%)	3007 (41%)	21141 (72%)	3984 (22%)	127 (4%)	4111 (19%)	2494 (63%)	68 (54%)	2562 (62%)
Dadra and Nagar Haveli and Daman and Diu	431 (61%)	49 (65%)	480 (61%)	64 (15%)	1 (2%)	65 (14%)	43 (67%)	1 (100%)	44 (68%)
Delhi	30936 (53%)	5573 (30%)	36509 (48%)	2185 (7%)	91 (2%)	2276 (6%)	538 (25%)	22 (24%)	560 (25%)
Goa	1206 (90%)	42 (14%)	1248 (76%)	93 (8%)	(%0)	93 (7%)	11 (12%)	NA	11 (12%)
Gujarat	70748 (88%)	29405 (76%)	100153 (8 <mark>4</mark> %)	4641 (7%)	373 (1%)	5014 (5%)	2078 (45%)	108 (29%)	2186 (44%)
Haryana	34323 (74%)	11169 (61%)	45492 (71%)	1466 (4%)	314 (3%)	1780 (4%)	518 (35%)	53 (17%)	571 (32%)
Himachal Pradesh	11795 (91%)	497 (76%)	12292 (90%)	1299 (11%)	38 (8%)	1337 (11%)	742 (57%)	29 (76%)	771 (58%)
Jammu & Kashmir	5895 (71%)	323 (53%)	6218 (70%)	336 (6%)	6 (2%)	342 (6%)	118 (35%)	(%0)	118 (35%)
Jharkhand	18633 (60%)	3325 (22%)	21958 (48%)	1925 (10%)	67 (2%)	1992 (9%)	838 (44%)	(%6)9	844 (42%)
Karnataka	42394 (81%)	7832 (61%)	50226 (77%)	6511 (15%)	274 (3%)	6785 (14%)	1766 (27%)	67 (24%)	1833 (27%)

Ctate	TB patie	tients with known Alcohol usage status (%)	Alcohol	Alcoho among	Alcohol users identified amongst screened (%)	ntified ed (%)	Alcoh Dead	Alcohol users linked with Deaddiction centres (%)	Alcohol users linked with Deaddiction centres (%)
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Kerala	13412 (75%)	1718 (57%)	15130 (72%)	2267 (17%)	142 (8%)	2409 (16%)	1154 (51%)	67 (47%)	1221 (51%)
Ladakh	179 (78%)	5 (29%)	184 (74%)	1 (1%)	(%0)	1 (1%)	1 (100%)	NA	1 (100%)
Lakshadweep	19 (100%)	NA	19 (100%)	NA	NA	NA	NA	NA	NA
Madhya Pradesh	64943 (60%)	11218 (37%)	76161 (55%)	4291 (7%)	302 (3%)	4593 (6%)	918 (21%)	66 (22%)	984 (21%)
Maharashtra	80266 (77%)	31216 (59%)	111482 (71%)	5851 (7%)	59 <mark>2</mark> (2%)	6443 (6%)	2038 (35%)	112 (19%)	2150 (33%)
Manipur	814 (58%)	7 (4%)	821 (51%)	161 (20%)	(%0)	161 (20%)	26 (16%)	NA	26 (16%)
Meghalaya	2954 (79%)	269 (64%)	3223 (78%)	59 <del>5</del> (20%)	47 (17%)	642 (20%)	93 (16%)	2 (4%)	95 (15%)
Mizoram	1636 (76%)	42 (20%)	1678 (71%)	262 (16%)	14 (33%)	276 (16%)	55 (21%)	(%0)	55 (20%)
Nagaland	2058 (73%)	310 (46%)	2368 (68%)	135 (7%)	12 (4%)	147 (6%)	56 (41%)	2 (17%)	58 (39%)
Odisha	37663 (90%)	3087 (85%)	40750 (90%)	6601 (18%)	143 (5%)	6744 (17%)	2581 (39%)	61 (43%)	2642 (39%)
Puducherry	1229 (97%)	1 (50%)	1230 (97%)	250 (20%)	(%0)	250 (20%)	240 (96%)	NA	240 (96%)
Punjab	31510 (87%)	7875 (72%)	39385 (84%)	1463 (5%)	342 (4%)	1805 (5%)	202 (14%)	6 (2%)	208 (12%)
Rajasthan	70998 (73%)	28618 (71%)	99616 (72%)	2152 (3%)	427 (1%)	2579 (3%)	644 (30%)	130 (30%)	774 (30%)
Sikkim	861 (68%)	29 (68%)	920 (68%)	89 (10%)	2 (8%)	94 (10%)	11 (12%)	2 (40%)	13 (14%)
Tamil Nadu	47934 (84%)	9569 (64%)	57503 (80%)	11085 (23%)	733 (8%)	11818 (21%)	2491 (22%)	98 (13%)	2589 (22%)
Telangana	36142 (87%)	17851 (82%)	53993 (86%)	5997 (17%)	1136 (6%)	7133 (13%)	2696 (45%)	473 (42%)	3169 (44%)
Tripura	1292 (58%)	1 (50%)	1293 (58%)	195 (15%)	(%0)	195 (15%)	23 (12%)	NA	23 (12%)

State	TB patie	TB patients with known Alcohol usage status (%)	ı Alcohol )	Alcoho among	Alcohol users identified amongst screened (%)	ntified d (%)	Alcoh Dead	ol users li diction ce	Alcohol users linked with Deaddiction centres (%)
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Uttar Pradesh	142296 (53%)	28183 (26%)	28183 (26%)   170479 (46%)	5212 (4%)	562 (2%)	5774 (3%)	1268 (24%)	20 (9%)	50 (9%)   1318 (23%)
Uttarakhand	6852 (44%)	737 (16%)	7589 (38%)	722 (11%)	49 (7%)	771 (10%)	173 (24%)	5 (10%)	5 (10%) 178 (23%)
West Bengal	56542 (79%)	5773 (72%)	62315 (78%)	7621 (13%)	375 (6%)	7996 (13%)	2579 (34%)	163 (43%)	2742 (34%)
India	927095 (70%)	240895 (50%)	1167990 (65%)	87552 (9%)	7309 (3%)	94861 (8%)	28593 (33%)	1870 (26%)	30463 (32%)
	1								

Data Source: Nikshay – Data extracted as on 12th February 2021

2.8 TB COVID patients

State	TB notifie	TB notified patients screened for COVID-19 disease	eened for se	TB-C	TB-COVID 19 patients detected	ts detected
	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	02	0	20	0	0	0
Andhra Pradesh	22334	7060	29394	203	19	222
Arunachal Pradesh	821	0	821	1	0	1
Assam	5540	612	6152	36	17	53
Bihar	10474	9187	19661	32	20	52
Chandigarh	1069	86	1167	19	1	20
Chhattisgarh	5158	748	2906	63	4	29
Dadra and Nagar Haveli and Daman and Diu	87	3	06	1	0	1
Delhi	14891	2119	17010	69	28	26
Goa	538	13	551	33	0	33
Gujarat	21860	9278	31138	159	71	230
Haryana	16145	4098	20243	85	12	67
Himachal Pradesh	2586	152	2738	24	0	24
Jammu & Kashmir	2192	131	2323	17	0	17
Jharkhand	7594	1036	8630	13	3	16
Karnataka	20734	3198	23932	333	39	372
Kerala	3023	787	3810	107	15	122
Ladakh	95	1	96	1	0	1
Lakshadweep	15	0	15	0	0	0
Madhya Pradesh	15845	3889	19734	160	28	188
Maharashtra	34051	15473	49524	523	155	678
Manipur	67	1	89	0	0	0
Meghalaya	603	186	789	6	1	7
Mizoram	127	1	128	2	0	2
Nagaland	403	2	405	0	0	0
Odisha	12876	1147	14023	105	5	110

Cinto	TB notifie	TB notified patients screened for	ened for	TB-C	TB-COVID 19 patients detected	ts detected
State	Public	Private	Total	Public	Private	Total
Puducherry	497	0	497	13	0	13
Punjab	13590	1682	15272	57	rv	62
Rajasthan	17460	7449	24909	84	18	102
Sikkim	177	5	182	2	0	2
Tamil Nadu	18992	2800	21792	335	32	367
Telangana	16374	9047	25421	88	25	113
Tripura	566	0	566	4	0	4
Uttar Pradesh	98989	12819	76505	228	47	275
Uttarakhand	2677	215	2892	32	1	33
West Bengal	30572	2969	33541	438	44	482
India	363789	96206	459995	3273	590	3863
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> February 2021	ebruary 2021					

2.9 TB-Pregnancy

Š	Female TB	Female TB patients screened for Pregnancy	r Pregnancy	Pregnant	Pregnant TB patients identified	dentified
State	Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	54	0	54	0	0	0
Andhra Pradesh	5601	2461	8062	27	12	39
Arunachal Pradesh	471	0	471	0	0	0
Assam	2193	184	2377	15	1	16
Bihar	3614	3178	6792	39	42	81
Chandigarh	512	49	561	9	0	9
Chhattisgarh	1616	293	1909	13	2	15
Dadra and Nagar Haveli and Daman and Diu	51	9	57	1	0	1
Delhi	5484	732	6216	56	20	92
Goa	218	9	224	0	0	0
Gujarat	8385	4991	13376	87	31	118
Haryana	5152	1671	6823	41	17	58
Himachal Pradesh	1519	93	1612	11	1	12
Jammu & Kashmir	693	55	748	9	0	9
Jharkhand	1858	441	2299	11	1	12
Karnataka	5930	1245	7175	62	11	73
Kerala	1660	291	1951	20	2	22
Ladakh	23	2	25	0	0	0
Lakshadweep	7	0	7	0	0	0
Madhya Pradesh	7791	1918	6026	67	19	98
Maharashtra	14618	6244	20862	89	26	115
Manipur	51	1	52	0	0	0
Meghalaya	332	52	384	4	1	5
Mizoram	218	9	224	1	1	2
Nagaland	148	55	203	0	0	0
Odisha	4739	505	5244	21	0	21
Puducherry	223	0	223	1	0	T

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Ctata	remale TB	remaie 1 B patients screened for Pregnancy	r Pregnancy	Pregnant	Pregnant 1 B patients identified	dentified
State	Public	Private	Total	Public	Private	Total
Punjab	3810	927	4737	21	2	56
Rajasthan	6485	3020	9505	29	56	96
Sikkim	65	1	99	0	0	0
Tamil Nadu	5670	1411	7081	89	16	84
Telangana	5373	3634	9007	22	33	55
Tripura	118	0	118	0	0	0
Uttar Pradesh	21378	6235	27613	150	46	196
Uttarakhand	902	118	1020	13	0	13
West Bengal	7592	1312	8904	20	2	22
India	124554	41137	165691	696	321	1290

Data Source: Nikshay – Data extracted as on 12<sup>th</sup> February 2021

3 Treatment Outcome:

3.1 Treatment outcome of TB patients notified in 2019 (Public Sector)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	543	285	152 (53%)	455 (84%)	25 (4.6%)	17 (3.1%)	0 (0.0%)	7 (1.3%)	39 (7.2%)
Andhra Pradesh	72585	48943	36846 (75%)	64454 (89%)	3216 (4.4%)	941 (1.3%)	261 (0.4%)	1363 (1.9%)	2350 (3.2%)
Arunachal Pradesh	2818	1364	1043 (76%)	23 <b>4</b> 3 (83%)	64 (2.3%)	202 (7.2%)	35 (1.2%)	78 (2.8%)	96 (3,4%)
Assam	42145	21296	13880 (65%)	35606 (84%)	1662 (3.9%)	1123 (2.7%)	161 (0.4%)	416 (1.0%)	3177 (7.5%)
Bihar	77375	47333	28220 (60%)	58931 (76%)	1 <mark>8</mark> 81 (2.4%)	2844 (3.7%)	390 (0.5%)	628 (0.8%)	12701 (16.4%)
Chandigarh	3367	1648	1110 (67%)	2792 (83%)	112 (3.3%)	137 (4.1%)	24 (0.7%)	36 (1.1%)	266 (7.9%)
Chhattisgarh	31941	15994	11958 (75%)	27275 (85%)	1417 (4.4%)	558 (1.7%)	176 (0.6%)	338 (1.1%)	2177 (6.8%)
Dadra and Nagar Haveli and Daman and Diu	827	372	311 (84%)	754 (91%)	23 (2.8%)	23 (2.8%)	3 (0.4%)	8 (1.0%)	16 (1.9%)
Delhi	67938	31886	16296 (51%)	51906 (76%)	1261 (1.9%)	3087 (4.5%)	462 (0.7%)	1361 (2.0%)	9861 (14.5%)
Goa	1820	1110	550 (50%)	1456 (80%)	65 (3.6%)	71 (3.9%)	13 (0.7%)	35 (1.9%)	180 (9.9%)
Gujarat	98494	52704	41172 (78%)	84291 (86%)	5254 (5.3%)	2149 (2.2%)	1125 (1.1%)	2311 (2.3%)	3364 (3.4%)
Haryana	52812	33902	22332 (66%)	43194 (82%)	2179 (4.1%)	1416 (2.7%)	425 (0.8%)	346 (0.7%)	5252 (9,9%)
Himachal Pradesh	16467	10913	7343 (67%)	14779 (90%)	792 (4.8%)	236 (1.4%)	56 (0.3%)	201 (1.2%)	403 (2.4%)
Jammu & Kashmir	10644	5349	3762 (70%)	9079 (85%)	286 (2.7%)	159 (1.5%)	47 (0.4%)	74 (0.7%)	999 (9.4%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen	% Not evaluated
Jharkhand	43843	25186	15119 (60%)	35899 (82%)	1081 (2.5%)	855 (2.0%)	243 (0.6%)	241 (0.5%)	5524 (12.6%)
Karnataka	69984	43474	30097	56314 (80%)	4926 (7.0%)	2690 (3.8%)	614 (0.9%)	1447 (2.1%)	3993 (5,7%)
Kerala	21868	13288	9992 (75%)	18193 (83%)	1583 (7.2%)	412 (1.9%)	178 (0.8%)	228 (1.0%)	1274 (5,8%)
Ladakh	367	203	98 (48%)	312 (85%)	22 (6.0%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	32 (8,7%)
Lakshadweep	22	12	7 (58%)	14 (64%)	2 (9.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (27.3%)
Madhya Pradesh	142986	66791	40836 (61%)	118238 (83%)	4584 (3.2%)	4991 (3.5%)	913 (0.6%)	1242 (0.9%)	13018 (9.1%)
Maharashtra	137098	67382	45230 (67%)	114138 (83%)	6117 (4.5%)	4425 (3.2%)	818 (0.6%)	2628 (1.9%)	8972 (6.5%)
Manipur	2250	1246	710 (57%)	1563 (69%)	70 (3.1%)	55 (2.4%)	6 (0.3%)	39 (1.7%)	517 (23.0%)
Meghalaya	4329	2484	1500 (60%)	3425 (79%)	183 (4.2%)	129 (3.0%)	31 (0.7%)	75 (1.7%)	486 (11.2%)
Mizoram	2876	1473	724 (49%)	1945 (68%)	48 (1.7%)	41 (1.4%)	8 (0.3%)	14 (0.5%)	820 (28.5%)
Nagaland	3985	2133	1569 (74%)	3363 (84%)	82 (2.1%)	133 (3.3%)	29 (0.7%)	23 (0.6%)	355 (8.9%)
Odisha	48439	28412	22056 (78%)	42454 (88%)	2611 (5.4%)	1022 (2.1%)	171 (0.4%)	409 (0.8%)	1772 (3.7%)
Puducherry	1559	1062	750 (71%)	1266 (81%)	116 (7.4%)	43 (2.8%)	22 (1.4%)	36 (2.3%)	76 (4.9%)
Punjab	44844	27593	16733 (61%)	36290 (81%)	1937 (4.3%)	1376 (3.1%)	265 (0.6%)	445 (1.0%)	4531 (10.1%)
Rajasthan	117227	73235	45398 (62%)	96011 (82%)	3885	3811 (3.3%)	680 (0.6%)	1035 (0.9%)	11805 (10.1%)
Sikkim	1203	629	461 (73%)	1066 (89%)	45 (3.7%)	10 (0.8%)	8 (0.7%)	11 (0.9%)	63 (5.2%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Tamil Nadu	81550	55430	40539 (73%)	68102 (84%)	4656 (5.7%)	2506 (3.1%)	516 (0.6%)	2036 (2.5%)	3734 (4.6%)
Telangana	47325	29476	23876 (81%)	41473 (88%)	1848 (3.9%)	458 (1.0%)	275 (0.6%)	648 (1.4%)	2623 (5.5%)
Tripura	2924	1967	1396 (71%)	2415 (83%)	173 (5.9%)	84 (2.9%)	18 (0.6%)	62 (2.1%)	172 (5.9%)
Uttar Pradesh	343248	188569	111045 (59%)	282584 (82%)	12094 (3.5%)	14476 (4.2%)	2292 (0.7%)	4562 (1.3%)	27240 (7.9%)
Uttarakhand	19231	9205	5883 (64%)	16185 (84%)	786 (4.1%)	625 (3.2%)	115 (0.6%)	345 (1.8%)	1175 (6.1%)
West Bengal	91732	62858	45076 (72%)	76531 (83%)	4757 (5.2%)	2430 (2.6%)	584 (0.6%)	1152 (1.3%)	6278 (6.8%)
India	1708666	975207	644070 (66%)	1415096 (83%)	69843 (4.1%)	53536 (3.1%)	10964 (0.6%)	23880 (1.4%)	135347 (7.9%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> .	acted as on 12	th February 2021	021						

3.2 Treatment outcome of TB patients notified in 2019 (Private Sector)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	<b>Death</b> Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	11	7	1 (14%)	8 (73%)	0 (0.0%)	1 (9.1%)	0 (0.0%)	0 (0.0%)	2 (18.2%)
Andhra Pradesh	23884	4446	2246 (51%)	22437 (94%)	369 (1.5%)	491 (2.1%)	61 (0.3%)	96 (0.4%)	430 (1.8%)
Arunachal Pradesh	46	7	2 (29%)	19 (41%)	0 (0.0%)	2 (4.3%)	0 (0.0%)	1 (2.2%)	24 (52.2%)
Assam	5634	916	237 (26%)	4270 (76%)	178 (3.2%)	87 (1.5%)	30 (0.5%)	32 (0.6%)	1037 (18.4%)
Bihar	45652	4854	669 (20%)	34941 (77%)	1094 (2.4%)	1290 (2.8%)	234 (0.5%)	177 (0.4%)	7916 (17.3%)
Chandigarh	87	42	7 (17%)	58 (67%)	2 (2.3%)	5 (5.7%)	0 (0.0%)	0 (0.0%)	22 (25.3%)
Chhattisgarh	10904	1172	510 (44%)	8890 (82%)	186 (1.7%)	263 (2.4%)	31 (0.3%)	15 (0.1%)	1519 (13.9%)
Dadra and Nagar Haveli and Daman and Diu	157	9	(%0) 0	152 (97%)	2 (1.3%)	2 (1.3%)	0 (0.0%)	0 (0.0%)	1 (0.6%)
Delhi	25881	9450	79 (1%)	14460 (56%)	850 (3.3%)	1243 (4.8%)	30 (0.1%)	138 (0.5%)	9160 (35.4%)
Goa	451	78	(%0) 0	349 (77%)	7 (1.6%)	55 (12.2%)	1 (0.2%)	2 (0.4%)	37 (8.2%)
Gujarat	52505	5828	993 (17%)	44772 (85%)	1616 (3.1%)	2259 (4.3%)	141 (0.3%)	339 (0.6%)	3378 (6.4%)
Haryana	19558	5654	2134 (38%)	13667 (70%)	630 (3.2%)	1584 (8.1%)	108 (0.6%)	78 (0.4%)	3491 (17.8%)
Himachal Pradesh	901	270	149 (55%)	786 (87%)	45 (5.0%)	21 (2.3%)	1 (0.1%)	2 (0.2%)	46 (5.1%)
Jammu & Kashmir	701	275	130 (47%)	587 (84%)	9 (1.3%)	5 (0.7%)	5 (0.7%)	3 (0.4%)	92 (13.1%)
Jharkhand	12681	1115	127 (11%)	7551 (60%)	233 (1.8%)	741 (5.8%)	38 (0.3%)	29 (0.2%)	4089 (32.2%)
Karnataka	17184	6335	924 (15%)	13466 (78%)	679 (4.0%)	265 (1.5%)	43 (0.3%)	48 (0.3%)	2683 (15.6%)
Kerala	3399	1420	688 (48%)	2755 (81%)	245 (7.2%)	66 (1.9%)	13 (0.4%)	30 (0.9%)	290 (8.5%)
Ladakh	45	7	4 (57%)	44 (98%)	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

					4				
State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Lakshadweep	#N/A	#N/A	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	40191	4542	1841 (41%)	26224 (65%)	901 (2.2%)	4730 (11,8%)	204 (0.5%)	130 (0.3%)	8002 (19.9%)
Maharashtra	73656	24820	3083 (12%)	61721 (84%)	2668 (3.6%)	2377 (3.2%)	342 (0.5%)	823 (1.1%)	5725 (7.8%)
Manipur	373	183	23 (13%)	238 (64%)	4 (1.1%)	20 (5.4%)	0 (0.0%)	2 (0.5%)	109 (29.2%)
Meghalaya	634	103	8 (8%)	530 (84%)	3 (0.5%)	27 (4.3%)	2 (0.3%)	0 (0.0%)	72 (11.4%)
Mizoram	54	29	8 (28%)	26 (48%)	0 (0.0%)	1 (1.9%)	0 (0.0%)	2 (3.7%)	25 (46.3%)
Nagaland	708	83	25 (30%)	523 (74%)	26 (3.7%)	32 (4.5%)	0 (0.0%)	6 (0,8%)	121 (17.1%)
Odisha	3840	807	530 (66%)	3165 (82%)	127 (3.3%)	122 (3.2%)	9 (0.2%)	20 (0.5%)	397 (10.3%)
Puducherry	6	2	1 (50%)	2 (33%)	0 (0 <mark>.0</mark> %)	0 (0.0%)	0 (0.0%)	1 (16.7%)	3 (50.0%)
Punjab	13334	3196	366 (11%)	10641 (80%)	887 (6.7%)	226 (1.7%)	20 (0.1%)	33 (0.2%)	1527 (11.5%)
Rajasthan	52084	9444	2534 (27%)	40006 (77%)	882 (1.7%)	3025 (5.8%)	340 (0.7%)	144 (0.3%)	7687 (14.8%)
Sikkim	26	7	(%0) 0	23 (88%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0'0%)	3 (11,5%)
Tamil Nadu	28222	8884	2823 (32%)	23000 (81%)	709 (2.5%)	773 (2.7%)	56 (0.2%)	71 (0.3%)	3613 (12.8%)
Telangana	21751	7922	3718 (47%)	20267 (93%)	544 (2.5%)	98 (0.5%)	56 (0.3%)	35 (0.2%)	751 (3.5%)
Tripura	12	6	(%29) 9	8 (67%)	0 (0.0%)	1 (8.3%)	0 (0.0%)	0 (0.0%)	3 (25.0%)
Uttar Pradesh	143062	12742	2074 (16%)	119096 (83%)	6315 (4.4%)	7151 (5.0%)	995 (0.7%)	865 (0.6%)	8640 (6.0%)
Uttarakhand	5273	1515	141 (9%)	4325 (82%)	108 (2.0%)	300 (5.7%)	9 (0.2%)	18 (0.3%)	513 (9.7%)
West Bengal	16765	6465	1549 (24%)	11817 (70%)	(%6'8)	507 (3.0%)	48 (0.3%)	149 (0.9%)	3584 (21.4%)
India	619672	122635	27930 (23%)	490824 (79%)	19980 (3.2%)	27770 (4.5%)	2817 (0.5%)	3289 (0.5%)	74992 (12.1%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> February 2021	- Data extract	ted as on 12 <sup>th</sup>	February 2021						

3.3 Treatment outcome of TB patients notified in 2019 (Total)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	554	292	153 (52%)	463 (84%)	25 (4.5%)	18 (3.2%)	0 (0.0%)	7 (1.3%)	41 (7.4%)
Andhra Pradesh	96469	53389	39092 (73%)	86891 (90%)	3585 (3.7%)	1432 (1.5%)	322 (0.3%)	1459 (1.5%)	2780 (2.9%)
Arunachal Pradesh	2864	1371	1045 (76%)	2362 (82%)	64 (2.2%)	204 (7.1%)	35 (1.2%)	79 (2.8%)	120 (4.2%)
Assam	47779	22212	14117 (64%)	39876 (83%)	1840 (3.9%)	1210 (2.5%)	191 (0,4%)	448 (0.9%)	4214 (8,8%)
Bihar	123027	52187	29189 (56%)	93872 (76%)	2975 (2.4%)	4134 (3.4%)	624 (0.5%)	805 (0.7%)	20617 (16.8%)
Chandigarh	3454	1690	1117 (66%)	2850 (83%)	114 (3.3%)	142 (4.1%)	24 (0.7%)	36 (1.0%)	288 (8.3%)
Chhattisgarh	42845	17166	12468 (73%)	36165 (84%)	1603 (3.7%)	821 (1.9%)	207 (0.5%)	353 (0.8%)	3696 (8.6%)
Dadra and Nagar Haveli and Daman and Diu	984	378	311 (82%)	606 (92%)	25 (2.5%)	25 (2.5%)	3 (0.3%)	8 (0.8%)	17 (1.7%)
Delhi	93819	41337	16375 (40%)	66366 (71%)	2111 (2.3%)	4330 (4.6%)	492 (0.5%)	1499 (1.6%)	19021 (20.3%)
Goa	2271	1188	550 (46%)	1805 (79%)	72 (3.2%)	126 (5.5%)	14 (0.6%)	37 (1.6%)	217 (9.6%)
Gujarat	150999	58532	42165 (72%)	129063 (85%)	6870 (4.5%)	4408 (2.9%)	1266 (0.8%)	2650 (1.8%)	6742 (4.5%)
Haryana	72370	39556	24466 (62%)	56861 (79%)	2809 (3.9%)	3000 (4.1%)	533 (0.7%)	424 (0.6%)	8743 (12.1%)
Himachal Pradesh	17368	11183	7492 (67%)	15565 (90%)	837 (4.8%)	257 (1.5%)	57 (0.3%)	203 (1,2%)	449 (2.6%)
Jammu & Kashmir	11345	5624	3892 (69%)	(%58) 9996	295 (2.6%)	164 (1,4%)	52 (0.5%)	77 (0.7%)	1091 (9.6%)
Jharkhand	56524	26301	15246 (58%)	43450 (77%)	1314 (2.3%)	1596 (2.8%)	281 (0.5%)	270 (0.5%)	9613 (17.0%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Karnataka	87168	49809	31021 (62%)	(%08) (80%)	5605 (6.4%)	2955 (3.4%)	(0.8%)	1495 (1.7%)	6676 (7.7%)
Kerala	25267	14708	10680 (73%)	20948 (83%)	1828 (7,2%)	478 (1,9%)	191 (0.8%)	258 (1.0%)	1564 (6.2%)
Ladakh	412	210	102 (49%)	356 (86%)	23 (5.6%)	1 (0.2%)	0 (0.0%)	0 (0.0%)	32 (7.8%)
Lakshadweep	22	12	7 (58%)	14 ( <mark>64</mark> %)	2 (9.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (27.3%)
Madhya Pradesh	183177	71333	42677 (60%)	144462 (79%)	5485 (3.0%)	9721 (5.3%)	1117 (0.6%)	1372 (0.7%)	21020 (11.5%)
Maharashtra	210754	92202	48313 (52%)	175859 (83%)	8785 (4.2%)	(3.2%)	1160 (0.6%)	3451 (1.6%)	14697 (7.0%)
Manipur	2623	1429	733 (51%)	1801 (69%)	74 (2.8%)	75 (2.9%)	6 (0.2%)	41 (1.6%)	626 (23.9%)
Meghalaya	4963	2587	1508 (58%)	3955 (80%)	186 (3.7%)	156 (3.1%)	33 (0.7%)	75 (1.5%)	558 (11.2%)
Mizoram	2930	1502	732 (49%)	1971 (67%)	48 (1.6%)	42 (1.4%)	8 (0.3%)	16 (0.5%)	845 (28.8%)
Nagaland	4693	2216	1594 (72%)	3886 (83%)	108 (2.3%)	165 (3.5%)	29 (0.6%)	29 (0.6%)	476 (10.1%)
Odisha	52279	29219	22586 (77%)	45619 (87%)	2738 (5.2%)	1144 (2.2%)	180 (0.3%)	429 (0.8%)	2169 (4.1%)
Puducherry	1565	1064	751 (71%)	1268 (81%)	116 (7.4%)	43 (2.7%)	22 (1.4%)	37 (2.4%)	79 (5.0%)
Punjab	58178	30789	17099 (56%)	46931 (81%)	2824 (4.9%)	1602 (2.8%)	285 (0.5%)	478 (0.8%)	6058 (10.4%)
Rajasthan	169311	82679	47932 (58%)	136017 (80%)	4767 (2.8%)	6836 (4.0%)	1020 (0.6%)	1179 (0.7%)	19492 (11.5%)
Sikkim	1229	636	461 (72%)	1089 (89%)	45 (3.7%)	10 (0.8%)	8 (0.7%)	11 (0.9%)	66 (5.4%)
Tamil Nadu	109772	64314	43362 (67%)	91102 (83%)	5365 (4.9%)	3279 (3.0%)	572 (0.5%)	2107 (1.9%)	7347 (6.7%)
Telangana	92069	37398	27594 (74%)	61740 (89%)	2392 (3.5%)	556 (0.8%)	331 (0.5%)	683 (1.0%)	3374 (4.9%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Tripura	2936	1976	1402 (71%)	2423 (83%)	173 (5.9%)	85 (2.9%)	18 (0.6%)	62 (2.1%)	175 (6.0%)
Uttar Pradesh	486310	201311	113119 (56%)	401680 (83%)	18409 (3.8%)	21627 (4.4%)	3287 (0.7%)	5427 (1.1%)	35880 (7.4%)
Uttarakhand	24504	10720	6024 (56%)	20510 (84%)	894 (3.6%)	925 (3.8%)	124 (0.5%)	363 (1.5%)	1688 (6.9%)
West Bengal	108497	69323	46625 (67%)	88348 (81%)	5417 (5.0%)	2937 (2.7%)	632 (0.6%)	1301 (1.2%)	9862 (9.1%)
India	2328338	1097843	672000 (61%)	1905920 (82%)	89823 (3.9%)	81306 (3.5%)	13781 (0.6%)	27169 (1.2%)	210339 (9.0%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup>	extracted as	on 12 <sup>th</sup> Februc	February 2021						

3.4 Treatment outcome of New TB patients notified in 2019 (Public Sector)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	497	255	134 (53%)	415 (84%)	24 (4.8%)	16 (3.2%)	0 (0.0%)	6 (1.2%)	36 (7.2%)
Andhra Pradesh	62768	41467	31641 (76%)	56184 (90%)	2705 (4.3%)	761 (1.2%)	191 (0.3%)	1051 (1.7%)	1876 (3.0%)
Arunachal Pradesh	2429	1131	(%87) (88%)	2041 (84%)	55 (2.3%)	175 (7.2%)	27 (1.1%)	53 (2,2%)	78 (3.2%)
Assam	37212	18647	12351 (66%)	31621 (85%)	1423 (3.8%)	947 (2.5%)	131 (0.4%)	330 (0.9%)	2760 (7.4%)
Bihar	67569	40611	24814 (61%)	52075 (77%)	1569 (2.3%)	2451 (3.6%)	323 (0.5%)	485 (0.7%)	10666 (15.8%)
Chandigarh	2944	1355	914 (67%)	2471 (84%)	89 (3.0%)	109 (3.7%)	18 (0.6%)	34 (1.2%)	223 (7.6%)
Chhattisgarh	28864	14190	10736 (76%)	24779 (86%)	1248 (4.3%)	457 (1.6%)	141 (0.5%)	270 (0.9%)	1969 (6.8%)
Dadra and Nagar Haveli and Daman and Diu	671	293	254 (87%)	618 (92%)	20 (3.0%)	17 (2.5%)	3 (0.4%)	4 (0.6%)	9 (1.3%)
Delhi	58001	25562	12980 (51%)	44558 (77%)	928 (1.6%)	2479 (4.3%)	330 (0.6%)	983 (1.7%)	8723 (15.0%)
Goa	1625	967	497 (51%)	1315 (81%)	58 (3.6%)	55 (3.4%)	10 (0.6%)	26 (1.6%)	161 (9.9%)
Gujarat	74246	37177	30445 (82%)	65006 (88%)	3642 (4.9%)	1483 (2.0%)	578 (0.8%)	1160 (1.6%)	2377 (3.2%)
Haryana	45235	27701	18627 (67%)	37354 (83%)	1768 (3.9%)	1172 (2.6%)	292 (0.6%)	236 (0.5%)	4413 (9.8%)
Himachal Pradesh	14371	0906	6115 (67%)	12959 (90%)	665 (4.6%)	193 (1.3%)	45 (0.3%)	159 (1,1%)	350 (2.4%)
Jammu & Kashmir	9298	4526	3189 (70%)	8186 (85%)	252 (2.6%)	135 (1.4%)	36 (0.4%)	56 (0.6%)	933 (9.7%)
Jharkhand	40475	23116	14120 (61%)	33344 (82%)	968 (2.4%)	756 (1.9%)	212 (0.5%)	200 (0.5%)	4995 (12.3%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Karnataka	60645	36418	25759 (71%)	49431 (82%)	4164 (6.9%)	2112 (3.5%)	395 (0.7%)	1149 (1.9%)	3394 (5.6%)
Kerala	20233	12052	9191 (76%)	16951 (84%)	1454 (7.2%)	349 (1.7%)	145 (0.7%)	180 (0.9%)	1154 (5.7%)
Ladakh	324	170	82 (48%)	272 (84%)	20 (6.2%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	31 (9.6%)
Lakshadweep	22	12	7 (58%)	14 (64%)	2 (9.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (27.3%)
Madhya Pradesh	127347	56789	35457 (62%)	106096 (83%)	3910 (3.1%)	4352 (3.4%)	727 (0.6%)	926 (0.7%)	11336 (8.9%)
Maharashtra	119739	27096	39133 (69%)	100671 (84%)	5170 (4.3%)	3457 (2.9%)	593 (0.5%)	2125 (1.8%)	7723 (6.4%)
Manipur	2020	1095	(833 (28%)	1409 (70%)	60 (3.0%)	47 (2.3%)	5 (0.2%)	30 (1.5%)	469 (23.2%)
Meghalaya	3887	2183	1335 (61%)	3084 (79%)	162 (4.2%)	108 (2.8%)	23 (0.6%)	60 (1.5%)	450 (11.6%)
Mizoram	2530	1265	(20%)	1763 (70%)	40 (1.6%)	35 (1.4%)	6 (0.2%)	12 (0.5%)	674 (26.6%)
Nagaland	3473	1756	1309 (75%)	2947 (85%)	65 (1.9%)	117 (3.4%)	21 (0.6%)	15 (0.4%)	308 (8.9%)
Odisha	44016	25366	19934 (79%)	38762 (88%)	2318 (5.3%)	869 (2.0%)	136 (0.3%)	330 (0.7%)	1601 (3.6%)
Puducherry	1344	878	634 (72%)	1104 (82%)	99 (7.4%)	31 (2.3%)	17 (1.3%)	32 (2.4%)	61 (4.5%)
Punjab	38908	22677	13894 (61%)	31708 (81%)	1628 (4.2%)	1134 (2.9%)	190 (0.5%)	321 (0.8%)	3927 (10.1%)
Rajasthan	101099	60039	38095 (63%)	84060 (83%)	3092 (3.1%)	3206 (3.2%)	484 (0.5%)	808 (0.8%)	9449 (9.3%)
Sikkim	1054	517	378 (73%)	940 (89%)	37 (3.5%)	6 (0.9%)	(%9'0) 9	11 (1.0%)	51 (4.8%)
Tamil Nadu	71438	47106	35134 (75%)	60433 (85%)	3931 (5.5%)	1920 (2.7%)	345 (0.5%)	1649 (2.3%)	3160 (4.4%)
Telangana	40962	24628	20573 (84%)	36216 (88%)	1507 (3.7%)	314 (0.8%)	169 (0.4%)	486 (1.2%)	2270 (5.5%)
Tripura	2635	1741	1248 (72%)	2200 (83%)	149 (5.7%)	67 (2.5%)	16 (0.6%)	53 (2.0%)	150 (5.7%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Uttar Pradesh	300235	159838	(%09) 26096	249603 (83%)	10180 (3.4%)	12539 (4.2%)	1837 (0.6%)	3236 (1.1%)	22840 (7,6%)
Uttarakhand	17026	7749	5036 (65%)	14420 (85%)	670 (3.9%)	565 (3.3%)	91 (0.5%)	264 (1.6%)	1016 (6.0%)
West Bengal	80940	54387	39779 (73%)	68200 (84%)	4124 (5.1%)	1971 (2.4%)	409 (0.5%)	850 (1.1%)	5386 (6.7%)
India	1486382	819820	552047 (67%)	1243210 (84%)	58196 (3.9%)	44409 (3.0%)	7952 (0.5%)	17590 (1.2%)	115025 (7.7%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup>	extracted as	on 12 <sup>th</sup> Febru	February 2021						

3.5 Treatment outcome of Previously Treated TB patients notified in 2019 (Public Sector)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	46	30	18 (60%)	40 (87%)	1 (2.2%)	1 (2.2%)	0 (0.0%)	1 (2.2%)	3 (6.5%)
Andhra Pradesh	9817	7476	5205 (70%)	8270 (84%)	511 (5.2%)	180 (1.8%)	70 (0.7%)	312 (3.2%)	474 (4.8%)
Arunachal Pradesh	389	233	156 (67%)	302 (78%)	9 (2.3%)	27 (6.9%)	8 (2.1%)	25 (6.4%)	18 (4.6%)
Assam	4933	2649	1529 (58%)	3985 (81%)	239 (4.8%)	176 (3.6%)	30 (0.6%)	86 (1.7%)	417 (8,5%)
Bihar	9086	6722	3406 (51%)	(%02) 9589	312 (3.2%)	393 (4.0%)	67 (0.7%)	143 (1.5%)	2035 (20.8%)
Chandigarh	423	293	196 (67%)	321 (76%)	23 (5.4%)	28 (6.6%)	6 (1.4%)	2 (0.5%)	43 (10.2%)
Chhattisgarh	3077	1804	1222 (68%)	2496 (81%)	169 (5.5%)	101 (3.3%)	35 (1.1%)	68 (2.2%)	208 (6.8%)
Dadra and Nagar Haveli and Daman and Diu	156	62	57 (72%)	136 (87%)	3 (1.9%)	6 (3.8%)	0 (0.0%)	4 (2.6%)	7 (4.5%)
Delhi	9937	6325	3316 (52%)	7348 (74%)	333 (3.4%)	608 (6.1%)	132 (1.3%)	378 (3.8%)	1138 (11.5%)
Goa	195	143	53 (37%)	141 (72%)	7 (3.6%)	16 (8.2%)	3 (1.5%)	9 (4.6%)	19 (9.7%)
Gujarat	24248	15527	10727 (69%)	19285 (80%)	1612 (6.6%)	666 (2.7%)	547 (2.3%)	1151 (4.7%)	987 (4.1%)
Haryana	7577	6201	3705 (60%)	5840 (77%)	411 (5.4%)	244 (3.2%)	133 (1.8%)	110 (1.5%)	839 (11.1%)
Himachal Pradesh	2096	1853	1228 (66%)	1820 ( <mark>8</mark> 7%)	127 (6.1%)	43 (2.1%)	11 (0.5%)	42 (2.0%)	53 (2.5%)
Jammu & Kashmir	1046	823	573 (70%)	893 (85%)	34 (3,3%)	24 (2.3%)	11 (1.1%)	18 (1,7%)	(%8'9) 99
Jharkhand	3368	2070	999 (48%)	2555 (76%)	113 (3.4%)	99 (2.9%)	31 (0.9%)	41 (1.2%)	529 (15.7%)
Karnataka	9339	7056	4338 (61%)	6883 (74%)	762 (8.2%)	578 (6.2%)	219 (2.3%)	298 (3.2%)	599 (6.4%)
Kerala	1635	1236	801 (65%)	1242 (76%)	129 (7.9%)	63 (3.9%)	33 (2.0%)	48 (2.9%)	120 (7.3%)
Ladakh	43	33	16 (48%)	40 (93%)	2 (4.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (2.3%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Lakshadweep	0	0	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	15639	10002	5379 (54%)	12142 (78%)	674 (4.3%)	639 (4,1%)	186 (1.2%)	316 (2.0%)	1682 (10.8%)
Maharashtra	17359	10286	(%65) (609)	13467 (78%)	947 (5.5%)	968 (5.6%)	225 (1.3%)	503 (2.9%)	1249 (7.2%)
Manipur	230	151	77 (51%)	154 (67%)	10 (4.3%)	8 (3.5%)	1 (0.4%)	9 (3.9%)	48 (20.9%)
Meghalaya	442	301	165 (55%)	341 ( <mark>77</mark> %)	21 (4.8%)	21 (4.8%)	8 (1.8%)	15 (3.4%)	36 (8.1%)
Mizoram	346	208	87 (42%)	182 (53%)	8 (2.3%)	6 (1.7%)	2 (0.6%)	2 (0.6%)	146 (42.2%)
Nagaland	512	377	260 (69%)	416 (81%)	17 (3.3%)	16 (3.1%)	8 (1.6%)	8 (1.6%)	47 (9.2%)
Odisha	4423	3046	2122 (70%)	3692 (83%)	293 (6.6%)	153 (3.5%)	35 (0.8%)	79 (1.8%)	171 (3.9%)
Puducherry	215	184	116 (63%)	162 (75%)	17 (7.9%)	12 (5.6%)	5 (2.3%)	4 (1.9%)	15 (7.0%)
Punjab	5936	4916	2839 (58%)	4582 (77%)	309 (5.2%)	242 (4.1%)	75 (1.3%)	124 (2.1%)	604 (10.2%)
Rajasthan	16128	13196	7303 (55%)	11951 (74%)	793 (4.9%)	605 (3.8%)	196 (1.2%)	227 (1.4%)	2356 (14.6%)
Sikkim	149	112	83 (74%)	126 (85%)	8 (5.4%)	1 (0.7%)	2 (1.3%)	0 (0.0%)	12 (8.1%)
Tamil Nadu	10112	8324	5405 (65%)	7669 (76%)	725 (7.2%)	586 (5.8%)	171 (1.7%)	387 (3.8%)	574 (5.7%)
Telangana	6363	4848	3303 (68%)	5257 (83%)	341 (5.4%)	144 (2.3%)	106 (1.7%)	162 (2.5%)	353 (5.5%)
Tripura	289	226	148 (65%)	215 (74%)	24 (8.3%)	17 (5.9%)	2 (0.7%)	9 (3.1%)	22 (7.6%)
Uttar Pradesh	43013	28731	14950 (52%)	32981 (77%)	1914 (4.4%)	1937 (4.5%)	455 (1.1%)	1326 (3.1%)	4400 (10.2%)
Uttarakhand	2205	1456	847 (58%)	1765 (80%)	116 (5.3%)	60 (2.7%)	24 (1.1%)	81 (3.7%)	159 (7.2%)
West Bengal	10792	8471	5297 (63%)	8331 (77%)	633 (5.9%)	459 (4.3%)	175 (1.6%)	302 (2.8%)	892 (8.3%)
India	222284	155388	92023 (59%)	171886 (77%)	11647 (5.2%)	9127 (4.1%)	3012 (1.4%)	6290 (2.8%)	20322 (9.1%)

Data Source: Nikshay – Data extracted as on  $12^{\text{th}}$  February 2021

3.6 Treatment outcome of TB-HIV patients notified in 2019 (Public)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	5	3	(%0) 0	5 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Andhra Pradesh	6363	4319	2577 (60%)	5084 (80%)	641 (10.1%)	153 (2.4%)	26 (0.4%)	104 (1.6%)	355 (5.6%)
Arunachal Pradesh	9	2	(%0) 0	4 (67%)	1 (16.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (16.7%)
Assam	331	147	59 (40%)	221 (67%)	30 (9.1%)	21 (6.3%)	0 (0.0%)	5 (1.5%)	54 (16,3%)
Bihar	1479	840	332 (40%)	885 (60%)	66.7%)	71 (4.8%)	4 (0.3%)	6 (0.4%)	414 (28.0%)
Chandigarh	71	18	2 (11%)	18 (25%)	7 (9.9%)	7 (9.9%)	0 (0.0%)	6 (8.5%)	33 (46.5%)
Chhattisgarh	507	314	142 (45%)	363 (72%)	75 (14.8%)	9 (1.8%)	3 (0.6%)	7 (1.4%)	50 (9,9%)
Dadra and Nagar Haveli and Daman and Diu	7	4	1 (25%)	4 (57%)	0 (0.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)	2 (28.6%)
Delhi	938	411	117 (28%)	562 (60%)	55 (5.9%)	84 (9.0%)	(%9'0) 9	15 (1.6%)	216 (23.0%)
Goa	09	31	6 (19%)	41 (68%)	2 (3.3%)	3 (5.0%)	0 (0.0%)	0 (0.0%)	14 (23.3%)
Gujarat	3301	1543	729 (47%)	2276 (69%)	506 (15.3%)	234 (7.1%)	32 (1.0%)	29 (0.9%)	224 (6.8%)
Haryana	819	384	237 (62%)	583 (71%)	71 (8.7%)	25 (3.1%)	4 (0.5%)	9 (1.1%)	127 (15.5%)
Himachal Pradesh	183	105	(%59) 89	148 (81%)	23 (12.6%)	4 (2.2%)	0 (0.0%)	2 (1.1%)	6 (3.3%)
Jammu & Kashmir	52	19	10 (53%)	34 (62%)	8 (14.5%)	1 (1.8%)	1 (1.8%)	1 (1.8%)	10 (18,2%)
Jharkhand	273	130	56 (43%)	188 (69%)	12 (4.4%)	10 (3.7%)	2 (0.7%)	2 (0.7%)	59 (21,6%)
Karnataka	5444	3077	1637 (53%)	3790 (70%)	861 (15.8%)	326 (6.0%)	33 (0.6%)	90 (1.7%)	344 (6.3%)
Kerala	261	107	50 (47%)	155 (59%)	45 (17.2%)	12 (4.6%)	1 (0.4%)	4 (1.5%)	44 (16.9%)
Ladakh	2	1	1 (100%)	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Lakshadweep	#N/A	#N/A	NA	NA	NA	NA	NA	NA	NA

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	<b>Death</b> Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Madhya Pradesh	1446	691	266 (38%)	1036 (72%)	135 (9.3%)	49 (3.4%)	11 (0.8%)	10 (0.7%)	205 (14.2%)
Maharashtra	9222	3060	1363 (45%)	5148 (66%)	1000 (12.9%)	391 (5.0%)	40 (0.5%)	81 (1.0%)	1116 (14.4%)
Manipur	83	48	26 (54%)	53 (64%)	9 (10.8%)	1 (1.2%)	0 (0.0%)	2 (2.4%)	18 (21.7%)
Meghalaya	119	54	29 (54%)	86 (72%)	13 (10.9%)	11 (9.2%)	1 (0.8%)	0 (0.0%)	8 (6.7%)
Mizoram	398	140	40 (29%)	112 (28%)	6 (1.5%)	4 (1.0%)	2 (0.5%)	1 (0.3%)	273 (68.6%)
Nagaland	308	115	54 (47%)	234 (76%)	10 (3.2%)	5 (1.6%)	1 (0.3%)	5 (1.6%)	53 (17.2%)
Odisha	720	428	181 (42%)	551 (77%)	88 (12.2%)	24 (3.3%)	3 (0.4%)	11 (1.5%)	43 (6.0%)
Puducherry	40	21	6 (29%)	19 (48%)	8 (20.0%)	5 (12.5%)	1 (2.5%)	1 (2.5%)	6 (15.0%)
Punjab	1006	589	208 (35%)	290 (59%)	101 (10.0%)	52 (5.2%)	7 (0.7%)	11 (1.1%)	245 (24.4%)
Rajasthan	1422	877	385 (44%)	(%89) 896	162 (11.4%)	61 (4.3%)	7 (0.5%)	6 (0.6%)	220 (15.5%)
Sikkim	9	3	(%0) 0	4 (67%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (16.7%)	1 (16.7%)
Tamil Nadu	3469	2060	1034 (50%)	2396 (69%)	502 (14.5%)	147 (4.2%)	15 (0.4%)	63 (1.8%)	346 (10.0%)
Telangana	2075	1486	915 (62%)	1617 (78%)	257 (12.4%)	11 (0.5%)	15 (0.7%)	32 (1.5%)	143 (6.9%)
Tripura	31	18	8 (44%)	23 (74%)	4 (12.9%)	2 (6.5%)	0 (0.0%)	2 (6.5%)	0 (0.0%)
Uttar Pradesh	3068	1433	419 (29%)	1842 (60%)	309 (10.1%)	176 (5.7%)	18 (0.6%)	36 (1.2%)	687 (22.4%)
Uttarakhand	268	63	32 (51%)	205 (76%)	21 (7.8%)	14 (5.2%)	2 (0.7%)	2 (0.7%)	24 (9.0%)
West Bengal	1223	806	308 (38%)	740 (61%)	152 (12.4%)	42 (3.4%)	10 (0.8%)	11 (0.9%)	268 (21.9%)
India	43563	23347	11298 (48%)	29982 (69%)	5213 (12.0%)	1956 (4.5%)	245 (0.6%)	558 (1.3%)	5609 (12.9%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup>	tracted as on	ı 12 <sup>th</sup> Febru	February 2021						

3.7 Treatment outcome of TB-HIV patients notified in 2019 (Private)

State	TB patients Notified	Micro Conf TB	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	152	43	30 (70%)	141 (93%)	6 (3.9%)	1 (0.7%)	1 (0.7%)	0 (0.0%)	3 (2.0%)
Arunachal Pradesh	0	0	NA	NA	NA	NA	NA	NA	NA
Assam	11	4	(%0) 0	6 (82%)	0 (0.0%)	1 (9.1%)	0 (0.0%)	0 (0.0%)	1 (9.1%)
Bihar	89	13	8 (62%)	51 (75%)	3 (4.4%)	3 (4.4%)	1 (1.5%)	2 (2.9%)	8 (11.8%)
Chandigarh	0	0	NA	NA	NA	NA	NA	NA	NA
Chhattisgarh	37	10	3 (30%)	32 (86%)	1 (2.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (10.8%)
Dadra and Nagar Haveli and Daman and Diu	0	0	NA	NA	NA	NA	NA	NA	NA
Delhi	84	27	(%0)0	(85%)	5 (6.0%)	2 (2.4%)	0 (0.0%)	1 (1.2%)	7 (8.3%)
Goa	2	1	(%0)0	(%0) 0	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)
Gujarat	181	29	4 (14%)	154 (85%)	18 (9.9%)	1 (0.6%)	1 (0.6%)	2 (1.1%)	5 (2.8%)
Haryana	67	18	8 (44%)	43 (64%)	2 (3.0%)	8 (11.9%)	0 (0.0%)	0 (0.0%)	14 (20.9%)
Himachal Pradesh	2	2	(%0) 0	1 (50%)	1 (5 <mark>0</mark> .0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Jammu & Kashmir	0	0	NA	NA	NA	NA	NA	NA	NA
Jharkhand	14	1	1 (100%)	9 (64%)	1 (7.1%)	0 (0.0%)	0 (0.0%)	1 (7.1%)	3 (21.4%)
Karnataka	122	37	7 (19%)	95 (78%)	13 (10.7%)	4 (3.3%)	0 (0.0%)	1 (0.8%)	9 (7.4%)
Kerala	15	5	2 (40%)	11 (73%)	1 (6.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (20.0%)
Ladakh	0	0	NA	NA	NA	NA	NA	NA	NA
Lakshadweep	0	0	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	93	17	4 (24%)	61 (66%)	4 (4.3%)	8 (8.6%)	0 (0.0%)	3 (3.2%)	17 (18.3%)
Maharashtra	299	212	30 (14%)	499 (75%)	70 (10.5%)	41 (6.1%)	3 (0.4%)	4 (0.6%)	50 (7.5%)
Manipur	28	19	2 (11%)	21 (75%)	1 (3.6%)	3 (10.7%)	0 (0.0%)	0 (0.0%)	3 (10.7%)
Meghalaya	4	1	0 (0%)	3 (75%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
Mizoram	4	3	0 (0%)	0 (0%)	0 (0.0%)	1 (25.0%)	0 (0.0%)	0 (0.0%)	3 (75.0%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	<b>Death</b> Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Nagaland	11	1	(%0) 0	6 (55%)	1 (9.1%)	3 (27.3%)	0 (0.0%)	0 (0.0%)	1 (9.1%)
Odisha	6	3	1 (33%)	4 (44%)	3 (33.3%)	0 (0.0%)	0 (0.0%)	1 (11,1%)	1 (11.1%)
Puducherry	0	0	NA	NA	NA	NA	NA	NA	NA
Punjab	26	19	2 (11%)	39 (70%)	9 (16.1%)	2 (3.6%)	0 (0.0%)	0 (0.0%)	6 (10.7%)
Rajasthan	120	24	3 (13%)	90 (75%)	2 (1.7%)	11 (9.2%)	3 (2.5%)	0 (0.0%)	14 (11.7%)
Sikkim	0	0	NA	NA	NA	NA	NA	NA	NA
Tamil Nadu	29	25	4 (16%)	42 (71 <mark>%</mark> )	5 (8.5%)	3 (5.1%)	1 (1.7%)	0 (0.0%)	8 (13.6%)
Telangana	91	47	19 (40%)	77 (85%)	8 (8.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	(%9'9) 9
Tripura	0	0	NA	NA	NA	NA	NA	NA	NA
Uttar Pradesh	157	28	3 (11%)	127 (81%)	14 (8.9%)	7 (4.5%)	0 (0.0%)	3 (1.9%)	6 (3.8%)
Uttarakhand	4	0	0 (NA)	3 (75%)	0 (0.0%)	1 (25.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
West Bengal	42	15	5 (33%)	33 (79%)	7 (16.7%)	0 (0.0%)	0 (0.0%)	1 (2.4%)	1 (2.4%)
India	2100	604	136 (23%)	1620 (77%)	175 (8.3%)	101 (4.8%)	10 (0.5%)	19 (0.9%)	175 (8.3%)

Data Source: Nikshay – Data extracted as on  $12^{th}$  February 2021

3.8 Treatment outcome of TB-HIV patients notified in 2019 (Total)

State	TB patients	Micro Conf	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure	% Regimen	% Not evaluated
Andaman & Nicobar Islands	5	3	(%0) 0	5 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Andhra Pradesh	6515	4362	2607 (60%)	5225 (80%)	647 (9.9%)	154 (2.4%)	27 (0.4%)	104 (1.6%)	358 (5.5%)
Arunachal Pradesh	9	2	(%0) 0	4 (67%)	1 (16.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (16.7%)
Assam	342	151	59 (39%)	230 (67%)	30 (8,8%)	22 (6.4%)	0 (0.0%)	5 (1.5%)	55 (16.1%)
Bihar	1547	853	340 (40%)	936 (61%)	102 (6.6%)	74 (4.8%)	5 (0.3%)	8 (0.5%)	422 (27.3%)
Chandigarh	71	18	2 (11%)	18 (25%)	7 (9.9%)	7 (9.9%)	0 (0.0%)	6 (8.5%)	33 (46.5%)
Chhattisgarh	544	324	145 (45%)	395 (73%)	76 (14.0%)	9 (1.7%)	3 (0.6%)	7 (1.3%)	54 (9.9%)
Dadra and Nagar Haveli and Daman and Diu	7	4	1 (25%)	4 (57%)	0 (0.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)	2 (28.6%)
Delhi	1022	438	117 (27%)	631 (62%)	60 (5.9%)	86 (8.4%)	(%9'0)	16 (1.6%)	223 (21.8%)
Goa	62	32	6 (19%)	41 (66%)	2 (3.2%)	4 (6.5%)	0 (0.0%)	0 (0.0%)	15 (24.2%)
Gujarat	3482	1572	733 (47%)	2430 (70%)	524 (15.0%)	235 (6.7%)	33 (0.9%)	31 (0.9%)	229 (6.6%)
Haryana	988	402	245 (61%)	626 (71%)	73 (8.2%)	33 (3.7%)	4 (0.5%)	9 (1.0%)	141 (15.9%)
Himachal Pradesh	185	107	68 (64%)	149 (81%)	24 (13.0%)	4 (2.2%)	0 (0.0%)	2 (1.1%)	6 (3.2%)
Jammu & Kashmir	52	19	10 (53%)	34 (62%)	8 (14.5%)	1 (1.8%)	1 (1.8%)	1 (1.8%)	10 (18,2%)
Jharkhand	287	131	57 (44%)	197 (69%)	13 (4.5%)	10 (3.5%)	2 (0.7%)	3 (1.0%)	62 (21.6%)
Karnataka	5566	3114	1644 (53%)	3885 (70%)	874 (15.7%)	330 (5.9%)	33 (0.6%)	91 (1.6%)	353 (6.3%)
Kerala	276	112	52 (46%)	166 (60%)	46 (16.7%)	12 (4.3%)	1 (0,4%)	4 (1.4%)	47 (17.0%)
Ladakh	2	1	1 (100%)	2 (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

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	<b>Death</b> Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Madhya Pradesh	1539	208	270 (38%)	1097 (71%)	139 (9.0%)	57 (3.7%)	11 (0.7%)	13 (0.8%)	222 (14.4%)
Maharashtra	8443	3272	1393 (43%)	5647 (67%)	1070 (12.7%)	432 (5.1%)	43 (0.5%)	85 (1.0%)	1166 (13.8%)
Manipur	111	29	28 (42%)	74 (67%)	10 (9.0%)	4 (3.6%)	0 (0.0%)	2 (1.8%)	21 (18,9%)
Meghalaya	123	55	29 (53%)	89 (72 <mark>%</mark> )	13 (10.6%)	11 (8.9%)	1 (0.8%)	0 (0.0%)	9 (7.3%)
Mizoram	402	143	40 (28%)	112 (28%)	6 (1.5%)	5 (1.2%)	2 (0.5%)	1 (0.2%)	276 (68.7%)
Nagaland	319	116	54 (47%)	240 (75%)	11 (3.4%)	8 (2.5%)	1 (0.3%)	5 (1.6%)	54 (16,9%)
Odisha	729	431	182 (42%)	555 (76%)	91 (12.5%)	24 (3.3%)	3 (0.4%)	12 (1.6%)	44 (6.0%)
Puducherry	40	21	6 (29%)	19 (48%)	8 (2 <mark>0</mark> .0%)	5 (12.5%)	1 (2.5%)	1 (2.5%)	6 (15.0%)
Punjab	1062	608	210 (35%)	629 (59%)	110 (10.4%)	54 (5.1%)	7 (0.7%)	11 (1.0%)	251 (23.6%)
Rajasthan	1542	901	388 (43%)	1053 (68%)	164 (10.6%)	72 (4.7%)	10 (0.6%)	6 (0.6%)	234 (15.2%)
Sikkim	9	3	(%0) 0	4 (67%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (16.7%)	1 (16.7%)
Tamil Nadu	3528	2085	1038 (50%)	2438 (69%)	507 (14.4%)	150 (4.3%)	16 (0.5%)	63 (1.8%)	354 (10.0%)
Telangana	2166	1533	934 (61%)	1694 (78%)	265 (12.2%)	11 (0.5%)	15 (0.7%)	32 (1.5%)	149 (6.9%)
Tripura	31	18	8 (44%)	23 (74%)	4 (12.9%)	2 (6.5%)	0 (0.0%)	2 (6.5%)	0 (0.0%)
Uttar Pradesh	3225	1461	422 (29%)	1969 (61%)	323 (10.0%)	183 (5.7%)	18 (0.6%)	39 (1.2%)	693 (21.5%)
Uttarakhand	272	63	32 (51%)	208 (76%)	21 (7.7%)	15 (5.5%)	2 (0.7%)	2 (0.7%)	24 (8.8%)
West Bengal	1265	821	313 (38%)	773 (61%)	159 (12.6%)	42 (3.3%)	10 (0.8%)	12 (0.9%)	269 (21.3%)
India	45663	23951	11434 (48%)	31602 (69%)	5388 (11.8%)	2057 (4.5%)	255 (0.6%)	577 (1.3%)	5784 (12.7%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> February 2021	tracted as or	n 12 <sup>th</sup> Febru	uary 2021						

3.9 Treatment outcome of Paediatric TB patients notified in 2019 (Public)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	23	4	2 (50%)	22 (96%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (4.3%)
Andhra Pradesh	2426	585	445 (76%)	2309 (95%)	26 (1.1%)	12 (0.5%)	4 (0.2%)	8 (0.3%)	67 (2.8%)
Arunachal Pradesh	388	95	71 (75%)	339 (87%)	3 (0.8%)	24 (6.2%)	4 (1.0%)	8 (2.1%)	10 (2.6%)
Assam	1502	448	264 (59%)	1311 (87%)	40 (2.7%)	28 (1.9%)	2 (0.1%)	5 (0.3%)	116 (7.7%)
Bihar	4890	1415	891 (63%)	3800 (78%)	54 (1.1%)	125 (2.6%)	18 (0.4%)	26 (0.5%)	867 (17.7%)
Chandigarh	247	73	47 (64%)	221 (89%)	5 (2.0%)	5 (2.0%)	2 (0.8%)	1 (0.4%)	13 (5.3%)
Chhattisgarh	1419	246	202 (82%)	1270 (89%)	30 (2.1%)	12 (0.8%)	3 (0.2%)	3 (0.2%)	101 (7.1%)
Dadra and Nagar Haveli and Daman and Diu	47	9	5 (83%)	47 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Delhi	8082	2450	639 (38%)	6552 (81%)	52 (0.6%)	148 (1.8%)	37 (0.5%)	95 (1.2%)	1198 (14.8%)
Goa	64	19	9 (47%)	27 (89%)	0 (0.0%)	2 (3.1%)	0 (0.0%)	0 (0.0%)	5 (7.8%)
Gujarat	4285	774	622 (80%)	(%86) 5968	134 (3.1%)	31 (0.7%)	22 (0.5%)	32 (0.7%)	101 (2.4%)
Haryana	2997	1097	765 (70%)	2625 (88%)	39 (1.3%)	46 (1.5%)	9 (0.3%)	14 (0.5%)	264 (8.8%)
Himachal Pradesh	629	229	150 (66%)	618 (94%)	11 (1.7%)	8 (1.2%)	0 (0.0%)	3 (0.5%)	19 (2.9%)
Jammu & Kashmir	712	186	141 (76%)	644 (90%)	5 (0.7%)	6 (0.8%)	(%8'0) 9	4 (0.6%)	47 (6.6%)
Jharkhand	1752	546	330 (60%)	1446 (83%)	21 (1.2%)	28 (1.6%)	6 (0.3%)	7 (0.4%)	244 (13.9%)
Karnataka	3451	604	427 (71%)	3131 (91%)	63 (1.8%)	66 (1.9%)	6 (0.2%)	16 (0.5%)	169 (4.9%)
Kerala	1073	106	90 (85%)	991 (9 <mark>2</mark> %)	6 (0.6%)	28 (2.6%)	0 (0.0%)	(%9'0) 9	42 (3.9%)
Ladakh	19	3	0 (0%)	15 (79%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (21.1%)
Lakshadweep	2	1	1 (100%)	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Madhya Pradesh	12759	1431	1034 (72%)	11486 (90%)	139 (1.1%)	293 (2.3%)	50 (0.4%)	25 (0.2%)	766 (6.0%)
Maharashtra	7591	1880	979 (52%)	6735 (89%)	140 (1.8%)	128 (1.7%)	26 (0.3%)	118 (1.6%)	444 (5.8%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	<b>Death</b> Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Manipur	93	56	16 (55%)	72 (77%)	0 (0.0%)	1 (1.1%)	1 (1.1%)	0 (0.0%)	19 (20.4%)
Meghalaya	277	26	54 (56%)	239 (86%)	5 (1.8%)	3 (1.1%)	4 (1.4%)	1 (0.4%)	25 (9.0%)
Mizoram	214	52	25 (48%)	164 (77%)	0 (0.0%)	3 (1.4%)	0 (0.0%)	1 (0.5%)	46 (21.5%)
Nagaland	290	82	(%88) 89	258 (89%)	4 (1.4%)	6 (2.1%)	0 (0.0%)	1 (0.3%)	21 (7.2%)
Odisha	2090	542	434 (80%)	1936 (93%)	29 (1.4%)	33 (1.6%)	6 (0.3%)	6 (0.3%)	80 (3.8%)
Puducherry	26	18	12 (67%)	52 (93%)	0 (0.0%)	1 (1.8%)	1 (1.8%)	0 (0.0%)	2 (3.6%)
Punjab	2722	985	572 (58%)	2405 (88%)	33 (1.2%)	43 (1.6%)	10 (0.4%)	11 (0.4%)	220 (8.1%)
Rajasthan	5484	1471	951 (65%)	4739 (86%)	90 (1.6%)	135 (2.5%)	20 (0.4%)	26 (0.5%)	474 (8.6%)
Sikkim	53	13	10 (77%)	53 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Tamil Nadu	2559	435	280 (64%)	2391 (93%)	33 (1.3%)	25 (1.0%)	5 (0.2%)	16 (0.6%)	89 (3.5%)
Telangana	1678	521	484 (93%)	1560 (93%)	22 (1.3%)	5 (0.3%)	2 (0.1%)	1 (0.1%)	88 (5.2%)
Tripura	47	8	8 (100%)	43 (91%)	0 (0.0%)	3 (6.4%)	0 (0.0%)	0 (0.0%)	1 (2.1%)
Uttar Pradesh	18222	4849	2766 (57%)	15834 (87%)	250 (1.4%)	531 (2,9%)	71 (0.4%)	110 (0.6%)	1426 (7.8%)
Uttarakhand	626	212	131 (62%)	873 (89%)	20 (2.0%)	17 (1.7%)	4 (0.4%)	6 (0.9%)	56 (5.7%)
West Bengal	2826	923	590 (64%)	2442 (86%)	82 (2.9%)	44 (1.6%)	10 (0.4%)	19 (0.7%)	229 (8.1%)
India	91978	22435	13815 (62%)	80647 (88%)	1336 (1.5%)	1840 (2.0%)	329 (0.4%)	572 (0.6%)	7254 (7.9%)

Data Source: Nikshay - Data extracted as on 12th February 2021

3.10 Treatment outcome of Paediatric TB patients notified in 2019 (Private)

State	TB patients Notified	Micro Conf TB	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	1328	89	38 (43%)	1282 (97%)	2 (0.2%)	18 (1.4%)	1 (0.1%)	1 (0.1%)	24 (1.8%)
Arunachal Pradesh	4	0	NA	2 (50%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)
Assam	223	19	3 (16%)	160 (72%)	2 (0.9%)	7 (3.1%)	2 (0.9%)	0 (0.0%)	52 (23.3%)
Bihar	8271	281	80 (28%)	6502 (79%)	63 (0.8%)	219 (2.6%)	37 (0.4%)	13 (0.2%)	1437 (17.4%)
Chandigarh	6	4	1 (25%)	4 (44%)	0 (0.0%)	1 (11.1%)	0 (0.0%)	0 (0.0%)	4 (44.4%)
Chhattisgarh	855	66	31 (47%)	729 (85%)	7 (0.8%)	14 (1.6%)	2 (0.2%)	3 (0.4%)	100 (11.7%)
Dadra and Nagar Haveli and Daman and Diu	11	2	(%0) 0	10 (91%)	1 (9.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Delhi	1595	350	6 (2%)	1162 (73%)	21 (1.3%)	75 (4.7%)	3 (0.2%)	6 (0.4%)	328 (20.6%)
Goa	7	1	(%0) 0	5 (71%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (28.6%)
Gujarat	4390	172	40 (23%)	3997 (91%)	43 (1.0%)	132 (3.0%)	11 (0.3%)	11 (0.3%)	196 (4.5%)
Haryana	1048	193	100 (52%)	813 (78%)	14 (1.3%)	59 (5.6%)	2 (0.2%)	6 (0.6%)	154 (14.7%)
Himachal Pradesh	70	7	11 (157%)	62 (89%)	0 (0.0%)	2 (2.9%)	0 (0.0%)	1 (1.4%)	5 (7.1%)
Jammu & Kashmir	79	7	3 (43%)	73 (92%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	(%9'L) 9
Jharkhand	1447	83	12 (14%)	930 (64%)	6 (0.4%)	78 (5.4%)	1 (0.1%)	0 (0.0%)	432 (29.9%)
Karnataka	1338	158	29 (18%)	1202 (90%)	5 (0.4%)	13 (1.0%)	1 (0.1%)	1 (0.1%)	116 (8.7%)
Kerala	407	38	12 (32%)	366 (90%)	4 (1.0%)	6 (1.5%)	2 (0.5%)	1 (0.2%)	28 (6.9%)
Ladakh	3	1	0 (0%)	3 (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	5020	213	113 (53%)	3987 (79%)	26 (0.5%)	423 (8.4%)	26 (0.5%)	6 (0.1%)	552 (11.0%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	<b>Death</b> Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Maharashtra	5437	1357	165 (12%)	4741 (87%)	49 (0.9%)	124 (2.3%)	21 (0.4%)	44 (0.8%)	458 (8.4%)
Manipur	25	2	(%0) 0	13 (52%)	0 (0.0%)	1 (4.0%)	0 (0.0%)	0 (0.0%)	11 (44.0%)
Meghalaya	150	12	1 (8%)	121 (81%)	2 (1.3%)	6 (4.0%)	0 (0.0%)	0 (0.0%)	21 (14.0%)
Mizoram	3	1	1 (100%)	2 (67%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (33,3%)
Nagaland	48	3	(%0) 0	34 (71%)	3 (6.3%)	4 (8.3%)	0 (0.0%)	1 (2.1%)	6 (12.5%)
Odisha	329	24	(%8£) 6	285 (87%)	2 (0.6%)	15 (4.6%)	0 (0.0%)	1 (0.3%)	26 (7.9%)
Puducherry	0	0	NA	NA	NA	NA	NA	NA	NA
Punjab	774	138	17 (12%)	677 (87%)	7 (0.9%)	9 (1.2%)	1 (0.1%)	3 (0.4%)	(%6'6) 22
Rajasthan	5054	301	351 (117%)	4028 (80%)	12 (0.2%)	285 (5.6%)	129 (2.6%)	5 (0.1%)	595 (11.8%)
Sikkim	2	0	NA	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Tamil Nadu	3312	259	339 (131%)	3012 (91%)	8 (0.2%)	39 (1.2%)	5 (0.2%)	2 (0.1%)	246 (7.4%)
Telangana	869	235	112 (48%)	657 (94%)	14 (2.0%)	1 (0.1%)	0 (0.0%)	0 (0.0%)	26 (3.7%)
Tripura	1	0	NA	1 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Uttar Pradesh	13913	552	194 (35%)	12394 (89%)	161 (1.2%)	611 (4,4%)	88 (0.6%)	34 (0.2%)	625 (4.5%)
Uttarakhand	366	85	12 (14%)	315 (86%)	1 (0.3%)	14 (3.8%)	0 (0.0%)	2 (0.5%)	34 (9.3%)
West Bengal	099	137	26 (19%)	488 (74%)	11 (1.7%)	22 (3.3%)	1 (0.2%)	4 (0.6%)	134 (20.3%)
India	56877	4793	1707 (36%)	48059 (84%)	464 (0.8%)	2178 (3.8%)	333 (0.6%)	145 (0.3%)	5698 (10.0%)

Data Source: Nikshay – Data extracted as on 12th February 2021

3.11 Treatment outcome of Paediatric TB patients notified in 2019 (Total)

Andamana & Nicobar Islands         23         4         2 (50%)         22 (96%)         0 (0.0%)	State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
a Pradesh         3754         674         483 (72%)         3591 (96%)         28 (0.7%)         30 (0.8%)         5 (0.1%)           chal Pradesh         392         95         72 (76%)         341 (87%)         3 (0.8%)         24 (6.1%)         4 (1.0%)           n         1175         467         267 (57%)         1471 (85%)         42 (2.4%)         35 (20%)         4 (0.2%)           n         13161         1696         971 (57%)         10302 (78%)         0.09%)         12.6%         4 (0.2%)           nsigarh         256         77         48 (62%)         25 (88%)         5 (2.0%)         6 (2.3%)         2 (0.0%)           n and Nagar Haveli and         58         8         5 (63%)         57 (98%)         11 (1.7%)         0 (0.0%)         0 (0.0%)           n and Diu         2274         312         233 (75%)         77 (48%)         73 (0.8%)         1 (1.0%)         1 (0.0%)         0 (0.0%)           n and Diu         2274         312         2463%)         77 (48%)         73 (0.8%)         1 (1.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1 (0.0%)         1	Andaman & Nicobar Islands	23	4	2 (50%)	22 (96%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (4.3%)
chal Pradesh 392 95 72 (76%) 341 (87%) 3 (0.8%) 24 (6.1%) 4 (1.0%) (1.0%) 1.175 467 267 (57%) 1471 (85%) 42 (2.4%) 35 (2.0%) 4 (0.2%) 1.181 1696 971 (57%) 1471 (85%) 170 (2.6%) (2.6%) (2.6%) 1.191 13161 1696 971 (57%) 1302 (78%) (1.0.9%) (2.6%) (2.6%) (2.6%) 277 48 (62%) 225 (88%) 5 (2.0%) 6 (2.3%) 2 (0.8%) 2 (0.0%) 1.192 1312 233 (75%) 1999 (88%) 37 (1.6%) 26 (1.1%) 5 (0.2%) 1.181	Andhra Pradesh	3754	674	483 (72%)	3591 (96%)	28 (0.7%)	30 (0.8%)	5 (0.1%)	9 (0.2%)	91 (2.4%)
1725   467   267 (57%)   1471 (85%)   42 (2.4%)   35 (2.0%)   4 (0.2%)   13161   1696   971 (57%)   10302 (78%)   117   344   55 (0.4%)   118ahh   2274   312   233 (75%)   1999 (88%)   37 (1.6%)   2 (1.1%)   5 (0.2%)   10302 (78%)   117   344   5 (0.2%)   2 (0.0	Arunachal Pradesh	392	95	72 (76%)	341 (87%)	3 (0.8%)	24 (6.1%)	4 (1.0%)	8 (2.0%)	12 (3.1%)
tigarh         13161         1696         971 (57%)         10302 (78%)         117         344         55 (0.4%)           tigarh         256         77         48 (62%)         225 (88%)         5 (2.0%)         6 (2.3%)         2 (0.8%)           tigarh         2274         312         233 (75%)         1999 (88%)         37 (1.6%)         2 (1.1%)         5 (0.2%)           and Nagar Haveli and         58         8         5 (63%)         5 (98%)         1 (1.7%)         0 (0.0%)         0 (0.0%)           and Diu         58         8         5 (63%)         5 (98%)         1 (1.7%)         0 (0.0%)         0 (0.0%)           and Diu         58         8         5 (63%)         5 (98%)         1 (1.7%)         0 (0.0%)         0 (0.0%)           and Diu         58         8         5 (63%)         7 714 (80%)         7 3 (0.8%)         4 0 (0.4%)         1 (0.4%)           and         71         20         9 (45%)         7 714 (80%)         7 3 (0.8%)         1 (0.4%)         1 (0.0%)           and         4045         1290         865 (67%)         7 962 (92%)         7 (0.8%)         1 1 (0.4%)         1 1 (0.6%)         1 1 (0.6%)         1 1 (0.6%)         1 1 (0.6%)         1 1 (0.6%	Assam	1725	467	267 (57%)	1471 (85%)	42 (2.4%)	35 (2.0%)	4 (0.2%)	5 (0.3%)	168 (9.7%)
tigarth         256         77         48 (62%)         225 (88%)         5 (2.0%)         6 (2.3%)         2 (0.8%)           tisgarth         2274         312         233 (75%)         1999 (88%)         3 7 (1.6%)         6 (2.1%)         5 (0.0%)           and Nagar Haveli and Aspar Haveli and Diu         58         8         5 (63%)         5 (798%)         1 (1.7%)         0 (0.0%)         0 (0.0%)           and Diu         9677         2800         945 (34%)         7714 (80%)         73 (0.8%)         22.3%         40 (0.4%)           at         71         20         9 (45%)         62 (87%)         7714 (80%)         7 (2.3%)         40 (0.0%)           at         71         20         9 (45%)         62 (87%)         7714 (80%)         7 (2.3%)         10 (0.0%)           at         71         20         9 (45%)         62 (87%)         7714 (80%)         7 (2.3%)         10 (0.0%)           at         4045         1290         865 (67%)         7962 (92%)         7 (1.3%)         7 (1.9%)         11 (0.3%)           at         22         40         662 (70%)         3438 (85%)         3 (1.3%)         10 (1.4%)         10 (0.0%)           at         22         144 (75%)	Bihar	13161	1696	971 (57%)	10302 (78%)	117 (0.9%)	344 (2.6%)	55 (0.4%)	39 (0.3%)	2304 (17.5%)
tisgarh 158	Chandigarh	256	77	48 (62%)	225 (88%)	5 (2.0%)	6 (2.3%)	2 (0.8%)	1 (0.4%)	17 (6.6%)
and Nagar Haveli and Diu         58         8         5 (63%)         57 (98%)         1 (1.7%)         0 (0.0%)         0 (0.0%)           n and Diu         n and Diu         9677         2800         945 (34%)         7714 (80%)         73 (0.8%)         223         40 (0.4%)           at         71         20         9 (45%)         62 (87%)         0 (0.0%)         2 (2.8%)         0 (0.0%)           at         8675         946         662 (7%)         7962 (92%)         1,77         1,19%         33 (0.4%)           na         4045         1290         865 (67%)         3438 (85%)         53 (1.3%)         1,163         33 (0.4%)           nad         729         236         161 (68%)         680 (93%)         11 (1.5%)         10 (1.4%)         0 (0.0%)           nad         729         236         161 (68%)         680 (93%)         11 (1.5%)         10 (1.4%)         0 (0.0%)           nad         40         629         342 (54%)         2376 (74%)         27 (0.8%)         3.3 (0.1%)           nad         1480         144         102 (71%)         135 (92%)         10 (0.7%)         34 (2.3%)         2 (0.1%)           n         1480         144         102 (71%)	Chhattisgarh	2274	312	233 (75%)	1999 (88%)	37 (1.6%)	26 (1.1%)	5 (0.2%)	6 (0.3%)	201 (8.8%)
40         2800         945 (34%)         7714 (80%)         73 (0.8%)         223         40 (0.4%)           40         71         20         9 (45%)         62 (87%)         0 (0.0%)         2 (2.8%)         0 (0.0%)           at         71         20         9 (45%)         62 (87%)         0 (0.0%)         2 (2.8%)         0 (0.0%)           na         4045         1290         865 (67%)         7962 (92%)         177         163         33 (0.4%)           nad         4045         1290         865 (67%)         7962 (92%)         53 (1.3%)         10 (1.4%)         0 (0.0%)           nak Kashmir         729         236         161 (68%)         6080 (93%)         11 (1.5%)         10 (1.4%)         0 (0.0%)           nand         729         236         161 (68%)         73 (1.4%)         7 (0.2%)         10 (0.0%)           nand         4789         629         342 (54%)         2376 (74%)         27 (0.8%)         6 (0.8%)         6 (0.8%)         7 (0.1%)           nand         1480         144         102 (71%)         133 (0.0%)         2 (1.6%)         7 (0.0%)         7 (0.1%)           nand         22         4         0 (0%)         164         147 (0.0	Dadra and Nagar Haveli and Daman and Diu	28	8	5 (63%)	(%86) 22	1 (1.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
rat         20         9 (45%)         62 (87%)         0 (0.0%)         2 (2.8%)         0 (0.0%)           rat         8675         946         662 (70%)         7962 (92%)         177         163         33 (0.4%)           rana         4045         1290         865 (67%)         7962 (92%)         73 (1.3%)         105         11 (0.3%)           achal Pradesh         729         236         161 (68%)         680 (93%)         11 (1.5%)         10 (1.4%)         0 (0.0%)           khand         791         193         144 (75%)         717 (91%)         5 (0.6%)         6 (0.8%)         10 (1.4%)         0 (0.0%)           khand         3199         629         342 (54%)         2376 (74%)         27 (0.8%)         10 (1.4%)         7 (0.1%)           la         1480         144         102 (71%)         1337 (92%)         68 (1.4%)         79 (1.6%)         7 (0.1%)           la         22         4         0 (0%)         18 (82%)         0 (0.0%)         0 (0.0%)         0 (0.0%)         0 (0.0%)         0 (0.0%)           layalwakeep         2         1         1 (100%)         18 (32%)         16 (4.0%)         16 (4.0%)         16 (0.0%)         16 (0.0%)         16 (0.0%)	Delhi	2296	2800	945 (34%)	7714 (80%)	73 (0.8%)	223 (2.3%)	40 (0.4%)	101 (1.0%)	1526 (15.8%)
sef75         946         662 (70%)         7962 (92%)         177         163         33 (0.4%)           idesh         4045         1290         865 (67%)         3438 (85%)         53 (1.3%)         105         11 (0.3%)           idesh         729         236         161 (68%)         680 (93%)         11 (1.5%)         10 (1.4%)         0 (0.0%)           innir         791         193         144 (75%)         717 (91%)         5 (0.6%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         7 (0.2%)           innir         791         193         144 (75%)         717 (91%)         27 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         7 (0.2%)           innir         791         193         144 (75%)         717 (91%)         27 (0.8%)         7 (0.2%)         7 (0.2%)         7 (0.2%)           innir         4789         762         456 (60%)         2376 (74%)         27 (0.8%)         6 (0.8%)         7 (0.1%)         7 (0.1%)           innir         22         4         0 (0%)         18 (82%)         0 (0.0%)         0 (0.0%)         0 (0.0%)         0 (0.0%)         1 (0.0%)           innir         17779	Goa	71	20	9 (45%)	62 (87%)	0 (0.0%)	2 (2.8%)	0 (0.0%)	0 (0.0%)	7 (9.9%)
tdesh 729 236 161(68%) 680(93%) 11(1.5%) 10(1.4%) 0 (0.0%) 105. https://dx.doi.org/10.2% 11(0.3%) 11(1.5%) 11(1.5%) 11(1.4%) 0 (0.0%) 11(1.5%) 11(1.4%) 0 (0.0%) 11(1.5%) 11(1.5%) 11(1.4%) 0 (0.0%) 11(1.5%) 11(1.4%) 11(1.5%) 11(1	Gujarat	8675	946	662 (70%)	7962 (92%)	177 (2.0%)	163 (1.9%)	33 (0.4%)	43 (0.5%)	297 (3.4%)
indesh         729         236         161 (68%)         680 (93%)         11 (1.5%)         10 (1.4%)         0 (0.0%)           shmir         791         193         144 (75%)         717 (91%)         5 (0.6%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         6 (0.8%)         7 (0.2%)         7 (0.2%)         7 (0.2%)         7 (0.2%)         7 (0.1%)	Haryana	4045	1290	865 (67%)	3438 (85%)	53 (1.3%)	105 (2.6%)	11 (0.3%)	20 (0.5%)	418 (10.3%)
shmir       791       193       144 (75%)       717 (91%)       5 (0.6%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       6 (0.8%)       7 (0.2%)       7 (0.2%)       7 (0.2%)       7 (0.2%)       7 (0.2%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.1%)       7 (0.0%) </td <td>Himachal Pradesh</td> <td>729</td> <td>236</td> <td>161 (68%)</td> <td>(%86) (89)</td> <td>11 (1.5%)</td> <td>10 (1.4%)</td> <td>0 (0.0%)</td> <td>4 (0.5%)</td> <td>24 (3.3%)</td>	Himachal Pradesh	729	236	161 (68%)	(%86) (89)	11 (1.5%)	10 (1.4%)	0 (0.0%)	4 (0.5%)	24 (3.3%)
3199       629       342 (54%)       2376 (74%)       27 (0.8%)       106 (3.3%)       7 (0.2%)         4789       762       456 (60%)       4333 (90%)       68 (1.4%)       79 (1.6%)       7 (0.1%)         5       1480       144       102 (71%)       1357 (92%)       10 (0.7%)       34 (2.3%)       2 (0.1%)         5       4       0 (0%)       18 (82%)       0 (0.0%)       0 (0.0%)       0 (0.0%)       0 (0.0%)         5       1       1 (100%)       2 (100%)       0 (0.0%)       0 (0.0%)       0 (0.0%)       0 (0.0%)         6       17779       1644       1147 (70%)       15473 (87%)       165       716       76 (0.4%)         13028       3237       11446 (88%)       189       252       47 (0.4%)	Jammu & Kashmir	791	193	144 (75%)	717 (91%)	5 (0.6%)	(%8'0) 9	6 (0.8%)	4 (0.5%)	53 (6.7%)
4789       762       456 (60%)       4333 (90%)       68 (1.4%)       79 (1.6%)       7 (0.1%)         1480       144       102 (71%)       1357 (92%)       10 (0.7%)       34 (2.3%)       2 (0.1%)         2       4       0 (0%)       18 (82%)       0 (0.0%)       0 (0.0%)       0 (0.0%)       0 (0.0%)         2       1       1 (100%)       2 (100%)       0 (0.0%)       0 (0.0%)       0 (0.0%)       0 (0.0%)         esh       17779       1644       1147 (70%)       15473 (87%)       (0.9%)       (4.0%)       76 (0.4%)         13028       3237       1144 (35%)       11476 (88%)       (1.5%)       (1.9%)       47 (0.4%)	Jharkhand	3199	629	342 (54%)	2376 (7 <mark>4</mark> %)	27 (0.8%)	106 (3.3%)	7 (0.2%)	7 (0.2%)	676 (21.1%)
1480       144       102 (71%)       1357 (92%)       10 (0.7%)       34 (2.3%)       2 (0.1%)         22       4       0 (0%)       18 (82%)       0 (0.0%)       0 (0.0%)       0 (0.0%)       0 (0.0%)         3       2       1       1 (100%)       2 (100%)       0 (0.0%)       0 (0.0%)       0 (0.0%)       0 (0.0%)         esh       17779       1644       1147 (70%)       15473 (87%)       165       716       76 (0.4%)         13028       3237       1144 (35%)       11476 (88%)       189       252       47 (0.4%)     47 (0.4%)	Karnataka	4789	762	456 (60%)	4333 (90%)	68 (1.4%)	79 (1.6%)	7 (0.1%)	17 (0.4%)	285 (6.0%)
22 4 0 (0%) 18 (82%) 0 (0.0%) 0 (0.0%) 0 (0.0%) 2 1 1 (100%) 2 (100%) 0 (0.0%) 0 (0.0%) 0 (0.0%) esh 17779 1644 1147 (70%) 15473 (87%) (0.9%) (4.0%) 76 (0.4%) 13028 3237 1144 (35%) 11476 (88%) (1.5%) (1.9%) (1.9%)	Kerala	1480	144	102 (71%)	1357 (92%)	10 (0.7%)	34 (2.3%)	2 (0.1%)	7 (0.5%)	70 (4.7%)
esh 17779 1644 1147 (70%) 15473 (87%) 0 (0.0%) 0 (0.0%) 0 (0.0%) 0 (0.0%) 13028 3237 1144 (35%) 11476 (88%) (1.5%) (1.5%) (1.9%) (1.9%)	Ladakh	22	4	(%0) 0	18 (82%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (18.2%)
esh 17779 1644 1147 (70%) 15473 (87%) 165 716 76 (0.4%) 76 (0.4%) 13028 3237 1144 (35%) 11476 (88%) (1.5%) (1.5%) (1.9%)	Lakshadweep	2	1	1 (100%)	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
13028     3237     1144 (35%)     11476 (88%)     189     252     47 (0.4%)	Madhya Pradesh	17779	1644	1147 (70%)	15473 (87%)	165 (0.9%)	716 (4.0%)	76 (0.4%)	31 (0.2%)	1318 (7.4%)
	Maharashtra	13028	3237	1144 (35%)	11476 (88%)	189 (1.5%)	252 (1.9%)	47 (0.4%)	162 (1.2%)	902 (6.9%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Manipur	118	34	16 (47%)	85 (72%)	0 (0.0%)	2 (1.7%)	1 (0.8%)	0 (0.0%)	30 (25.4%)
Meghalaya	427	109	55 (50%)	360 (84%)	7 (1.6%)	9 (2.1%)	4 (0.9%)	1 (0.2%)	46 (10.8%)
Mizoram	217	53	26 (49%)	166 (76%)	0 (0.0%)	3 (1.4%)	0 (0.0%)	1 (0.5%)	47 (21.7%)
Nagaland	338	85	68 (80%)	292 (86%)	7 (2.1%)	10 (3.0%)	0 (0.0%)	2 (0.6%)	27 (8.0%)
Odisha	2419	266	443 (78%)	2221 (92%)	31 (1.3%)	48 (2.0%)	6 (0.2%)	7 (0.3%)	106 (4.4%)
Puducherry	26	18	12 (67%)	52 (93 <mark>%</mark> )	(%0'0) 0	1 (1.8%)	1 (1.8%)	0 (0.0%)	2 (3.6%)
Punjab	3496	1123	589 (52%)	3082 (88%)	40 (1.1%)	52 (1.5%)	11 (0.3%)	14 (0.4%)	297 (8.5%)
Rajasthan	10538	1772	1302 (73%)	8767 (83%)	102 (1.0%)	420 (4.0%)	149 (1,4%)	31 (0.3%)	1069 (10.1%)
Sikkim	52	13	10 (77%)	55 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Tamil Nadu	5871	694	619 (89%)	5403 (92%)	41 (0.7%)	64 (1.1%)	10 (0.2%)	18 (0.3%)	335 (5.7%)
Telangana	2376	922	596 (79%)	2217 (93%)	36 (1.5%)	(%8:0) 9	2 (0.1%)	1 (0.0%)	114 (4.8%)
Tripura	48	8	8 (100%)	44 (92%)	0 (0°0%)	3 (6.3%)	0 (0.0%)	0 (0.0%)	1 (2.1%)
Uttar Pradesh	32135	5401	2960 (55%)	28228 (88%)	411 (1.3%)	1142 (3.6%)	159 (0.5%)	144 (0.4%)	2051 (6.4%)
Uttarakhand	1345	297	143 (48%)	1188 (88%)	21 (1,6%)	31 (2.3%)	4 (0.3%)	11 (0.8%)	90 (6.7%)
West Bengal	3486	1060	616 (58%)	2930 (84%)	93 (2.7%)	66 (1.9%)	11 (0.3%)	23 (0.7%)	363 (10.4%)
India	148855	27228	15522 (57%)	128706 (86%)	1800 (1.2%)	4018 (2.7%)	662 (0.4%)	717 (0.5%)	12952 (8.7%)
Data Source: Nikshay – Data extracted as on 12th February 2021	tracted as or	n 12 <sup>th</sup> Febru	uary 2021						

3.12 Treatment outcome of Male TB patients notified in 2019

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	324	186	102 (55%)	265 (82%)	14 (4.3%)	15 (4.6%)	0 (0.0%)	4 (1.2%)	26 (8.0%)
Andhra Pradesh	64038	38672	28009 (72%)	26968 (89%)	2707 (4.2%)	1064 (1.7%)	244 (0.4%)	1113 (1.7%)	1942 (3.0%)
Arunachal Pradesh	1553	819	618 (75%)	1256 (81%)	40 (2.6%)	129 (8.3%)	21 (1.4%)	39 (2.5%)	68 (4,4%)
Assam	31933	15450	9655 (62%)	26348 (83%)	1391 (4.4%)	912 (2.9%)	135 (0,4%)	298 (0.9%)	2849 (8.9%)
Bihar	79845	35406	19415 (55%)	60362 (76%)	2063 (2.6%)	2822 (3.5%)	419 (0.5%)	524 (0.7%)	13655 (17.1%)
Chandigarh	1902	1018	636 (62%)	1513 (80%)	70 (3.7%)	99 (5.2%)	16 (0.8%)	22 (1.2%)	182 (9.6%)
Chhattisgarh	28012	12223	8735 (71%)	23356 (83%)	1172 (4.2%)	601 (2.1%)	157 (0.6%)	253 (0.9%)	2473 (8.8%)
Dadra and Nagar Haveli and Daman and Diu	597	238	191 (80%)	541 (91%)	14 (2.3%)	19 (3.2%)	3 (0.5%)	5 (0.8%)	15 (2.5%)
Delhi	49771	24283	9501 (39%)	33435 (67%)	1417 (2.8%)	2771 (5.6%)	279 (0.6%)	850 (1.7%)	11019 (22.1%)
Goa	1351	772	354 (46%)	1034 (77%)	41 (3.0%)	94 (7.0%)	12 (0.9%)	26 (1.9%)	144 (10.7%)
Gujarat	98236	41004	28939 (71%)	8248 <mark>8</mark> (84%)	5120 (5.2%)	3267 (3.3%)	965 (1.0%)	1832 (1.9%)	4564 (4.6%)
Haryana	44252	26340	15679 (60%)	33883 (77%)	2094 (4.7%)	2001 (4.5%)	367 (0.8%)	283 (0.6%)	5624 (12.7%)
Himachal Pradesh	10882	7322	4882 (67%)	9644 (89%)	604 (5.6%)	173 (1.6%)	38 (0.3%)	134 (1.2%)	289 (2.7%)
Jammu & Kashmir	6633	3382	2291 (68%)	5571 (84%)	189 (2.8%)	108 (1.6%)	35 (0.5%)	51 (0.8%)	679 (10.2%)
Jharkhand	38961	19331	11055 (57%)	29882 (77%)	994 (2.6%)	1156 (3.0%)	200 (0.5%)	195 (0.5%)	6534 (16.8%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	<b>Death</b> <b>Rate</b>	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Karnataka	55993	34441	21039 (61%)	43653 (78%)	4069 (7.3%)	2290 (4.1%)	514 (0.9%)	1044 (1.9%)	4423 (7.9%)
Kerala	16841	11096	8044 (72%)	13750 (82%)	1342 (8.0%)	351 (2.1%)	169 (1.0%)	193 (1.1%)	1036 (6.2%)
Ladakh	218	111	60 (54%)	189 (87%)	11 (5.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	18 (8.3%)
Lakshadweep	16	9	5 (56%)	9 (56 <mark>%</mark> )	2 (12.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (31.3%)
Madhya Pradesh	116413	49436	28846 (58%)	89689 (77%)	4022 (3.5%)	6747 (5.8%)	808 (0.7%)	892 (0.8%)	14255 (12.2%)
Maharashtra	119914	55690	30347 (54%)	98266 (82%)	6028 (5.0%)	4554 (3.8%)	732 (0.6%)	1940 (1.6%)	8394 (7.0%)
Manipur	1674	971	504 (52%)	1148 (69%)	46 (2.7%)	51 (3.0%)	4 (0.2%)	28 (1.7%)	397 (23.7%)
Meghalaya	2946	1714	994 (58%)	2286 (78%)	134 (4.5%)	107 (3.6%)	22 (0.7%)	48 (1.6%)	349 (11.8%)
Mizoram	1649	930	438 (47%)	1043 (63%)	34 (2.1%)	32 (1.9%)	4 (0.2%)	4 (0.2%)	532 (32.3%)
Nagaland	2759	1366	941 (69%)	2246 (81%)	80 (2.9%)	115 (4.2%)	19 (0.7%)	18 (0.7%)	281 (10.2%)
Odisha	34835	20772	15831 (76%)	30083 (86%)	1978 (5.7%)	864 (2.5%)	133 (0.4%)	314 (0.9%)	1463 (4.2%)
Puducherry	1029	781	560 (72%)	810 (79%)	85 (8.3%)	35 (3.4%)	17 (1.7%)	28 (2.7%)	54 (5.2%)
Punjab	33603	18566	10024 (54%)	26554 (79%)	1860 (5.5%)	1043 (3.1%)	180 (0.5%)	292 (0.9%)	3674 (10.9%)
Rajasthan	112726	59314	33629 (57%)	89065 (79%)	3681 (3.3%)	4811 (4.3%)	737 (0.7%)	852 (0.8%)	13580 (12.0%)
Sikkim	969	392	291 (74%)	612 (88%)	27 (3.9%)	7 (1.0%)	3 (0.4%)	6 (0.9%)	41 (5.9%)
Tamil Nadu	75729	48797	32719 (67%)	61765 (82%)	4188 (5.5%)	2628 (3.5%)	473 (0.6%)	1586 (2.1%)	5089 (6.7%)
Telangana	42687	24963	18111 (73%)	37657 (88%)	1721 (4.0%)	417 (1.0%)	247 (0.6%)	479 (1.1%)	2166 (5.1%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Tripura	2198	1563	1096 (70%)	1804 (82%)	132 (6.0%)	62 (2.8%)	15 (0.7%)	46 (2.1%)	139 (6.3%)
Uttar Pradesh	293388	132850	72831 (55%)	237591 (81%)	13189 (4.5%)	14085 (4.8%)	2190 (0.7%)	3490 (1.2%)	22843 (7.8%)
Uttarakhand	14423	6993	3897 (56%)	11790 (82%)	643 (4.5%)	602 (4.2%)	86 (0.6%)	231 (1.6%)	1071 (7.4%)
West Bengal	73406	50389	34197 (68%)	59342 (81%)	4083 (5.6%)	2209 (3.0%)	443 (0.6%)	839 (1.1%)	(8,8%)
India	1461433	747590	454466 (61%)	1175898 (80%)	65285 (4.5%)	56241 (3.8%)	9687	17959 (1.2%)	136363 (9.3%)
Data Common Milroham Data outwarded as on 12t	, and and another	13th Eaburgan; 2021	1000						

Data Source: Nikshay – Data extracted as on 12<sup>th</sup> February 2021

3.13 Treatment outcome of Female TB patients notified in 2019

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	230	106	51 (48%)	198 (86%)	11 (4.8%)	3 (1.3%)	0 (0.0%)	3 (1.3%)	15 (6.5%)
Andhra Pradesh	32311	14656	11034 (75%)	29818 (92%)	872 (2.7%)	365 (1.1%)	78 (0.2%)	344 (1.1%)	834 (2.6%)
Arunachal Pradesh	1306	552	427 (77%)	1101 (84%)	24 (1.8%)	75 (5.7%)	14 (1.1%)	40 (3.1%)	52 (4.0%)
Assam	15807	6748	4451 (66%)	13495 (85%)	447 (2.8%)	297 (1.9%)	56 (0.4%)	150 (0.9%)	1362 (8,6%)
Bihar	43061	16726	9740 (58%)	33417 (78%)	911 (2.1%)	1309 (3.0%)	204 (0.5%)	279 (0.6%)	6941 (16.1%)
Chandigarh	1542	699	477 (71%)	1327 (86%)	44 (2.9%)	43 (2.8%)	8 (0.5%)	14 (0.9%)	106 (6.9%)
Chhattisgarh	14792	4925	3720 (76%)	12774 (86%)	427 (2.9%)	219 (1.5%)	50 (0.3%)	100 (0.7%)	1222 (8.3%)
Dadra and Nagar Haveli and Daman and Diu	387	140	120 (86%)	365 (94%)	11 (2.8%)	6 (1.6%)	0 (0.0%)	3 (0.8%)	2 (0.5%)
Delhi	43961	17018	6866 (40%)	32872 (75%)	693 (1.6%)	1551 (3.5%)	213 (0.5%)	648 (1.5%)	7984 (18.2%)
Goa	918	414	195 (47%)	770 (84%)	31 (3.4%)	31 (3.4%)	2 (0.2%)	11 (1.2%)	73 (8.0%)
Gujarat	52677	17494	13198 (75%)	46504 (88%)	1748 (3.3%)	1134 (2.2%)	300 (0.6%)	816 (1.5%)	2175 (4.1%)
Haryana	28037	13178	8761 (66%)	22915 (82%)	712 (2.5%)	994 (3.5%)	166 (0.6%)	141 (0.5%)	3109 (11.1%)
Himachal Pradesh	6465	3851	2603 (68%)	5905 (91%)	232 (3.6%)	83 (1.3%)	19 (0.3%)	68 (1.1%)	158 (2.4%)
Jammu & Kashmir	4687	2233	1593 (71%)	4073 (87%)	106 (2.3%)	56 (1.2%)	17 (0.4%)	26 (0.6%)	409 (8.7%)
Jharkhand	17507	6951	4181 (60%)	13526 (77%)	319 (1.8%)	439 (2.5%)	81 (0.5%)	75 (0.4%)	3067 (17.5%)
Karnataka	31088	15323	(%59) 8566	26060 (84%)	1531 (4.9%)	660 (2.1%)	142 (0.5%)	450 (1.4%)	2245 (7.2%)
Kerala	8413	3605	2631 (73%)	7187 (85%)	485 (5.8%)	127 (1.5%)	22 (0.3%)	65 (0.8%)	527 (6.3%)

State	TB	Micro	Cure Rate	Success Rate	Death	% Lost to	Treatment Failure	% Regimen	% Not
	Notified	Conf TB			Rate	dn wolloj	Rate	Change	evaluated
Ladakh	194	66	42 (42%)	167 (86%)	12 (6.2%)	1 (0.5%)	0 (0.0%)	0 (0.0%)	14 (7.2%)
Lakshadweep	9	3	2 (67%)	5 (83%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (16.7%)
Madhya Pradesh	66581	21829	13792 (63%)	54626 (82%)	1458 (2.2%)	2967 (4.5%)	309 (0.5%)	479 (0.7%)	6742 (10.1%)
Maharashtra	90649	36424	17928 (49%)	77441 (85%)	2751 (3.0%)	2237 (2.5%)	427 (0.5%)	1508 (1.7%)	6285 (6.9%)
Manipur	946	457	228 (50%)	651 (69%)	28 (3.0%)	24 (2.5%)	2 (0.2%)	12 (1.3%)	229 (24.2%)
Meghalaya	2013	698	514 (59%)	1668 (83%)	52 (2.6%)	49 (2.4%)	11 (0.5%)	27 (1.3%)	206 (10.2%)
Mizoram	1279	570	293 (51%)	926 (72%)	14 (1.1%)	10 (0.8%)	4 (0.3%)	12 (0.9%)	313 (24.5%)
Nagaland	1928	849	652 (77%)	1634 (85%)	28 (1.5%)	50 (2.6%)	10 (0.5%)	11 (0.6%)	195 (10.1%)
Odisha	17382	8411	6725 (80%)	15482 (89%)	757 (4.4%)	280 (1.6%)	47 (0.3%)	115 (0.7%)	701 (4.0%)
Puducherry	535	282	191 (68%)	457 (85%)	31 (5.8%)	8 (1.5%)	5 (0.9%)	9 (1.7%)	25 (4.7%)
Punjab	24497	12181	7054 (58%)	20319 (83%)	961 (3.9%)	557 (2.3%)	105 (0.4%)	184 (0.8%)	2371 (9.7%)
Rajasthan	56443	23319	14274 (61%)	46848 (83%)	1082 (1.9%)	2014 (3.6%)	281 (0.5%)	325 (0.6%)	5893 (10.4%)
Sikkim	533	244	170 (70%)	477 (89%)	18 (3.4%)	3 (0.6%)	5 (0.9%)	5 (0.9%)	25 (4.7%)
Tamil Nadu	33916	15444	10599 (69%)	29232 ( <mark>8</mark> 6%)	1169 (3.4%)	647 (1.9%)	99 (0.3%)	520 (1.5%)	2249 (6.6%)
Telangana	26310	12387	9445 (76%)	24014 (91%)	666 (2.5%)	138 (0.5%)	84 (0.3%)	204 (0.8%)	1204 (4.6%)
Tripura	738	413	306 (74%)	619 (84%)	41 (5.6%)	23 (3.1%)	3 (0.4%)	16 (2.2%)	36 (4.9%)
Uttar Pradesh	192487	68291	40185 (59%)	163735 (85%)	5202 (2.7%)	7520 (3.9%)	1094 (0.6%)	1931 (1.0%)	13005 (6.8%)
Uttarakhand	10054	3722	2122 (57%)	8696 (86%)	250 (2.5%)	323 (3.2%)	38 (0.4%)	132 (1.3%)	615 (6.1%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
West Bengal	35021	18899	12404 (66%) 28949 (83%)	28949 (83%)	1332 (3.8%)	728 (2.1%)	188 (0.5%)	462 (1.3%)	3362 (9.6%)
India	864701 349282	349282	216932 (62%)	728253 (84%)	24456 (2.8%)	24971 (2.9%)	4084 (0.5%)	9185 (1.1%)	73752 (8.5%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> i	xtracted as o	ın 12 <sup>th</sup> Febri	February 2021						

3.14 Treatment outcome of Transgenders TB patients notified in 2019

Andaman & Nicobar Islands Andhra Pradesh Arunachal Pradesh Sssam Bihar Chandigarh Chantisgarh Dadra and Nagar Haveli and Daman and Diu Belhi Goa Cujarat 86	0				•	Kate	Culange	
hra Pradesh nachal Pradesh ur ndigarh attisgarh ra and Nagar Haveli Daman and Diu ii	61	NA	NA	NA	NA	NA	NA	NA
um  ur  ndigarh  attisgarh  ra and Nagar Haveli  Daman and Diu  ni		49 (80%)	105 (88%)	6 (5.0%)	3 (2.5%)	0 (0.0%)	2 (1.7%)	4 (3.3%)
ur ndigarh attisgarh ra and Nagar Haveli Daman and Diu ii	0	NA	5 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
ndigarh attisgarh ra and Nagar Haveli Daman and Diu ni	14	11 (79%)	33 (85%)	2 (5.1%)	1 (2.6%)	0 (0.0%)	0 (0.0%)	3 (7.7%)
attisgarh ra and Nagar Haveli Daman and Diu ii	55	34 (62%)	93 (77%)	1 (0.8%)	3 (2.5%)	1 (0.8%)	2 (1.7%)	21 (17.4%)
attisgarh ra and Nagar Haveli Daman and Diu ui rat	3	4 (133%)	10 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
ra and Nagar Haveli Daman and Diu li rat	18	13 (72%)	35 (85%)	4 (9.8%)	1 (2.4%)	0 (0.0%)	0 (0.0%)	1 (2.4%)
li Trat	0	NA	NA	NA	NA	NA	NA	NA
ırat	36	8 (22%)	(%89) 65	1 (1.1%)	8 (9.2%)	0 (0.0%)	1 (1.1%)	18 (20.7%)
	2	1 (50%)	1 (50%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	34	28 (82%)	71 (83%)	2 (2.3%)	7 (8.1%)	1 (1.2%)	2 (2.3%)	3 (3.5%)
Haryana 81	38	26 (68%)	63 (78%)	3 (3.7%)	5 (6.2%)	0 (0.0%)	0 (0.0%)	10 (12.3%)
Himachal Pradesh 21	10	7 (70%)	16 (76%)	1 (4.8%)	1 (4.8%)	0 (0.0%)	1 (4.8%)	2 (9.5%)
Jammu & Kashmir 25	6	8 (89%)	22 (88%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (12.0%)
Jharkhand 56	19	10 (53%)	42 (75%)	1 (1.8%)	1 (1.8%)	(%0'0) 0	(%0'0) 0	12 (21.4%)
Karnataka 87	45	24 (53%)	(%/2/)	5 (5.7%)	5 (5.7%)	1 (1.1%)	1 (1.1%)	8 (9.2%)
Kerala 13	7	5 (71%)	11 (85%)	1 (7.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (7.7%)
Ladakh 0	0	NA	NA	NA	NA	NA	NA	NA
Lakshadweep 0	0	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh 183	89	39 (57%)	147 (80%)	5 (2.7%)	7 (3.8%)	0 (0.0%)	1 (0.5%)	23 (12.6%)
Maharashtra 191	88	38 (43%)	152 (80%)	6 (3.1%)	11 (5.8%)	1 (0.5%)	3 (1.6%)	18 (9.4%)
Manipur 3	1	1 (100%)	2 (67%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (33.3%)	0 (0.0%)
Meghalaya 4	4	0 (0%)	1 (25%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (75.0%)
Mizoram 2	2	1 (50%)	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Nagaland 6	1	1 (100%)	6 (100%)	0 (0:0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Odisha	62	36	30 (83%)	54 (87%)	3 (4.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (8.1%)
Puducherry	1	1	(%0) 0	1 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Punjab	78	42	21 (50%)	58 (74%)	3 (3.8%)	2 (2.6%)	0 (0.0%)	2 (2.6%)	13 (16.7%)
Rajasthan	142	46	29 (63%)	104 (73%)	4 (2.8%)	11 (7.7%)	2 (1.4%)	2 (1.4%)	19 (13.4%)
Sikkim	0	0	NA	NA	NA	NA	NA	NA	NA
Tamil Nadu	127	73	44 (60%)	105 (83%)	8 (6.3%)	4 (3.1%)	0 (0.0%)	1 (0.8%)	9 (7.1%)
Telangana	79	48	38 (79%)	(%28) 69	5 (6.3%)	1 (1.3%)	0 (0.0%)	0 (0.0%)	4 (5.1%)
Tripura	0	0	NA	NA	NA	NA	NA	NA	NA
Uttar Pradesh	435	170	103 (61%)	354 (81%)	18 (4.1%)	22 (5.1%)	3 (0.7%)	6 (1.4%)	32 (7.4%)
Uttarakhand	27	5	5 (100%)	24 (89%)	1 (3.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (7.4%)
West Bengal	70	35	24 (69%)	57 (81%)	2 (2.9%)	0 (0.0%)	1 (1.4%)	0 (0.0%)	10 (14.3%)
India	2204	971	602 (62%)	1769 (80%)	82 (3.7%)	82 (3.7%) 94 (4.3%) 10 (0.5%)		25 (1.1%)	25 (1.1%) 224 (10.2%)
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Data Source: Nikshay – Data extracted as on 12<sup>th</sup> February 2021

3.15 Treatment outcome of Tribal TB patients notified in 2019

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Andaman & Nicobar Islands	64	43	11 (26%)	26 (88%)	5 (7.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (4.7%)
Andhra Pradesh	13573	8411	(%92) (888)	12384 (91%)	435 (3.2%)	133 (1.0%)	33 (0.2%)	171 (1.3%)	417 (3.1%)
Arunachal Pradesh	2414	1282	(%87) 799	2042 (85%)	54 (2.2%)	144 (6.0%)	23 (1.0%)	62 (2.6%)	89 (3.7%)
Assam	8203	3826	2432 (64%)	6810 (83%)	347 (4.2%)	327 (4.0%)	31 (0.4%)	89 (1.1%)	599 (7.3%)
Chhattisgarh	15546	6915	5130 (74%)	12897 (83%)	590 (3.8%)	320 (2.1%)	91 (0.6%)	90 (0.6%)	1558 (10.0%)
Dadra and Nagar Haveli and Daman and Diu	553	229	195 (85%)	525 (95%)	12 (2.2%)	4 (0.7%)	0 (0.0%)	4 (0.7%)	8 (1.4%)
Gujarat	23139	11037	8394 (76%)	20140 (87%)	947 (4.1%)	721 (3.1%)	182 (0.8%)	483 (2.1%)	666 (2.9%)
Himachal Pradesh	362	243	198 (81%)	336 (93%)	11 (3.0%)	2 (0.6%)	2 (0.6%)	2 (0.6%)	9 (2.5%)
Jammu & Kashmir	377	189	141 (75%)	328 (87%)	8 (2.1%)	4 (1.1%)	3 (0.8%)	2 (0.5%)	32 (8.5%)
Jharkhand	31817	15361	8707 (57%)	24241 (76%)	887 (2.8%)	696 (2.2%)	150 (0.5%)	145 (0.5%)	5698 (17.9%)
Karnataka	2755	1763	1184 (67%)	2207 (80%)	193 (7.0%)	122 (4.4%)	25 (0.9%)	55 (2.0%)	153 (5.6%)
Kerala	1072	645	540 (84%)	934 (87%)	62 (5.8%)	20 (1.9%)	8 (0.7%)	16 (1.5%)	32 (3.0%)
Ladakh	412	210	102 (49%)	356 (86%)	23 (5.6%)	1 (0.2%)	0 (0.0%)	0 (0.0%)	32 (7.8%)
Lakshadweep	22	12	7 (58%)	14 (64%)	2 (9.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (27.3%)
Madhya Pradesh	34265	13631	8859 (65%)	28596 (83%)	1004 (2.9%)	1407 (4.1%)	226 (0.7%)	235 (0.7%)	2797 (8.2%)
Maharashtra	17761	8000	6328 (79%)	15586 (88%)	612 (3.4%)	418 (2.4%)	84 (0.5%)	193 (1.1%)	868 (4.9%)
Manipur	1344	795	444 (56%)	936 (70%)	36 (2.7%)	34 (2.5%)	6 (0.4%)	32 (2.4%)	300 (22.3%)
Meghalaya	4963	2587	1508 (58%)	3955 (80%)	186 (3.7%)	156 (3.1%)	33 (0.7%)	75 (1.5%)	558 (11.2%)

State	TB patients Notified	Micro Conf TB	Cure Rate	Success Rate	Death Rate	% Lost to follow up	Treatment Failure Rate	% Regimen Change	% Not evaluated
Mizoram	2925	1498	732 (49%)	1971 (67%)	47 (1.6%)	42 (1.4%)	8 (0.3%)	16 (0.5%)	841 (28.8%)
Nagaland	4663	2215	1592 (72%)	3856 (83%)	108 (2.3%)	165 (3.5%)	29 (0.6%)	29 (0.6%)	476 (10.2%)
Odisha	21389	12927	10301 (80%)	19125 (89%)	1208 (5.6%)	327 (1.5%)	65 (0.3%)	136 (0.6%)	528 (2.5%)
Rajasthan	19179	12928	8185 (63%)	16465 (86%)	541 (2.8%)	632 (3.3%)	87 (0.5%)	161 (0.8%)	1293 (6.7%)
Sikkim	78	49	33 (67%)	65 (83%)	7 (9.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (7.7%)
Tamil Nadu	854	514	449 (87%)	747 (87%)	(%0'(2) 09	11 (1.3%)	4 (0.5%)	15 (1.8%)	17 (2.0%)
Telangana	10027	5123	3324 (65%)	8911 (89%)	390 (3.9%)	159 (1.6%)	77 (0.8%)	65 (0.6%)	425 (4.2%)
Tripura	262	158	152 (96%)	250 (95%)	6 (2.3%)	0 (0.0%)	0 (0.0%)	1 (0.4%)	5 (1.9%)
Uttar Pradesh	4409	2315	1487 (64%)	3830 (87%)	163 (3.7%)	97 (2.2%)	97 (2.2%)	44 (1.0%)	178 (4.0%)
India	222428	112906	77820 (69%)	187563 (84%)	7944 (3.6%)	5942 (2.7%)	1264 (0.6%)	2121 (1.0%)	17594 (7.9%)

Data Source: Nikshay – Data extracted as on 12th February 2021

4. PMDT:

4.1 PMDT-Infrastructure

**Colleges with DRTB** Number of Medical centre established  $\sim$ **Medical Colleges** Number of beds in Nodal DRTB Total number of centre AIC compliant **DRTB** centres Number of  $\infty$ **District DRTB** Number of Centres  $\infty$  $\vdash$  $\vdash$ Nodal DRTB Number of Centres Ŋ  $\mathbf{C}$ \_ Andaman & Nicobar Islands Dadra and Nagar Haveli and Arunachal Pradesh State Jammu & Kashmir Himachal Pradesh Andhra Pradesh Madhya Pradesh Daman and Diu Lakshadweep Chhattisgarh Maharashtra Chandigarh Karnataka Meghalaya **[harkhand**] Haryana Manipur Mizoram Ladakh Gujarat Kerala Assam Bihar Delhi Goa

State	Number of Nodal DRTB Centres	Number of District DRTB Centres	Number of AIC compliant DRTB centres	Total number of beds in Nodal DRTB centre	Number of Medical Colleges	Number of Medical Colleges with DRTB centre established
Nagaland	3	4	1	51	0	0
Odisha	3	27	27	123	12	5
Puducherry	1	0	1	14	6	6
Punjab	5	21	17	85	6	3
Rajasthan	7	34	23	207	22	15
Sikkim	1	5	3	58	1	0
Tamil Nadu	6	29	21	236	55	28
Telangana	5	27	18	191	30	11
Tripura	1	0	1	10	2	1
Uttar Pradesh	23	57	39	530	52	23
Uttarakhand	4	4	3	42	9	3
West Bengal	11	32	20	257	27	13
India	173	620	404	4094	536	253
Data Source: State Submitted Data	ta		4			

4.2 Case Finding - UDST testing & MDR patients management - 2020

	1	<b>UDST Tested</b>	q	MDR/RR	MDR/RR patient diagnosed	agnosed		MDR/RR	
State	Public	Private	Total	Public	Private	Total	MDR/ RR put on treatment (%)	put on Shorter MDR Regimen	MDR/RR put on All Oral Regimen
Andaman & Nicobar Islands	274 (57%)	NA	274 (57%)	51	0	51	47 (92%)	34 (72%)	5 (11%)
Andhra Pradesh	42819 (90%)	13525 (79%)	56344 (87%)	1302	78	1380	1241 (90%)	1024 (83%)	199 (16%)
Arunachal Pradesh	1417 (55%)	(%0) 0	1417 (55%)	224	0	224	174 (78%)	119 (68%)	58 (33%)
Assam	22225 (70%)	1194 (32%)	23419 (66%)	748	34	782	643 (82%)	440 (68%)	191 (30%)
Bihar	33213 (61%)	23679 (50%)	56892 (56%)	2409	265	2974	2515 (85%)	2252 (90%)	139 (6%)
Chandigarh	1663 (62%)	104 (37%)	1767 (59%)	46	0	46	42 (91%)	20 (48%)	21 (50%)
Chhattisgarh	15823 (71%)	2856 (39%)	18679 (63%)	300	16	316	251 (79%)	237 (94%)	19 (8%)
Dadra and Nagar Haveli and Daman and Diu	299 (85%)	32 (43%)	631 (81%)	42	0	42	41 (98%)	21 (51%)	20 (49%)
Delhi	34489 (60%)	8033 (44%)	42522 (56%)	1904	120	2024	1625 (80%)	1175 (72%)	418 (26%)
Goa	1187 (89%)	39 (13%)	1226 (75%)	46	1	47	38 (81%)	23 (61%)	16 (42%)
Gujarat	66785 (83%)	17274 (45%)	84059 (71%)	2569	253	2822	254 <mark>8 (90%)</mark>	1572 (62%)	855 (34%)
Haryana	32847 (71%)	6352 (35%)	39199 (61%)	1332	109	1441	1308 (91%)	1073 (82%)	199 (15%)
Himachal Pradesh	11424 (88%)	444 (68%)	11868 (87%)	204	2	209	211 (101%)	140 (66%)	55 (26%)
Jammu & Kashmir	7328 (88%)	349 (58%)	7677 (86%)	114	4	118	104 (88%)	76 (73%)	23 (22%)
Jharkhand	17077 (55%)	8508 (57%)	25585 (56%)	772	88	098	757 (88%)	295 (79%)	80 (11%)

Private (45%) (165%) (56%) (56%) (56%) (56%) (56%) (165%) (13%) (12620) (131%) (1283%)		•		-			•		44,444	
State         Public         Private         Total         Public         Private         Total         Public         Private         Total           aka         (84%)         (45%)         (77%)         1400         98         1498           aka         (67%)         (65%)         17%         11         187           akeep         (77%)         5(29%)         (65%)         176         11         187           dweep         (74%)         (56%)         (67%)         0         0         0         0           dweep         (74%)         (74%)         (67%)         176         11         187           akeep         (74%)         (67%)         (78%)         0         0         0         0           akeep         (74%)         (64%)         (78%)         0         0         0         0           akeep         (74%)         (65%)         (78%)         46         19         65           akeep         (74%)         (65%)         (78%)         46         19         65           akeep         (74%)         (65%)         (78%)         46         19         46           akeep			JUST TEST	ea	MDK/KK	patient ai	agnosed		MDK/ KK	
aka         43963         5771         49734         1400         98         1498           (84%)         (45%)         (77%)         (77%)         (77%)         (77%)         (180%)         1400         98         1498           11928         1677         13605         176         11         187           1100         (56%)         (65%)         176         11         187           1200         (56%)         165         10         0         0           dweep         (74%)         (67%)         10         0         0         0           a Pradesh         (74%)         (64%)         2786         422         3208         10           ashtra         (69%)         (44%)         (64%)         2786         422         3208           ark         (65%)         (78%)         (64%)         1787         8085         263           ark         (65%)         (78%)         (65%)         1787         8085         263           ark         (65%)         (78%)         (69%)         154         10         164           ark         (65%)         (78%)         (68%)         154         10	State	Public	Private	Total	Public	Private	Total	MDK/ KK put on treatment (%)	put on Shorter MDR Regimen	MDK/KK put on All Oral Regimen
tr 1928 1677 13605 176 11 187  (67%) (56%) (65%) (65%) 176 11 187  dweep (74%) (56%) (67%) 0 0 10  a Pradesh (69%) (44%) (64%) 0 0 0 0  a Pradesh (69%) (44%) (64%) 2786 422 3208  ashtra (89%) (44%) (64%) (55%) 46 19 65  ashtra (85%) (55%) (78%) 66%) 154 10 164  m (68%) (74%) (24%) (69%) 154 10 164  and (68%) (72%) (68%) 154 10 165  and (68%) (72%) (68%) 13 0 13  and (68%) (72%) (68%) 69%  and (72%) (81%) (62%) 697 19 716  ann (73%) (31%) (61%) 83517 3472 118 3590  ann (73%) (31%) (61%) 83517 3472 118 3590  ann (73%) (31%) (61%) 83517	Karnataka	43963 (84%)	5771 (45%)	49734 (77%)	1400	86	1498	1298 (87%)	981 (76%)	306 (24%)
dweep         160         5 (29%)         165         1 (70%)         5 (29%)         165%         10         0         10           dweep         (74%)         NA         14 (74%)         0         0         0         0           a Pradesh         (74%)         13131         88314         2786         422         3208           a Pradesh         (69%)         (44%)         (64%)         2786         422         3208           ashtra         (85%)         (44%)         (65%)         (78%)         46         19         65           ar         (55%)         (78%)         (78%)         46         19         65         263           ar         (55%)         (78%)         (78%)         (78%)         169%         164         19         65           ar         (57%)         (24%)         (69%)         154         10         164         164           m         (68%)         (72%)         (68%)         154         10         164         164         164         164         164         164         164         164         164         164         164         164         164         164         164         164	Kerala	11928 (67%)	1677 (56%)	13605 (65%)	176	11	187	182 (97%)	99 (54%)	87 (48%)
dweep         14         NA         14(74%)         0         0         0           a Pradesh         (74%)         NA         14(74%)         0         0         0           a Pradesh         (74%)         (74%)         (64%)         2786         422         3208           ashtra         (85%)         (44%)         (64%)         2786         422         3208           ar         (85%)         (65%)         (78%)         659%         1787         8085           ar         (57%)         (32%)         (55%)         46         19         65           ar         (74%)         (24%)         (68%)         154         10         164           m         (68%)         (72%)         (68%)         174         10         164           m         (68%)         (72%)         (72%)         (87%)         13         0	Ladakh	160 (70%)	5 (29%)	165 (67%)	10	0	10	5 (50%)	0 (%0)	4 (80%)
a bradesh (69%) (44%) (64%) 2786 422 3208 ashtra (88002 34464 122466 6298 1787 8085 ashtra (85%) (65%) (78%) 46 6298 1787 8085 array (57%) (32%) (55%) (55%) 46 19 65 array (68%) (72%) (68%) (55%) (55%) (68%) (55%) and (68%) (72%) (68%) (57%) (68%) (57%) (68%) (57%) (68%) (57%) (68%) (57%) (68%) (57%) (68%) (57%) (68%) (72%) (68%) (57%) (87%) (81%) (100%) (82%) (62	Lakshadweep	14 (74%)	NA	14 (74%)	0	0	0	NA	NA	(%0)0
ashtra (85%) (65%) (78%) 6298 1787 8085  LT (57%) (65%) (78%) 46 19 65  aya (74%) (24%) (69%) 154 10 65  m (68%) (72%) (68%) 154 10 164  nd (68%) (72%) (87%) 453 8 461  and (68%) (72%) (87%) 453 8 461  and (68%) (72%) (87%) 13 0 13  berry (81%) (100%) (82%) 697 19 716  cerry (81%) (100%) (62%) (62%) 697 118 3590  1132 72 1204 225 6 231	Madhya Pradesh	75183 (69%)	13131 (44%)	88314 (64%)	2786	422	3208	2519 (79%)	2195 (87%)	358 (14%)
Interpretation         811	Maharashtra	88002 (85%)	34464 (65%)	122466 (78%)	6298	1787	8085	7528 (93%)	2689 (36%)	2582 (34%)
laya (74%) (24%) (69%) 258 5 263	Manipur	811 (57%)	59 (32%)	870 (55%)	46	19	65	51 (78%)	29 (57%)	17 (33%)
m (68%) (72%) (68%) 154 10 164 log (68%) (72%) (68%) 154 10 105 log (68%) (13%) (57%) 105 0 105 36790 2615 39405 453 8 461 (88%) (72%) (87%) (87%) 13 0 13 lerry (81%) (100%) (82%) 697 19 716 26130 3246 29376 697 19 716 (72%) (30%) (62%) (62%) 3472 118 3590 lan (73%) (31%) (61%) (89%) 225 6 231	Meghalaya	2771 (74%)	102 (24%)	2873 (69%)	258	5	263	229 (87%)	141 (62%)	53 (23%)
nd (68%) (13%) (57%) 105 0 105 105 (68%) (13%) (57%) (57%) 105 (88%) (72%) (87%) (87%) (87%) 1035 2 1037 13 0 13	Mizoram	1460 (68%)	149 (72%)	1609 (68%)	154	10	164	164 (100%)	76 (46%)	84 (51%)
1035     2     1035     2     1037     13     461       1010     1035     1037     13     0     13       1010     1010     1010     13     0     13       1010     1010     1010     13     0     13       1010     1010     1010     13     13     13     13       1010     1010     1010     13     11     11     11       1010     1100     1100     11     11     11     11       1010     1100     11     11     11     11     11       1010     11     11     11     11     11     11     11       1010     11	Nagaland	1912 (68%)	89 (13%)	2001 (57%)	105	0	105	96 (91%)	75 (78%)	15 (16%)
nerry (81%) (100%) (82%) 13 0 13 13	Odisha	36790 (88%)	2615 (72%)	39405 (87%)	453	8	461	436 (95%)	374 (86%)	54 (12%)
26130 3246 29376 697 19 716 (72%) (30%) (62%) (62%) 83517 3472 118 3590 (133%) (89%) (89%) (89%) (83%) (89%) (89%)	Puducherry	1035 (81%)	2 (100%)	1037 (82%)	13	0	13	13 (100%)	6 (46%)	7 (54%)
nan     70897 (73%)     12620 (83517)     83517 (61%)     3472 (118 (3590))       1132 (89%)     72 (1204 (89%))     225 (89%)     6 231	Punjab	26130 (72%)	3246 (30%)	29376 (62%)	269	19	716	644 (90%)	415 (64%)	216 (34%)
1132         72         1204         225         6         231           (89%)         (83%)         (89%)         (89%)         6         231	Rajasthan	70897 (73%)	12620 (31%)	83517 (61%)	3472	118	3590	2900 (81%)	2229 (77%)	559 (19%)
(2)	Sikkim	1132 (89%)	72 (83%)	1204 (89%)	225	9	231	224 (97%)	133 (59%)	74 (33%)

	1	UDST Tested	p	MDR/RR	MDR/RR patient diagnosed	agnosed		MDR/RR	
State	Public	Private	Total	Public	Private	Total	MDR/ RR put on treatment (%)	put on Shorter MDR Regimen	MDR/RR put on All Oral Regimen
Tamil Nadu	50409 (89%)	8694 (58%)	59103 (82%)	1301	92	1377	1226 (89%)	952 (78%)	249 (20%)
Telangana	37858 (92%)	17178 (79%)	55036 (87%)	1221	106	1327	1218 (92%)	942 (77%)	281 (23%)
Tripura	2028 (92%)	(%0)0	2028 (92%)	31	0	31	28 (90%)	18 (64%)	12 (43%)
Uttar Pradesh	180193 (68%)	43767 (41%)	223960 (60%)	10338	1991	12329	9950 (81%)	(%68) 8088	703 (7%)
Uttarakhand	8696 (56%)	1225 (26%)	9921 (49%)	454	27	481	416 (86%)	206 (50%)	122 (29%)
West Bengal	55118 (77%)	3528 (44%)	58646 (74%)	2117	85	2202	1833 (83%)	1436 (78%)	353 (19%)
India	985660 (74%)	230783 (48%)	1216443 (67%)	43618	6061	49679	42505 (86%)	30605 (72%)	8434 (20%)
Data Source: UDST – Nikshay: Case Finding on diagnosis and treatment initiation – State Submitted Data	r: Case Fina	ling on diag	nosis and tr	eatment in	uitiation – S	tate Su <mark>b</mark> m.	itted Data		

4.3 MDR/RR with Additional Resistance Patients diagnosis & treatment - 2020

		MDR/RR with	Additional Re	with Additional Resistance diagnosed	sed	FQ/SLI/inhA/Z	FQ/SLI/inhA/Z
State	FQ Resistance	SLI Resistance	inhA Resistance	Z Resistance	FQ/SLI/inhA/Z res. detected (other than XDR)	resistance patients initiated on treatment (other than XDR)	resistance patients initiated on longer oral regimen (other than XDR)
Andaman & Nicobar Islands	10	0	6	0	16	8 (50%)	2 (25%)
Andhra Pradesh	84	4	54	0	133	97 (73%)	70 (72%)
Arunachal Pradesh	4	3	4	0	11	9 (82%)	9 (100%)
Assam	64	7	48	0	104	62 (60%)	48 (77%)
Bihar	475	13	82	1	543	400 (74%)	342 (86%)
Chandigarh	5	1	0	0	6	5 (83%)	4 (80%)
Chhattisgarh	83	12	57	0	139	119 (86%)	64 (54%)
Dadra and Nagar Haveli and Daman and Diu	11	1	7	1	18	17 (94%)	17 (100%)
Delhi	273	10	81	2	354	313 (88%)	249 (80%)
Goa	8	1	2	0	11	6 (55%)	6 (100%)
Gujarat	625	28	63	38	730	636 (87%)	583 (92%)
Haryana	139	27	84	1	183	161 (88%)	112 (70%)
Himachal Pradesh	46	5	24	0	68	59 (87%)	51 (86%)
Jammu & Kashmir	22	3	13	0	30	23 (77%)	15 (65%)
Jharkhand	09	4	30	1	86	(%08) 69	29 (86%)
Karnataka	262	11	157	0	384	266 (69%)	192 (72%)
Kerala	70	8	19	0	93	57 (61%)	52 (91%)
Ladakh	3	0	0	0	3	2 (67%)	1 (50%)
Lakshadweep	0	0	0	0	0	0 (NA)	0 (NA)
Madhya Pradesh	415	26	06	1	500	333 (67%)	281 (84%)
Maharashtra	2015	123	475	49	2470	2202 (89%)	1562 (71%)
Manipur	9	1	9	0	8	5 (63%)	5 (100%)
Meghalaya	29	2	9	1	73	(86%)	42 (65%)

		MDR/RR with	Additional Re	MDR/RR with Additional Resistance diagnosed	psed	FQ/SLI/inhA/Z	FQ/SLI/inhA/Z
State	FQ Resistance	SLI Resistance	inhA Resistance	Z Resistance	FQ/SLI/inhA/Z res. detected (other than XDR)	resistance patients initiated on treatment (other than XDR)	resistance patients initiated on longer oral regimen (other than XDR)
Mizoram	14	1	2	0	17	10 (59%)	(%08) 8
Nagaland	24	0	5	0	30	19 (63%)	14 (74%)
Odisha	115	4	12	0	119	94 (79%)	78 (83%)
Puducherry	8	0	3	0	11	11 (100%)	6 (55%)
Punjab	79	4	22	1	66	76 (77%)	69 (91%)
Rajasthan	638	26	274	1	849	474 (56%)	302 (64%)
Sikkim	34	2	8	0	37	12 (32%)	10 (83%)
Tamil Nadu	157	15	72	4	235	158 (67%)	121 (77%)
Telangana	141	24	68	0	208	155 (75%)	141 (91%)
Tripura	19	3	5	0	23	18 (78%)	18 (100%)
Uttar Pradesh	1549	94	362	14	1871	1162 (62%)	838 (72%)
Uttarakhand	80	1	17	2	88	65 (74%)	56 (86%)
West Bengal	145	8	53	1	193	95 (49%)	86 (91%)
India	7750	472	2214	118	9743	7263 (75%)	5513 (76%)
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Data Source: Case Finding on diagnosis and treatment initiation – State Submitted Data

4.4 XDR - TB Patients & H - Mono/ Poly Resistance TB Patients diagnosis & Management - 2020

		XDR Patients	y.	H-Mo	H-Mono/Polv	Patients initia	ted on Newer	Patients initiated on Newer drugs containing
							regimen	
State	Diagnosed	Initiated on treatment	Initiated on all oral longer regimen	Diagnosed	Initiated on treatment	Bedaquilline	Delaminid	Any Newer drug containing regimen
Andaman & Nicobar Islands	I	1 (100%)	1 (100%)	16	13 (81%)	9	0	9
Andhra Pradesh	2	(%0)0	0 (NA)	832	732 (88%)	194	9	200
Arunachal Pradesh	1	1 (100%)	1 (100%)	21	15 (71%)	29	0	29
Assam	7	4 (57%)	5 (125%)	234	206 (88%)	178	9	184
Bihar	99	46 (77%)	34 (74%)	261	203 (78%)	328	15	343
Chandigarh	1	(%0) 0	0 (NA)	29	28 (97%)	27	3	30
Chhattisgarh	16	14 (88%)	13 (93%)	208	190 (91%)	141	3	144
Dadra and Nagar Haveli and Daman and Diu	0	0 (NA)	0 (NA)	6	8 (89%)	21	1	22
Delhi	24	21 (88%)	18 (86%)	787	694 (88%)	423	28	451
Goa	1	0 (0%)	0 (NA)	31	26 (84%)	17	2	19
Gujarat	80	74 (93%)	72 (97%)	794	723 (91%)	1199	35	1234
Haryana	18	17 (94%)	19 (112%)	297	272 (92%)	218	7	225
Himachal Pradesh	9	5 (83%)	2 (40%)	196	186 (95%)	80	2	82
Jammu & Kashmir	6	8 (89%)	7 (88%)	80	77 (96%)	44	0	44
Jharkhand	10	10 (100%)	6 (90%)	70	56 (80%)	115	3	118
Karnataka	28	25 (89%)	24 (96%)	1003	929 (93%)	377	13	390
Kerala	14	10 (71%)	6 (90%)	172	152 (88%)	113	3	116
Ladakh	0	0 (NA)	0 (NA)	1	1 (100%)	1	0	1
Lakshadweep	0	0 (NA)	0 (NA)	0	0 (NA)	0	0	0
Madhya Pradesh	58	45 (78%)	40 (89%)	748	616 (82%)	556	13	569
Maharashtra	359	330 (92%)	249 (75%)	1665	1497 (90%)	2316	125	2441
Manipur	0	0 (NA)	0 (NA)	52	41 (79%)	18	0	18
Meghalaya	12	11 (92%)	7 (64%)	99	26 (85%)	06	0	96

		XDR Patients	S	H-Mo	H-Mono/Poly	Patients initiat	ted on Newer regimen	Patients initiated on Newer drugs containing regimen
State	Diagnosed	Initiated on treatment	Initiated on all oral longer regimen	Diagnosed	Initiated on treatment	Bedaquilline	Delaminid	Any Newer drug containing regimen
Mizoram	2	2 (100%)	(%0) 0	33	25 (76%)	82	0	82
Nagaland	4	2 (50%)	1 (50%)	21	15 (71%)	30	0	30
Odisha	23	19 (83%)	16 (84%)	216	190 (88%)	128	13	141
Puducherry	0	0 (NA)	0 (NA)	26	26 (100%)	16	1	17
Punjab	14	13 (93%)	13 (100%)	333	281 (84%)	261	4	265
Rajasthan	62	59 (75%)	50 (85%)	1051	744 (71%)	543	17	560
Sikkim	2	4 (80%)	3 (75%)	13	13 (100%)	57	0	57
Tamil Nadu	24	17 (71%)	16 (94%)	1598	1408 (88%)	298	7	305
Telangana	48	40 (83%)	36 (90%)	971	813 (84%)	303	6	312
Tripura	9	5 (83%)	5 (100%)	101	85 (84%)	28	2	30
Uttar Pradesh	277	173 (62%)	107 (62%)	926	672 (69%)	1371	25	1396
Uttarakhand	16	15 (94%)	10 (67%)	127	109 (86%)	156	1	157
West Bengal	27	22 (81%)	21 (95%)	346	233 (67%)	376	5	381
India	1232	993 (81%)	(%64) 884	13384	11335 (85%)	10140	349	10489

Data Source: Case Finding on diagnosis and treatment initiation – State Submitted Data

4.5 Treatment Outcome of MDR/RR TB Patients initiated on treatment during 2017

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
Andaman & Nicobar Islands	49	17 (35%)	25 (51%)	14 (29%)	8 (16%)	2 (4%)	0 (0%)	0 (%0)
Andhra Pradesh	738	272 (37%)	444 (60%)	139 (19%)	118 (16%)	6 (1%)	22 (3%)	9 (1%)
Arunachal Pradesh	212	57 (27%)	116 (55%)	15 (7%)	67 (32%)	3 (1%)	0 (0%)	11 (5%)
Assam	411	117 (28%)	197 (48%)	79 (19%)	95 (23%)	9 (2%)	25 (6%)	6 (1%)
Bihar	1932	647 (33%)	1016 (53%)	349 (18%)	348 (18%)	60 (3%)	118 (6%)	41 (2%)
Chandigarh	48	28 (58%)	32 (67%)	3 (6%)	6 (13%)	2 (4%)	0 (0%)	5 (10%)
Chhattisgarh	273	57 (21%)	149 (55%)	55 (20%)	59 (22%)	4 (1%)	2 (1%)	4 (1%)
Dadra and Nagar Haveli and Daman and Diu	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Delhi	1375	414 (30%)	634 (46%)	180 (13%)	264 (19%)	9 (1%)	225 (16%)	63 (5%)
Goa	40	19 (48%)	22 (55%)	8 (20%)	3 (8%)	0 (0%)	2 (5%)	5 (13%)
Gujarat	1976	605 (31%)	848 (43%)	381 (19%)	315 (16%)	158 (8 <mark>%</mark> )	222 (11%)	52 (3%)
Haryana	693	238 (34%)	371 (54%)	145 (21%)	121 (17%)	22 (3%)	6 (1%)	28 (4%)
Himachal Pradesh	239	98 (41%)	155 (65%)	44 (18%)	21 (9%)	3 (1%)	7 (3%)	9 (4%)
Jammu & Kashmir	126	61 (48%)	75 (60%)	20 (16%)	19 (15%)	5 (4%)	3 (2%)	4 (3%)
Jharkhand	494	150 (30%)	277 (56%)	64 (13%)	112 (23%)	7 (1%)	23 (5%)	11 (2%)
Karnataka	1000	243 (24%)	423 (42%)	259 (26%)	194 (19%)	32 (3%)	36 (4%)	56 (6%)
Kerala	249	93 (37%)	137 (55%)	52 (21%)	42 (17%)	3 (1%)	9 (4%)	6 (2%)
Ladakh	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Lakshadweep	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Madhya Pradesh	1757	538 (31%)	862 (49%)	340 (19%)	416 (24%)	55 (3%)	64 (4%)	20 (1%)
Maharashtra	8346	1815 (22%)	3625 (43%)	1197 (14%)	1566 (19%)	124 (1%)	826 (10%)	1008 (12%)
Manipur	46	26 (57%)	31 (67%)	5 (11%)	5 (11%)	3 (7%)	0 (0%)	2 (4%)
Meghalaya	250	78 (31%)	165 (66%)	30 (12%)	38 (15%)	5 (2%)	4 (2%)	8 (3%)
Mizoram	89	26 (38%)	40 (59%)	10 (15%)	12 (18%)	3 (4%)	1 (1%)	2 (3%)
Nagaland	81	13 (16%)	43 (53%)	2 (9%)	26 (32%)	1 (1%)	2 (2%)	2 (2%)

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
0disha	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Puducherry	14	7 (50%)	7 (50%)	2 (14%)	1 (7%)	4 (29%)	(%0)0	(%0) 0
Punjab	505	167 (33%)	265 (52%)	90 (18%)	88 (17%)	3 (1%)	24 (5%)	35 (7%)
Rajasthan	2545	784 (31%)	1256 (49%)	613 (24%)	413 (16%)	52 (2%)	167 (7%)	44 (2%)
Sikkim	262	155 (59%)	182 (69%)	40 (15%)	24 (9%)	3 (1%)	5 (2%)	8 (3%)
Tamil Nadu	1135	264 (23%)	473 (42%)	237 (21%)	327 (29%)	23 (2%)	53 (5%)	22 (2%)
Telangana	835	410 (49%)	467 (56%)	192 (23%)	134 (16%)	9 (1%)	19 (2%)	14 (2%)
Tripura	35	14 (40%)	20 (57%)	3 (9%)	11 (31%)	(%0) 0	1 (3%)	(%0) 0
Uttar Pradesh	7812	1696 (22%)	4034 (52%)	1430 (18%)	1394 (18%)	117 (1%)	601 (8%)	236 (3%)
Uttarakhand	335	107 (32%)	177 (53%)	55 (16%)	67 (20%)	4 (1%)	15 (4%)	17 (5%)
West Bengal	1833	523 (29%)	951 (52%)	302 (16%)	329 (18%)	40 (2%)	140 (8%)	71 (4%)
India	36043	9860 (27%)	17699 (49%)	6422 (18%)	6697 (19%)	776 (2%)	2635 (7%)	1814 (5%)

Failure also includes treatment stopped due to ADR and other reasons

Not evaluated includes transfer out and People still on treatment at the time of data collection/ submission

The data published in 2020 report was upto 2Q17. The current report includes the total 2017 cohort data.

Data Source: - State Submitted Data

4.6 Treatment Outcome of XDR TB Patients initiated on treatment during 2017

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Not Evaluated (%)
Andaman & Nicobar Islands	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Andhra Pradesh	80	14 (18%)	34 (43%)	30 (38%)	13 (16%)	3 (4%)	0 (0%)
Arunachal Pradesh	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Assam	5	0 (0%)	1 (20%)	1 (20%)	3 (60%)	0 (0%)	0 (0%)
Bihar	35	8 (23%)	18 (51%)	9 (26%)	5 (14 <mark>%</mark> )	2 (6%)	1 (3%)
Chandigarh	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Chhattisgarh	9	2 (33%)	4 (67%)	(%0) 0	2 (33%)	0 (0%)	0 (0%)
Dadra and Nagar Haveli and Daman and Diu	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Delhi	92	16 (21%)	27 (36%)	26 (34%)	11 (14%)	5 (7%)	7 (9%)
Goa	2	1 (50%)	1 (50%)	1 (50%)	(%0) 0	(%0) 0	0 (0%)
Gujarat	91	30 (33%)	36 (40%)	30 (33%)	8 (9%)	16 (18%)	1 (1%)
Haryana	15	3 (20%)	6 (40%)	(%09)6	0 (0%)	0 (0%)	0 (0%)
Himachal Pradesh	2	0 (0%)	0 (0%)	1 (50%)	0 (0%)	0 (0%)	1 (50%)
Jammu & Kashmir	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Jharkhand	10	2 (20%)	2 (20%)	3 (30%)	2 (20%)	0 (0%)	3 (30%)
Karnataka	63	10 (16%)	25 (40%)	21 (33%)	10 (16%)	1 (2%)	6 (10%)
Kerala	17	5 (29%)	6 (35%)	6 (35%)	2 (12%)	1 (6%)	2 (12%)
Ladakh	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Lakshadweep	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Madhya Pradesh	27	8 (30%)	13 (48%)	10 (37%)	2 (7%)	1 (4%)	1 (4%)
Maharashtra	504	86 (17%)	176 (35%)	145 (29%)	85 (17%)	46 (9%)	52 (10%)
Manipur	5	3 (60%)	3 (60%)	1 (20%)	1 (20%)	0 (0%)	0 (0%)
Meghalaya	3	0 (0%)	0 (0%)	2 (67%)	1 (33%)	0 (0%)	0 (0%)
Mizoram	1	0 (0%)	1 (100%)	(%0) 0	0 (%)	0 (0%)	0 (0%)
Nagaland	1	0 (0%)	0 (0%)	(%0) 0	1 (100%)	0 (0%)	0 (0%)
Odisha	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Puducherry	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Not Evaluated (%)
Punjab	13	1 (8%)	3 (23%)	5 (38%)	3 (23%)	0 (0%)	2 (15%)
Rajasthan	82	12 (15%)	28 (34%)	35 (43%)	16 (20%)	2 (2%)	1 (1%)
Sikkim	1	(%0) 0	0 (0%)	0 (0%)	1 (100%)	0 (0%)	(%0) 0
Tamil Nadu	48	11 (23%)	19 (40%)	14 (29%)	11 (23%)	4 (8%)	(%0) 0
Telangana	38	13 (34%)	16 (42%)	15 (39%)	5 (13%)	2 (5%)	(%0) 0
Tripura	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Uttar Pradesh	240	29 (12%)	78 (33%)	98 (41%)	43 (18%)	15 (6%)	6 (3%)
Uttarakhand	9	1 (17%)	2 (33%)	2 (33%)	1 (17%)	0 (0%)	1 (17%)
West Bengal	57	12 (21%)	18 (32%)	16 (28%)	13 (23%)	7 (12%)	3 (5%)
India	1436	267 (19%)	519 (36%)	486 (34%)	239 (17%)	105 (7%)	87 (6%)
Failure also includes treatment stopped due to	tment stopped d	ue to ADR and	other reasons as	s well as regim	ADR and other reasons as well as regimen changed to cat5		
Not evaluated includes transfer out and People	ansfer out and P	eople still on tr	eatment at the t	time of data col	still on treatment at the time of data collection/ submission		
The data published in 2020 report was upto 2Q17. The current report includes the total 2017 cohort data	20 report was up	oto 2Q17. The $\mathfrak c$	urrent report in	ıcludes the tota	l 2017 cohort data.		
Data Source: – State Submitted Data	iitted Data						

4.7 Treatment Outcome of H-Mono/ Poly Regimen Patients initiated on treatment during 2019

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
Andaman & Nicobar Islands	1	1 (100%)	1 (100%)	(%0) 0	0 (0%)	(%0) 0	(%0) 0	(%0)0
Andhra Pradesh	1435	731 (51%)	1153 (80%)	(%9) 62	69 (5%)	9 (1%)	110 (8%)	15 (1%)
Arunachal Pradesh	9	4 (67%)	5 (83%)	1 (17%)	0 (0%)	0 (0%)	(%0) 0	(%0) 0
Assam	152	74 (49%)	134 (88%)	5 (3%)	7 (5%)	3 (2%)	3 (2%)	(%0) 0
Bihar	132	48 (36%)	91 (69%)	5 (4%)	5 (4%)	3 (2%)	12 (9%)	16 (12%)
Chandigarh	34	26 (76%)	26 (76%)	1 (3%)	3 (9%)	(%0) 0	3 (9%)	1 (3%)
Chhattisgarh	257	137 (53%)	209 (81%)	10 (4%)	5 (2%)	6 (2%)	18 (7%)	9 (4%)
Dadra and Nagar Haveli and Daman and Diu	9	4 (67%)	4 (67%)	0 (%)	0 (0%)	1 (17%)	1 (17%)	(%0)0
Delhi	710	393 (55%)	527 (74%)	23 (3%)	84 (12%)	23 (3%)	43 (6%)	10 (1%)
Goa	24	22 (92%)	22 (92%)	1 (4%)	1 (4%)	0 (0%)	0 (0%)	(%0) 0
Gujarat	1389	830 (60%)	988 (71%)	159 (11%)	83 (6%)	113 ( <mark>8</mark> %)	38 (3%)	8 (1%)
Haryana	109	56 (51%)	96 (88%)	4 (4%)	3 (3%)	1 (1%)	4 (4%)	1 (1%)
Himachal Pradesh	220	139 (63%)	202 (92%)	8 (4%)	4 (2%)	2 (1%)	3 (1%)	1 (0%)
Jammu & Kashmir	11	7 (64%)	7 (64%)	0 (0%)	0 (0%)	0 (0%)	2 (18%)	2 (18%)
Jharkhand	51	17 (33%)	42 (82%)	0 (0%)	3 (6%)	0 (0%)	4 (8%)	2 (4%)
Karnataka	1174	753 (64%)	958 (82%)	55 (5%)	99 (8%)	21 (2%)	39 (3%)	2 (0%)
Kerala	133	81 (61%)	111 (83%)	7 (5%)	7 (5%)	2 (2%)	3 (2%)	3 (2%)
Ladakh	2	(%0) 0	4 (80%)	1 (20%)	0 (0%)	0 (0%)	(%0) 0	(%0) 0
Lakshadweep	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Madhya Pradesh	767	286 (37%)	585 (76%)	43 (6%)	76 (10%)	14 (2%)	30 (4%)	19 (2%)
Maharashtra	1195	577 (48%)	904 (76%)	59 (5%)	94 (8%)	24 (2%)	54 (5%)	(%5) 09
Manipur	14	10 (71%)	13 (93%)	0 (0%)	0 (0%)	0 (0%)	(%0) 0	1 (7%)
Meghalaya	40	19 (48%)	36 (90%)	1 (3%)	2 (5%)	1 (3%)	0 (0%)	(%0) 0
Mizoram	7	2 (29%)	(86%)	0 (0%)	0 (0%)	0 (0%)	1 (14%)	(%0) 0
Nagaland	10	2 (20%)	4 (40%)	0 (0%)	1 (10%)	1 (10%)	4 (40%)	(%0) 0
Odisha	212	116 (55%)	173 (82%)	10 (5%)	15 (7%)	3 (1%)	9 (4%)	2 (1%)

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
Puducherry	73	49 (67%)	52 (71%)	0 (0%)	14 (19%)	5 (7%)	2 (3%)	(%0) 0
Punjab	399	212 (53%)	324 (81%)	16 (4%)	27 (7%)	4 (1%)	20 (5%)	8 (2%)
Rajasthan	855	399 (47%)	(%22) 099	49 (6%)	42 (5%)	16 (2%)	49 (6%)	39 (5%)
Sikkim	2	0 (0%)	(%0) 0	(%0) 0	(%0)0	(%0) 0	(%0) 0	2 (100%)
Tamil Nadu	2195	1318 (60%)	1717 (78%)	100 (5%)	203 (9%)	39 (2%)	121 (6%)	15 (1%)
Telangana	532	284 (53%)	391 (73%)	19 (4%)	20 (4%)	3 (1%)	53 (10%)	46 (9%)
Tripura	89	39 (57%)	47 (69%)	2 (3%)	10 (15%)	5 (7%)	3 (4%)	1 (1%)
Uttar Pradesh	518	167 (32%)	385 (74%)	32 (6%)	32 (2%)	7 (1%)	37 (7%)	22 (4%)
Uttarakhand	69	33 (48%)	52 (75%)	4 (6%)	4 (6%)	1 (1%)	3 (4%)	5 (7%)
West Bengal	215	93 (43%)	165 (77%)	10 (5%)	14 (7%)	12 (6%)	8 (4%)	6 (3%)
India	13020	6929 (53%)	10094 (78%)	704 (5%)	930 (7%)	319 (2%)	677 (5%)	296 (2%)
Data Source: Nikshay – Data extracted as on 03 <sup>rd</sup> March 2021	ata extracted as on	03rd March 202	1					

4.8 Treatment Outcome of MDR TB patients initiated on Shorter regimen during 2019

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
Andaman & Nicobar Islands	28	(%0)0	19 (68%)	2 (7%)	(%0) 0	5 (18%)	2 (7%)	(%0)0
Andhra Pradesh	1772	758 (43%)	1135 (64%)	230 (13%)	172 (10%)	(%0) 9	204 (12%)	25 (1%)
Arunachal Pradesh	167	26 (16%)	95 (57%)	18 (11%)	37 (22%)	4 (2%)	11 (7%)	2 (1%)
Assam	750	180 (24%)	457 (61%)	(%6) 69	113 (15%)	18 (2%)	76 (10%)	17 (2%)
Bihar	2238	603 (27%)	1105 (49%)	219 (10%)	335 (15%)	39 (2%)	358 (16%)	182 (8%)
Chandigarh	33	14 (42%)	22 (67%)	4 (12%)	2 (6%)	0 (0%)	4 (12%)	1 (3%)
Chhattisgarh	313	82 (26%)	162 (52%)	39 (12%)	42 (13%)	6 (2%)	46 (15%)	18 (6%)
Dadra and Nagar Haveli and Daman and Diu	17	7 (41%)	8 (47%)	(%0) 0	(%0) 0	(%0) 0	7 (41%)	2 (12%)
Delhi	1707	506 (30%)	843 (49%)	92 (5%)	243 (14%)	57 (3%)	441 (26%)	31 (2%)
Goa	19	6 (32%)	7 (37%)	(%0) 0	1 (5%)	(%0) 0	11 (58%)	0 (0%)
Gujarat	2375	856 (36%)	1215 (51%)	248 (10%)	272 (11%)	152 (6%)	453 (19%)	35 (1%)
Haryana	1323	328 (25%)	885 (67%)	142 (11%)	196 (15%)	17 (1%)	59 (4%)	24 (2%)
Himachal Pradesh	267	143 (54%)	194 (73%)	19 (7%)	21 (8%)	3 (1%)	28 (10%)	2 (1%)
Jammu & Kashmir	136	71 (52%)	85 (63%)	11 (8%)	8 (6%)	10 (7%)	10 (7%)	12 (9%)
Jharkhand	447	119 (27%)	284 (64%)	34 (8%)	72 (16%)	9 (2%)	33 (7%)	15 (3%)
Karnataka	1464	574 (39%)	825 (56%)	202 (14%)	202 (14%)	46 (3%)	177 (12%)	12 (1%)
Kerala	165	82 (50%)	111 (67%)	14 (8%)	11 (7%)	3 (2%)	24 (15%)	2 (1%)
Ladakh	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Lakshadweep	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Madhya Pradesh	2835	576 (20%)	1685 (59%)	326 (11%)	459 (16%)	54 (2%)	236 (8%)	75 (3%)
Maharashtra	3021	847 (28%)	1520 (50%)	331 (11%)	318 (11%)	54 (2%)	697 (23%)	101 (3%)
Manipur	39	17 (44%)	22 (56%)	3 (8%)	2 (5%)	1 (3%)	0 (0%)	11 (28%)
Meghalaya	212	40 (19%)	118 (56%)	27 (13%)	31 (15%)	12 (6%)	21 (10%)	3 (1%)
Mizoram	92	24 (32%)	53 (70%)	5 (7%)	9 (12%)	1 (1%)	(%8) 9	2 (3%)
Nagaland	91	37 (41%)	64 (70%)	2 (5%)	17 (19%)	1 (1%)	4 (4%)	0 (0%)

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
Odisha	525	156 (30%)	343 (65%)	53 (10%)	57 (11%)	2 (0%)	55 (10%)	15 (3%)
Puducherry	8	5 (63%)	5 (63%)	0 (0%)	1 (13%)	1 (13%)	1 (13%)	0 (0%)
Punjab	586	178 (30%)	340 (58%)	79 (13%)	66 (11%)	8 (1%)	73 (12%)	20 (3%)
Rajasthan	2768	897 (32%)	1554 (56%)	333 (12%)	373 (13%)	35 (1%)	350 (13%)	123 (4%)
Sikkim	179	34 (19%)	70 (39%)	16 (9%)	9 (5%)	4 (2%)	6 (3%)	74 (41%)
Tamil Nadu	1405	521 (37%)	803 (57%)	174 (12%)	240 (17%)	33 (2%)	128 (9%)	27 (2%)
Telangana	1581	753 (48%)	997 (63%)	184 (12%)	111 (7%)	15 (1%)	142 (9%)	132 (8%)
Tripura	27	10 (37%)	16 (59%)	1 (4%)	6 (22%)	1 (4%)	3 (11%)	(%0) 0
Uttar Pradesh	10359	1863 (18%)	5729 (55%)	1337 (13%)	1239 (12%)	133 (1%)	1658 (16%)	263 (3%)
Uttarakhand	169	51 (30%)	93 (55%)	17 (10%)	19 (11%)	1 (1%)	29 (17%)	10 (6%)
West Bengal	2172	633 (29%)	1404 (65%)	239 (11%)	214 (10%)	(%8) 69	209 (10%)	37 (2%)
India	39274	10997 (28%)	(28%) 22268 (57%) 4473 (11%)	4473 (11%)	4898 (12%)	800 (2%)	5562 (14%)	1273 (3%)
Data Source: Nikshay – Data extracted as on 03 <sup>rd</sup> March 2021	Data extracted as c	on 03 <sup>rd</sup> March 2	021					

4.9 Treatment Outcome of MDR TB patients initiated on conventional regimen as well as MDR TB patients with additional resistance initiated on any regimen during 2018

State	Registered	Cure Rate	Success	Death Rate	Loss to follow	Failure	Regimen	Not Evaluated
Andaman & Nicobar Islands	50	10 (20%)	31 (62%)	6 (12%)	9 (18%)	2 (4%)	1 (2%)	1 (2%)
Andhra Pradesh	408	122 (30%)	217 (53%)	69 (17%)	38 (9%)	5 (1%)	67 (16%)	12 (3%)
Arunachal Pradesh	107	21 (20%)	59 (55%)	5 (5%)	32 (30%)	2 (2%)	3 (3%)	(%9) 9
Assam	189	37 (20%)	95 (50%)	30 (16%)	39 (21%)	1 (1%)	6 (5%)	15 (8%)
Bihar	1822	479 (26%)	920 (20%)	225 (12%)	237 (13%)	25 (1%)	198 (11%)	217 (12%)
Chandigarh	25	11 (44%)	15 (60%)	4 (16%)	4 (16%)	(%0) 0	1 (4%)	1 (4%)
Chhattisgarh	130	33 (25%)	(%09) 82	21 (16%)	13 (10%)	(%0) 0	14 (11%)	4 (3%)
Dadra and Nagar Haveli and Daman and Diu	8	5 (63%)	(%52)	(%0) 0	2 (25%)	(%0) 0	(%0) 0	(%0) 0
Delhi	1080	317 (29%)	617 (57%)	133 (12%)	154 (14%)	20 (2%)	102 (9%)	54 (5%)
Goa	42	15 (36%)	22 (52%)	6 (14%)	5 (12%)	(%0) 0	6 (14%)	3 (7%)
Gujarat	1553	546 (35%)	734 (47%)	253 (16%)	188 (12%)	78 (5%)	186 (12%)	114 (7%)
Haryana	413	104 (25%)	255 (62%)	68 (16%)	62 (15%)	2 (0%)	17 (4%)	9 (2%)
Himachal Pradesh	75	23 (31%)	52 (69%)	13 (17%)	8 (11%)	0 (0%)	2 (3%)	(%0) 0
Jammu & Kashmir	28	15 (54%)	22 (79%)	4 (14%)	1 (4%)	0 (0%)	0 (0%)	1 (4%)
Jharkhand	548	128 (23%)	317 (58%)	69 (13%)	104 (19%)	10 (2%)	36 (7%)	12 (2%)
Karnataka	613	188 (31%)	288 (47%)	138 (23%)	90 (15%)	20 (3%)	50 (8%)	27 (4%)
Kerala	112	45 (40%)	(%09) 29	20 (18%)	10 (9%)	0 (0%)	8 (7%)	2 (6%)
Ladakh	9	1 (17%)	4 (67%)	1 (17%)	0 (0%)	0 (0%)	0 (0%)	1 (17%)
Lakshadweep	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Madhya Pradesh	1175	239 (20%)	646 (55%)	171 (15%)	229 (19%)	25 (2%)	(%5) 09	44 (4%)
Maharashtra	7613	1586 (21%)	3772 (50%)	1094 (14%)	1211 (16%)	105 (1%)	905 (12%)	526 (7%)
Manipur	19	7 (37%)	9 (47%)	1 (5%)	5 (26%)	0 (0%)	0 (0%)	4 (21%)
Meghalaya	73	13 (18%)	44 (60%)	8 (11%)	9 (12%)	4 (5%)	7 (10%)	1 (1%)
Mizoram	33	18 (55%)	25 (76%)	2 (6%)	4 (12%)	0 (0%)	0 (0%)	2 (6%)
Nagaland	38	12 (32%)	19 (50%)	5 (13%)	13 (34%)	(%0)0	0 (0%)	1 (3%)

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
Odisha	186	61 (33%)	115 (62%)	30 (16%)	22 (12%)	2 (1%)	12 (6%)	5 (3%)
Puducherry	12	5 (42%)	(%05)9	1 (8%)	1 (8%)	3 (25%)	(%0)0	1 (8%)
Punjab	423	109 (26%)	216 (51%)	86 (20%)	61 (14%)	6 (1%)	42 (10%)	12 (3%)
Rajasthan	2703	750 (28%)	1365 (50%)	498 (18%)	415 (15%)	51 (2%)	162 (6%)	212 (8%)
Sikkim	100	16 (16%)	(%09) 09	9 (9%)	3 (3%)	0 (0%)	7 (7%)	21 (21%)
Tamil Nadu	573	150 (26%)	265 (46%)	125 (22%)	128 (22%)	6 (1%)	36 (6%)	13 (2%)
Telangana	456	149 (33%)	239 (52%)	74 (16%)	32 (7%)	10 (2%)	69 (15%)	32 (7%)
Tripura	8	4 (50%)	2 (63%)	2 (25%)	(%0) 0	1 (13%)	(%0) 0	(%0) 0
Uttar Pradesh	9671	1639 (17%)	5070 (52%)	1387 (14%)	1378 (14%)	119 (1%)	971 (10%)	746 (8%)
Uttarakhand	356	83 (23%)	180 (21%)	39 (11%)	63 (18%)	6 (2%)	31 (9%)	37 (10%)
West Bengal	1291	277 (21%)	643 (50%)	226 (18%)	178 (14%)	21 (2%)	138 (11%)	85 (7%)
India	31939	7218 (23%)	16478 (52%)	4823 (15%)	4748 (15%)	524 (2%)	3140 (10%)	2226 (7%)

Data Source: Nikshay – Data extracted as on 03<sup>rd</sup> March 2021

4.10 Treatment Outcome of XDR TB patients initiated on any regimen during 2018

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
Andaman & Nicobar Islands	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Andhra Pradesh	23	5 (22%)	13 (57%)	4 (17%)	2 (9%)	1 (4%)	1 (4%)	2 (9%)
Arunachal Pradesh	1	0 (0%)	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	(%0) 0
Assam	6	1 (11%)	2 (22%)	(%29) 9	0 (0%)	(%0) 0	1 (11%)	(%0) 0
Bihar	171	48 (28%)	83 (49%)	25 (15%)	24 (14%)	0 (0%)	11 (6%)	28 (16%)
Chandigarh	2	0 (0%)	1 (50%)	0 (0%)	(%0) 0	(%0) 0	1 (50%)	(%0) 0
Chhattisgarh	9	2 (33%)	4 (67%)	1 (17%)	0 (0%)	(%0) 0	1 (17%)	(%0) 0
Dadra and Nagar Haveli and Daman and Diu	2	1 (50%)	1 (50%)	(%0) 0	(%0) 0	(%0) 0	1 (50%)	(%0) 0
Delhi	122	38 (31%)	(%25) 69	16 (13%)	18 (15%)	0 (0%)	13 (11%)	6 (5%)
Goa	5	2 (40%)	2 (40%)	1 (20%)	1 (20%)	0 (0%)	1 (20%)	(%0) 0
Gujarat	206	68 (33%)	87 (42%)	54 (26%)	17 (8%)	15 (7 <mark>%</mark> )	23 (11%)	10 (5%)
Haryana	30	8 (27%)	21 (70%)	5 (17%)	1 (3%)	0 (0%)	3 (10%)	(%0) 0
Himachal Pradesh	15	8 (53%)	10 (67%)	3 (20%)	(%0) 0	(%0)0	1 (7%)	1 (7%)
Jammu & Kashmir	3	1 (33%)	2 (67%)	1 (33%)	(%0) 0	(%0) 0	0 (0%)	(%0) 0
Jharkhand	20	3 (15%)	9 (45%)	(%08)	1 (5%)	2 (10%)	1 (5%)	1 (5%)
Karnataka	38	10 (26%)	16 (42%)	12 (32%)	5 (13%)	1 (3%)	4 (11%)	(%0) 0
Kerala	5	2 (40%)	4 (80%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (20%)
Ladakh	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Lakshadweep	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Madhya Pradesh	87	14 (16%)	40 (46%)	16 (18%)	12 (14%)	2 (2%)	11 (13%)	(%2) 9
Maharashtra	947	210 (22%)	410 (43%)	242 (26%)	103 (11%)	26 (3%)	112 (12%)	54 (6%)
Manipur	1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (100%)
Meghalaya	15	3 (20%)	8 (53%)	6 (40%)	1 (7%)	0 (0%)	0 (0%)	(%0) 0
Mizoram	2	0 (0%)	1 (50%)	0 (0%)	1 (50%)	(%0) 0	0 (0%)	(%0) 0
Nagaland	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Odisha	18	4 (22%)	10 (56%)	5 (28%)	2 (11%)	(%0)0	1 (6%)	0 (0%)

State	Registered	Cure Rate	Success Rate	Death Rate	Loss to follow up (%)	Failure (%)	Regimen Change (%)	Not Evaluated (%)
Puducherry	3	2 (67%)	2 (67%)	(%0)0	1 (33%)	(%0) 0	0 (0%)	(%0) 0
Punjab	24	6 (25%)	14 (58%)	6 (25%)	1 (4%)	0 (0%)	3 (13%)	0 (%)
Rajasthan	107	29 (27%)	53 (50%)	34 (32%)	11 (10%)	3 (3%)	2 (2%)	4 (4%)
Sikkim	3	1 (33%)	1 (33%)	(%0) 0	0 (%0)	(%0) 0	(%0) 0	2 (67%)
Tamil Nadu	36	10 (28%)	18 (50%)	5 (14%)	3 (8%)	4 (11%)	5 (14%)	1 (3%)
Telangana	16	(%8£)	7 (44%)	7 (44%)	1 (6%)	(%0) 0	(%0) 0	1 (6%)
Tripura	0	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Uttar Pradesh	535	76 (14%)	244 (46%)	145 (27%)	65 (12%)	13 (2%)	25 (5%)	43 (8%)
Uttarakhand	23	6 (26%)	12 (52%)	6 (26%)	0 (0%)	0 (0%)	3 (13%)	2 (9%)
West Bengal	169	22 (13%)	56 (33%)	51 (30%)	24 (14%)	11 (7%)	5 (3%)	22 (13%)
India	2644	586 (22%)	1201 (45%)	657 (25%)	294 (11%)	78 (3%)	229 (9%)	185 (7%)
Data Source: Nikshay – Data extracted as on 03 <sup>rd</sup> ,	ı extracted as on 03	rd March 2021						

5. Private Sector Engagement:

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5.1 Pr

State	Hospitals	Laboratories	Chemists	Health Facilities Registered
Andaman & Nicobar Islands	4	0	0	4
Andhra Pradesh	5123	069	5720	11533
Arunachal Pradesh	22	0	4	26
Assam	1304	340	863	2537
Bihar	6852	421	186	7459
Chandigarh	119	51	16	186
Chhattisgarh	1809	392	3783	5984
Dadra and Nagar Haveli and Daman and Diu	110	21	29	198
Delhi	4314	402	49	4765
Goa	651	32	0	683
Gujarat	10358	576	6431	17365
Haryana	2583	552	2877	6012
Himachal Pradesh	559	275	1	835
Jammu & Kashmir	665	379	98	1130
Jharkhand	2239	156	752	3147
Karnataka	17337	2126	10104	29567
Kerala	9269	1571	10	8557
Ladakh	40	7	3	50
Lakshadweep	0	0	0	0
Madhya Pradesh	8258	639	1149	10046
Maharashtra	38870	3018	5050	46938
Manipur	75	46	101	222
Meghalaya	83	24	19	126
Mizoram	26	13	0	39
Nagaland	45	16	73	134
Odisha	2074	263	490	2827

State	Hospitals	Laboratories	Chemists	Health Facilities Registered
Puducherry	28	4	10	42
Punjab	2639	452	115	3206
Rajasthan	3092	345	771	4208
Sikkim	41	15	0	56
Tamil Nadu	19252	2922	3832	26006
Telangana	4928	772	1579	7279
Tripura	58	157	2	217
Uttar Pradesh	18611	1676	1491	21778
Uttarakhand	531	125	219	875
West Bengal	7595	2421	4783	14799
India	167271	20899	20666	238836
	1000	7000		

Data Source: Nikshay – Data extracted as on 12<sup>th</sup> February 2021

5.2 Private Health Facilities that have notified at least ONE TB case during the year 2020

Andaman & Nicobar Islands         0         0         0           Andhra Pradesh         880         479         30           Arunachal Pradesh         1         0         0           Arunachal Pradesh         1         0         0           Assam         282         267         34         8           Bhar         2255         210         15         8           Chandigarh         482         184         14         14           Dadra and Nagar Haveli and Daman and Diu         14         5         0         0           Delhi         719         286         0	State	Hospitals	Laboratories	Chemists	Total Health Facilities notifying TB case
rical Pradesh 880 4799 challed by a Pradesh 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 0 0 0 0	Andaman & Nicobar Islands	0	0	0	
tisgarh and Nagar Haveli and Daman and Diu tt and Nagar Haveli and Daman and Diu and Nagar Haveli and Daman and Diu tt and Nagar Haveli and Daman and Diu and Nagar Haveli and Daman and Diu tt and Nagar Haveli and Daman and Diu and Nagar Haveli and Daman and Diu and Nagar Haveli and Daman and Diu and Asshmir and Asshmir taka and Asshmir b adweep b adweep c ashtra and and and and and and and and and an	Andhra Pradesh	880	479	30	1389
1         282         267         Entert	Arunachal Pradesh	1	0	0	1
igarh         2155         210           iigarh         21         32           and Nagar Haveli and Daman and Diu         14         5           and Nagar Haveli and Daman and Diu         14         5           att         719         286           tt         3291         488           natt         900         353           inatt         618         65           inand         618         65           inand         1720         920           h         2         0           adweep         0         0           adweep         1883         382           ashtra         4468         1849           urr         10         29           urr         10         29           am         16         7           and         16         7           and         16         7           and         16         15           and         16         15	Assam	282	267	34	583
tisgarh tisgarh tisgarh and Nagar Haveli and Daman and Diu tisgarh and Nagar Haveli and Daman and Diu tat at tat at tat ana Nagar Haveli and Daman and Diu at tat at tat at tat ana ana	Bihar	2255	210	15	2480
tisgarh tisgarh tisgarh tisgarh tisgarh tisgarh tisgarh tisgarh tisgarh tind Daman and Diu 14 5 719 286 719 286 719 286 719 286 719 286 719 2891 719 63 353 719 648 658 719 658 719 658 719 658 719 658 719 658 719 658 719 658 719 719 659 719 719 719 719 719 719 719 719 719 71	Chandigarh	21	32	8	61
and Nagar Haveli and Daman and Diu         14         5           and Nagar Haveli and Daman and Diu         719         286           at         32         12           at         3291         488           na         900         353           chal Pradesh         71         63           nand         618         65           nand         1720         920           atka         214         436           th         2         0           adweep         0         0           adweep         4468         1849           vas Pradesh         1883         382           varshtra         6         23           and         6         23           am         16         7           and         16         7           and         16         15           and         408         150	Chhattisgarh	482	184	14	680
at 3291 286 and	Dadra and Nagar Haveli and Daman and Diu	14	5	0	19
street     3291     488       la     3291     488       la     900     353       nal Pradesh     71     63       and     618     65       and     618     65       aka     1720     920       la     214     436       la     2     0       dweep     0     0       a Pradesh     1883     382       shtra     4468     1849       la     10     29       laya     6     23       m     16     7       nd     16     15       nd     16     15	Delhi	719	286	0	1005
that a state of the state of th	Goa	32	12	0	44
al Pradesh     71     63       & Kashmir     96     96       and     618     65       and     1720     920       aka     1720     920       t     214     436       dweep     0     0       a Pradesh     1883     382       ashtra     4468     1849       ur     10     29       laya     6     23       m     16     15       nd     16     15       nd     408     150	Gujarat	3291	488	5	3784
R Kashmir     71     63       ak Kashmir     96     96       and     618     65       aka     1720     920       t     214     436       dweep     0     0       a Pradesh     1883     382       ashtra     4468     1849       ur     10     29       m     6     23       m     16     7       nd     16     15       nd     408     150	Haryana	900	353	28	1281
& Kashmir       96       96       96       96       96       96       and       and       618       65       96       96       96       96       96       96       96       96       96       96       96       96       96       96       96       920       70       97 <td>Himachal Pradesh</td> <td>71</td> <td>63</td> <td>0</td> <td>134</td>	Himachal Pradesh	71	63	0	134
and     618     65       aka     1720     920       t     214     436       dweep     0     0       a Pradesh     1883     382       sshtra     4468     1849       ur     10     29       m     6     23       nd     16     7       nd     16     15       nd     408     150	Jammu & Kashmir	96	96	17	209
aka         1720         920           t         214         436           t         2         0           dweep         0         0         0           a Pradesh         1883         382         382           ashtra         4468         1849         1           ir         10         29         23           m         6         23         1           nd         16         7         1           nd         16         15         1           rd         408         150         1	Jharkhand	618	65	21	704
t     214     436       dweep     2     0       a Pradesh     1883     382       ashtra     4468     1849       nr     10     29       laya     6     23       m     16     7       nd     16     15       nd     408     150	Karnataka	1720	920	116	2756
sh     0     0       sch     1883     382       4468     1849     1       6     29     29       6     23     6       16     7     1       16     15     1       408     150     150	Kerala	214	436	0	650
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esh 1883 382 382 4468 1849 1879 6 29 6 23 6 6 23 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Lakshadweep	0	0	0	0
4468       1849         10       29         6       23         16       7         16       15         408       150	Madhya Pradesh	1883	382	27	2292
10     29       6     23       16     7       16     7       16     15       408     150	Maharashtra	4468	1849	115	6432
6     23       16     7       16     15       408     150	Manipur	10	29	0	39
16     7       16     7       16     15       408     150	Meghalaya	6	23	0	29
16     15       408     150	Mizoram	16	7	0	23
408 150	Nagaland	16	15	14	45
	Odisha	408	150	91	649
Puducherry 0 3 0	Puducherry	0	3	0	3
Punjab         605         213         26	Punjab	605	213	26	844

State	Hospitals	Laboratories	Chemists	Total Health Facilities notifying TB case
Rajasthan	1391	289	24	1704
Sikkim	2	9	0	8
Tamil Nadu	2015	733	84	2832
Telangana	1146	524	390	2060
Tripura	T	27	0	28
Uttar Pradesh	4943	866	77	6018
Uttarakhand	174	91	3	268
West Bengal	640	1571	52	2263
India	29322	10806	1191	41319
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> i	th February 2021			

5.3 Patient Provider Support Agencies (PPSA) under NTEP through Domestic Budgetary Resources

5.4: State-wise Partnership Options (FY 2020-21)

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	aborations	No. of Colla	0	0	0	0	0	0	2	0	21	0	0	0	0	0	0	0	0
	Total Number of Partnership Options	(2014 Guidelines + 2019 Guidance)	0	1	0	23	0	0	11	0	21	0	33	0	9	0	26	24	44
	- - - - - -	State	Andaman & Nicobar Islands	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Chandigarh	Chhattisgarh	Dadra & Nagar Haveli	Delhi	Diu & Daman	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Jharkhand	Karnataka

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		State	Kerala	Lakshadweep	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Odisha	Puducherry	Punjab	Rajasthan	Sikkim	Tamil Nadu	Telangana	Tripura	Uttar Pradesh	Uttarakhand	West Bengal	Total

6. Active Case Finding:

Andomon P.	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 (%)
Nicobar Islands	3.9	389615 (100.0%)	44762 (11.5%)	432 (1.0%)	21 (4.9%)
Andhra Pradesh	525,4	1335818 (2.5%)	1151885 (86.2%)	51982 (4.5%)	1685 (3.2%)
Arunachal Pradesh	16.4	56236 (3.4%)	48925 (87.0%)	2350 (4.8%)	73 (3.1%)
Assam	350.5	79329 (0.2%)	15243 (19.2%)	2029 (13.3%)	91 (4.5%)
Bihar	1247.6	884094 (0.7%)	13776 (1.6%)	49 (0,4%)	7 (14.3%)
Chandigarh	11,7	145297 (12.4%)	6962 (4.8%)	703 (10.1%)	36 (5.1%)
Chhattisgarh	8.008	571344 (1.9%)	7462 (1.3%)	6436 (86,3%)	170 (2.6%)
Dadra and Nagar Haveli and Daman and Diu	8	0 (0.0%)	0 (NA)	0 (NA)	0 (NA)
Delhi	190.5	1716 (0.0%)	985 (57.4%)	256 (26.0%)	30 (11.7%)
Goa	15.4	0 (0.0%)	0 (NA)	0 (NA)	0 (NA)
Gujarat	9'269	65882010 (94.4%)	50847334 (77.2%)	121466 (0.2%)	4565 (3.8%)
Haryana	294.4	9889536 (33.6%)	8282557 (83.8%)	30539 (0.4%)	866 (2.8%)
Himachal Pradesh	75	7485901 (99.8%)	22709 (0.3%)	15852 (69.8%)	595 (3.8%)
Jammu & Kashmir	145	422954 (2.9%)	141814 (33.5%)	15254 (10.8%)	190 (1.2%)
Jharkhand	394.8	14854650 (37.6%)	15230 (0.1%)	10731 (70.5%)	1891 (17.6%)
Karnataka	685.1	15507273 (22.6%)	92436 (0.6%)	87505 (94.7%)	2939 (3,4%)
Kerala	344,4	1171034 (3.4%)	37685 (3.2%)	29166 (77.4%)	802 (2.7%)
Ladakh	3,4	5952 (1.7%)	5952 (100.0%)	14 (0.2%)	0 (0.0%)
Lakshadweep	0.7	70070 (105.7%)	70070 (100.0%)	509 (0.7%)	3 (0.6%)
Madhya Pradesh	843.6	14668164 (17.4%)	1070951 (7.3%)	44341 (4.1%)	4912 (11.1%)
Maharashtra	1257.4	85791971 (68.2%)	333161 (0.4%)	311650 (93.5%)	12823 (4.1%)
Manipur	31.2	53336 (1.7%)	32289 (60.5%)	3802 (11,8%)	52 (1.4%)
Meghalaya	36.6	1435077 (39.2%)	532359 (37.1%)	1064 (0.2%)	28 (2.6%)
Mizoram	12.6	135399 (10.7%)	59883 (44.2%)	293 (0.5%)	8 (2.7%)

State	Estimated Population	Vulnerable Population	Population screened amongst	Presumptive TB cases	TB cases
	(Lakhs)	Mapped (%)	(%)	screened (%)	tested (%)
Nagaland	20.7	91005 (4.4%)	23272 (25.6%)	1291 (5.5%)	23 (1.8%)
Odisha	463,2	45292673 (97.8%)	41965511 (92.7%)	222198 (0.5%)	5116 (2.3%)
Puducherry	15	16152 (1.1%)	10886 (67.4%)	109 (1.0%)	5 (4.6%)
Punjab	306,7	4856533 (15.8%)	4317208 (88.9%)	5371 (0.1%)	529 (9.8%)
Rajasthan	799,2	8090518 (10.1%)	6906255 (85.4%)	43083 (0.6%)	1067 (2.5%)
Sikkim	9'9	62853 (9.6%)	11034 (17.6%)	149 (1.4%)	4 (2.7%)
Tamil Nadu	814	1148451 (1.4%)	281 <mark>1</mark> 22 (24.5%)	14744 (5.2%)	395 (2.7%)
Telangana	379.2	754912 (2.0%)	60632 (8.0%)	4822 (8.0%)	1207 (25.0%)
Tripura	39.6	198624 (5.0%)	98845 (49.8%)	9084 (9.2%)	109 (1.2%)
Uttar Pradesh	2324.3	44019832 (18.9%)	43255104 (98.3%)	156980 (0.4%)	10121 (6.4%)
Uttarakhand	116.3	1291237 (11.1%)	178511 (13.8% <mark>)</mark>	2953 (1.7%)	100 (3.4%)
West Bengal	999,1	13608540 (13.6%)	11997372 (88.2%)	232599 (1.9%)	1810 (0.8%)
India	13775.4	340268106 (24.7%)	171940182 (50.5%)	1429 <mark>80</mark> 6 (0.8%)	52273 (3.7%)
Data Source: State Submitted data	bmitted data				

## 7. Nikshay Poshan Yojana

States/ UTs	Eligible Beneficiary	Beneficiary Paid at least one benefit	Proportion of Paid Beneficiary
Andaman & Nicobar Islands	487	386	79
Andhra Pradesh	65292	59763	92
Arunachal Pradesh	2632	2100	80
Assam	34821	28142	81
Bihar	100059	48621	49
Chandigarh	2986	888	30
Chhattisgarh	29116	15812	54
Dadra and Nagar Haveli and Daman and Diu	787	660	84
Delhi	73316	35740	49
Goa	1691	1056	62
Gujarat	119438	85055	71
Haryana	63566	43342	68
Himachal Pradesh	14011	12955	92
Jammu & Kashmir	9005	7638	85
Jharkhand	45158	33407	74
Karnataka	66453	49153	74
Kerala	20743	13558	65
Ladakh	244	40	16
Lakshadweep	18	18	100
Madhya Pradesh	138939	110047	79
Maharashtra	159334	100404	63
Manipur	1547	729	47
Meghalaya	4184	3020	72
Mizoram	2295	1542	67
Nagaland	3428	2191	64
Odisha	45562	39635	87
Puducherry	1273	853	67
Punjab	46604	14540	31
Rajasthan	134723	42116	31
Sikkim	1360	1213	89
Tamil Nadu	71959	57734	80
Telangana	61249	29635	48
Tripura	2169	1763	81
Uttar Pradesh	372704	194232	52
Uttarakhand	20158	16885	84
West bengal	78804	55222	70
INDIA	1796115	1110095	62

8. Patient Home Visits & Contact Tracing:

8.1 Patient Home Visits by Field Staff

	Pub	Public Sector	Priva	Private Sector		Total
State	TB Patients initiated on treatment	Home Visits done by field Staff	TB Patients initiated on treatment	Home Visits done by field Staff	TB Patients initiated on treatment	Home Visits done by field Staff
Andaman & Nicobar Islands	456	380 (83%)	0	NA	456	380 (83%)
Andhra Pradesh	46459	39591 (85%)	17082	13514 (79%)	63541	53105 (84%)
Arunachal Pradesh	2503	(%8£) 096	4	(%0) 0	2507	960 (38%)
Assam	30023	19077 (64%)	3556	1335 (38%)	33579	20412 (61%)
Bihar	48548	25174 (52%)	46738	24896 (53%)	95286	50070 (53%)
Chandigarh	2563	2173 (85%)	241	139 (58%)	2804	2312 (82%)
Chhattisgarh	21832	13452 (62%)	7192	1208 (17%)	29024	14660 (51%)
Dadra and Nagar Haveli and Daman and Diu	691	602 (87%)	74	61 (82%)	765	663 (87%)
Delhi	51408	31113 (61%)	13860	8898 (64%)	65268	40011 (61%)
Goa	1275	1176 (92%)	303	15 (5%)	1578	1191 (75%)
Gujarat	78221	75354 (96%)	38402	29448 (77%)	116623	104802 (90%)
Haryana	41035	34177 (83%)	17164	10301 (60%)	58199	44478 (76%)
Himachal Pradesh	12757	11868 (93%)	629	239 (86%)	13386	12407 (93%)
Jammu & Kashmir	7962	6565 (82%)	596	352 (59%)	8558	6917 (81%)
Jharkhand	29590	15872 (54%)	14935	3735 (25%)	44525	19607 (44%)
Karnataka	49957	46955 (94%)	11948	9905 (83%)	61905	56860 (92%)
Kerala	17334	15847 (91%)	2808	2280 (81%)	20142	18127 (90%)
Ladakh	225	112 (50%)	17	3 (18%)	242	115 (48%)
Lakshadweep	19	19 (100%)	0	NA	19	19 (100%)
Madhya Pradesh	104285	82628 (79%)	29295	15706 (54%)	133580	98334 (74%)
Maharashtra	97867	88694 (91%)	50877	40188 (79%)	148744	128882 (87%)
Manipur	1338	721 (54%)	146	7 (5%)	1484	728 (49%)
Meghalaya	3524	2990 (85%)	408	78 (19%)	3932	3068 (78%)

	Pub	Public Sector	Priva	Private Sector		Total
State	TB Patients initiated on treatment	Home Visits done by field Staff	TB Patients initiated on treatment	Home Visits done by field Staff	TB Patients initiated on treatment	Home Visits done by field Staff
Mizoram	1914	1273 (67%)	167	137 (82%)	2081	1410 (68%)
Nagaland	2798	1399 (50%)	675	218 (32%)	3473	1617 (47%)
0disha	40758	37352 (92%)	3485	2957 (85%)	44243	40309 (91%)
Puducherry	1197	1181 (99%)	1	1 (100%)	1198	1182 (99%)
Punjab	33817	30272 (90%)	10549	8405 (80%)	44366	38677 (87%)
Rajasthan	88520	68530 (77%)	38875	25149 (65%)	127395	93679 (74%)
Sikkim	1243	906 (73%)	87	25 (29%)	1330	934 (70%)
Tamil Nadu	54864	52783 (96%)	14372	9226 (64%)	69236	(%06) 60029
Telangana	40129	35676 (89%)	21337	17963 (84%)	61466	53639 (87%)
Tripura	2132	1865 (87%)	1	1 (100%)	2133	1866 (87%)
Uttar Pradesh	246878	136430 (55%)	105560	42393 (40%)	352438	178823 (51%)
Uttarakhand	14782	7079 (48%)	4499	209 (5%)	19281	7288 (38%)
West Bengal	08989	(%68) 08609	7456	6307 (85%)	76136	67237 (88%)
India	1247584	951179 (76%)	463339	275599 (59%)	1710923	1226778 (72%)
Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> February 2021	ata extracted as on	12 <sup>th</sup> February 2021				

8.2 Contact Tracing in Household Contacts > 6 years

State	Children in the household	Screened for TB disease	Presumptive symptomatic cases identified	Presumptive symptomatic cases tested	TB Cases diagnosed	TB Cases Treated
Andaman & Nicobar Islands	1535	1447	5	2	2	2
Andhra Pradesh	153554	143275	1154	746	451	337
Arunachal Pradesh	4153	3686	102	82	82	81
Assam	83759	63793	1484	1082	762	646
Bihar	271321	177251	1941	814	590	518
Chandigarh	9100	8459	128	84	10	10
Chhattisgarh	62694	49002	1819	1133	582	459
Dadra and Nagar Haveli and Daman and Diu	2486	2468	22	22	rv	5
Delhi	158723	66266	099	424	330	322
Goa	4168	4014	10	6	1	1
Gujarat	433334	414763	7726	6370	989	623
Haryana	185856	154205	2011	835	643	568
Himachal Pradesh	49130	48454	263	200	47	44
Jammu & Kashmir	31965	27040	1361	1256	829	838
Jharkhand	88410	98799	2261	1983	1542	1270
Karnataka	209242	189588	4637	3449	1575	1374
Kerala	63199	50814	1431	1017	204	146
Ladakh	437	315	5	5	1	1
Lakshadweep	59	59	0	0	0	0
Madhya Pradesh	438441	311945	10993	7616	4694	3417
Maharashtra	496713	419513	8889	5596	1297	811
Manipur	3339	1541	14	10	6	6
Meghalaya	13927	12203	141	129	115	111
Mizoram	5814	2142	8	3	2	2

State Chi			Drasumntiva			
	Children in the household	Screened for TB disease	symptomatic cases identified	Presumptive symptomatic cases tested	TB Cases diagnosed	TB Cases Treated
Nagaland	6328	4678	45	27	23	22
0disha	157888	143556	1169	709	533	488
Puducherry	3429	3421	1084	1072	4	4
Punjab	167431	119969	1690	952	344	251
Rajasthan	405294	350225	7345	6517	1372	738
Sikkim	3552	1355	34	23	5	5
Tamil Nadu	175680	162706	6516	5275	472	273
Telangana	170387	156229	5253	3937	1130	530
Tripura	6788	6409	196	138	23	7
Uttar Pradesh	872401	638907	9853	6264	3683	2827
Uttarakhand	32779	24972	372	197	177	160
West Bengal	266361	237083	7485	5762	773	653
India	5039677	4101368	88107	63740	23028	17553
Data Source: Nikshay – Data extracted as on $12^{th}$ February $2021$	extracted as on	12 <sup>th</sup> February 2021				

8.3 Contact Tracing and Isoniazid Chemoprophylaxis in Household Contacts < 6 years

State	Children in the household	Screened for TB disease	Presumptive symptomatic cases identified	Presumptive symptomatic cases tested	TB Cases diagnosed	TB Cases Treated	Children Eligible for Isoniazid Chemoprophylaxis	Eligible children given Isoniazid Chemoprophylaxis
Andaman & Nicobar Islands	192	169	4	4	4	4	188	69 (37%)
Andhra Pradesh	6121	5721	66	65	54	51	6067	5277 (87%)
Arunachal Pradesh	561	446	17	16	14	14	547	107 (20%)
Assam	7209	5338	92	63	56	52	7153	2520 (35%)
Bihar	44776	25176	564	305	181	143	44595	6780 (15%)
Chandigarh	785	160	12	5	1	1	784	516 (66%)
Chhattisgarh	8637	6425	110	61	37	32	8600	1419 (17%)
Dadra and Nagar Haveli and Daman and Diu	169	168	1	1	0	0	169	150 (89%)
Delhi	11429	6535	123	92	70	65	11359	2496 (22%)
Goa	81	77	0	0	0	0	81	76 (94%)
Gujarat	31204	30212	481	384	78	72	31126	23275 (75%)
Haryana	18419	13985	448	378	345	335	18074	5337 (30%)
Himachal Pradesh	2529	2502	132	129	37	36	2492	2236 (90%)
Jammu & Kashmir	3236	2916	80	72	48	43	3188	997 (31%)
Jharkhand	14523	8146	311	251	235	199	14288	2660 (19%)
Karnataka	16888	14693	520	350	238	217	16650	6486 (39%)
Kerala	4499	3489	221	193	123	112	4376	1518 (35%)
Ladakh	59	27	0	0	0	0	59	23 (39%)
Lakshadweep	2	2	0	0	0	0	2	2 (100%)

State	Children in the household	Screened for TB disease	Presumptive symptomatic cases identified	Presumptive symptomatic cases tested	TB Cases diagnosed	TB Cases Treated	Children Eligible for Isoniazid Chemoprophylaxis	Eligible children given Isoniazid Chemoprophylaxis
Madhya Pradesh	64212	34974	1662	1316	1008	827	63204	20414 (32%)
Maharashtra	27743	22344	1092	910	244	213	27499	17199 (63%)
Manipur	435	207	6	9	9	9	429	146 (34%)
Meghalaya	1553	1377	18	11	9	9	1547	911 (59%)
Mizoram	009	258	3	2	1	1	599	138 (23%)
Nagaland	089	519	14	10	8	7	672	153 (23%)
Odisha	12646	11168	276	218	500	206	12437	6478 (52%)
Puducherry	155	155	32	29	2	2	153	153 (100%)
Punjab	13428	8888	114	54	38	34	13390	4288 (32%)
Rajasthan	36919	29569	471	326	209	119	36710	10170 (28%)
Sikkim	138	29	4	4	3	3	135	103 (76%)
Tamil Nadu	8267	7366	553	480	105	88	8162	5203 (64%)
Telangana	8682	6858	231	182	89	41	8614	4233 (49%)
Tripura	328	304	19	7	2	2	326	258 (79%)
Uttar Pradesh	115242	80404	1214	719	531	479	114711	21941 (19%)
Uttarakhand	3061	2085	17	9	9	9	3055	998 (33%)
West Bengal	23497	20873	323	176	59	53	23438	10239 (44%)
India	488905	354203	9267	6825	4026	3469	484879	164969 (34%)
Data Source: Nii	kshay – Data ex	stracted as on	Data Source: Nikshay – Data extracted as on 12 <sup>th</sup> February 2021	13				
	,		2					

9. Lab Infrastructure and performance: 9.1 Molecular diagnostic tests using CBNAAT/ TrueNAAT

	;	·	;	,	Pae	Paediatric Testing	sting	EF	EP-TB Testing	ηg	Private	Private Samples Testing	[esting
State	Conaat/ Truenaat Machines	Per- formed	Detect-	kir-ke- sistance Detected	Tests Per- formed	MTB Detect- ed	Rif-Re- sistance Detected	Tests Per- formed	MTB Detect- ed	Rif-Re- sistance Detected	Tests Per- formed	MTB Detect-	Rif-Re- sistance Detected
Andaman & Nicobar Islands	ß	1584	320	59	76	0	0	56	8	2	3	2	1
Andhra Pradesh	46 + 240	295207	30826	1512	7756	416	42	7015	776	98	19761	4526	227
Arunachal Pradesh	12	6618	1429	268	503	65	15	485	135	32	52	14	2
Assam	33	55998	16517	881	2963	543	21	2420	569	21	4606	964	09
Bihar	72	102006	30052	3103	4525	1084	169	3644	745	177	27428	7845	916
Chandigarh	3	5930	1723	86	1456	152	7	1689	236	14	2	1	1
Chhattis- garh	32	61812	12278	385	2561	233	2	5440	579	50	6889	1107	54
Dadra and Nagar Haveli and Daman and Diu	rv	6017	647	63	335	19	1	259	72	6	35	13	1
Delhi	41	93837	35645	3500	14044	2908	311	25646	6253	714	3680	1245	116
Goa	3	5512	1005	61	568	31	3	2079	155	8	38	12	0
Gujarat	61	164189	43281	2238	8714	1109	64	12136	2279	174	19490	7057	464
Haryana	28	74730	29851	1705	4288	1162	78	4409	1077	61	8630	3436	209
Himachal Pradesh	25	53928	9259	255	3054	408	12	8822	1100	82	2574	736	21
Jammu & Kashmir	14	28059	4512	141	1870	159	4	2282	183	9	836	141	1
Jharkhand	37	57164	18730	1152	1512	340	26	1672	311	39	11289	3445	193
Karnataka	72	256809	35308	1507	12535	1387	846	16727	2617	316	18167	4198.5	197
Kerala	31	70348	10806	284	3442	98	6	10107	1198	47	11505	1675	33

					Dage	Dandiatric Tacting	oting	O.E.	FP-TR Tocting	Į.	Drivato	Drivato Camaloc Tocting	Poeting
	Chnaat/	Tacte	Mth	Rif.Ro.	Lac	וומוו זר זבי	Sung	ā	-1 D lesci	<u>8</u>	FIIVale	Samples	guncal
State	Truenaat	Per-	Detect-	sistance	Tests Per-	MTB Detect-	Rif-Re-	Tests Per-	MTB Detect-	Rif-Re-	Tests Per-	MTB Detect-	Rif-Re-
	Macnines	rormed	ed	Detected	formed	ed	Detected	formed	pə	Detected	formed	pə	Detected
Ladakh	2	1200	146	10	25	2	0	177	11	0	75	4	0
Lakshad- weep	1	405	15	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	74	201896	53454	3955	10770	1531	84	11843	1845	137	16412	5753	444
Maharash- tra	335	292616	61591	8998	20966	2505	994	42620	6471	1098	49131	12261	1919
Manipur	10	3103	640	46	121	8	0	266	51	2	112	21	4
Meghalaya	8	9928	2178	215	1279	173	43	722	164	30	902	156	18
Mizoram	6	7741	1219	163	614	35	3	1338	224	41	989	91	14
Nagaland	6	5776	1619	111	341	125	81	250	40	2	369	145	5
0disha	41	36066	25792	989	4754	528	11	10169	1169	52	6107	1148	27
Puducherry	3	5070	889	22	372	17	0	2257	218	2	48	0	0
Punjab	30	63303	24075	807	2775	743	41	6776	1215	47	2881	948	29
Rajasthan	62	136555	59674	3945	8509	1567	101	16367	2320	176	14216	5757	464
Sikkim	8	6317	1019	247	486	92	19	961	162	45	2	2	1
Tamil Nadu	73	180628	40181	1603	8603	236	9	10359	1241	34	13651	3648	81
Telangana	35	115836	24000	1534	4042	327	15	4073	602	31	13716	3404	175
Tripura	7	6787	1444	34	290	17	0	358	43	0	138	18	0
Uttar Pradesh	148	342262	141271	12680	15668	4265	386	16623	2985	376	54198	22793	2519
Uttara- khand	15	15922	7060	517	812	248	28	3412	290	43	769	361	28
West Ben- gal	79	153098	48110	2397	5963	989	129	12598	1698	132	7778	1752	111
India	1270 + 240	2987286	776365	54847	156592	23185	3581	246057	39042	4089	315579	94679.5	8335
Data Source:	Data Source: Nikshay – CBNAAT/ TrueNAAT Monthly	VAAT/ True.	NAAT Mon	thly indicator sheet	ır sheet				000				۶

9.2 Line Probe Assay (S or R)

	Total subjected	Total		Resistant		;	MTBC Not	Final results
State	to LPA	Susceptible	HR	R	Н	Invalid	Detected	not available
Andaman & Nicobar Islands	29	35	21	5	2	0	4	0
Andhra Pradesh	10392	9032	234	84	825	1	171	45
Arunachal Pradesh	371	244	45	20	14	0	12	36
Assam	3802	2921	202	97	320	0	62	200
Bihar	7283	5138	1001	127	536	24	360	37
Chandigarh	4322	3930	85	45	210	0	52	0
Chhattisgarh	387	338	14	5	30	0	0	0
Dadra and Nagar Haveli and Daman and Diu	14	9	4	0	0	0	4	0
Delhi	21208	16427	2062	204	1465	200	522	328
Goa	287	234	13	4	10	0	2	24
Gujarat	11763	0898	868	406	763	169	846	0
Haryana	22535	19125	461	126	1494	53	695	581
Himachal Pradesh	6057	5299	108	61	221	0	357	11
Jammu & Kashmir	1116	2962	34	13	49	100	118	9
Jharkhand	2181	1747	174	26	65	10	159	0
Karnataka	24135	20407	577	263	1314	27	1251	296
Kerala	3374	2035	135	38	171	290	405	0
Ladakh	2	2	0	0	0	0	0	0
Lakshadweep	0	0	0	0	0	0	0	0
Madhya Pradesh	19365	16175	765	366	1289	2	742	26
Maharashtra	41594	30942	4995	928	2691	183	1301	554
Manipur	255	197	15	4	6	0	13	17
Meghalaya	1171	938	107	12	70	0	9	35
Mizoram	134	112	1	6	7	0	1	4
Nagaland	243	187	6	14	14	0	4	15
Odisha	7820	7425	54	18	150	21	135	17

	Total subjected	Total		Resistant		;	MTBC Not	Final results
State	to LPA	Susceptible	HR	R	Н	Invalid	Detected	not available
Puducherry	742	533	8	1	28	17	0	155
Punjab	8888	7508	221	09	391	1	454	253
Rajasthan	34367	29404	788	393	1811	208	1017	746
Sikkim	153	103	46	2	2	0	0	0
Tamil Nadu	31286	25975	625	366	2250	33	738	1299
Telangana	15384	8595	301	195	936	161	1411	3785
Tripura	952	827	6	12	75	0	13	16
Uttar Pradesh	18292	12371	2527	427	1565	20	1129	223
Uttarakhand	3343	2507	160	34	189	0	23	430
West Bengal	11285	7647	527	87	829	117	1143	1106
India	314570	247842	17287	4452	19624	1967	13153	10245
Data Source: Data submitted by IRL	d by IRL							

9.3 SL LPA (FQ&/ SLID) 1-3Q2020

	Total			Resistant	tant			MTRC	Final	Total H
State	subjected to SLPA	Total Susceptible	FQ+SLID	FQ	SLID	Mono low level KAN	Invalid	Not Detected	results not available	resistant subjected to SL-LPA
Andaman & Nicobar Islands	41	24	1	6	1	0	3	3	0	2
Andhra Pradesh	1143	932	3	122	9	1	11	34	34	815
Arunachal Pradesh	103	59	1	19	1	0	0	0	23	15
Assam	982	443	10	120	14	2	0	17	180	312
Bihar	2383	941	154	1006	30	0	46	186	20	523
Chandigarh	392	304	7	55	2	0	0	10	14	190
Chhattisgarh	58	50	1	7	0	0	0	0	0	18
Dadra and Nagar Haveli and Daman and Diu	21	6	3	5	0	0	1	3	0	0
Delhi	4261	2370	165	1407	37	11	29	100	104	1367
Goa	35	22	3	5	1	0	0	0	4	10
Gujarat	4249	2134	189	1139	89	25	391	303	0	995
Haryana	2373	1493	23	308	7	0	18	99	458	1494
Himachal Pradesh	437	325	4	09	9	4	0	0	38	221
Jammu & Kashmir	115	65	2	19	0	1	13	2	13	31
Jharkhand	271	153	17	92	6	9	0	10	0	8
Karnataka	3213	2164	51	491	33	9	97	327	44	1290
Kerala	327	278	8	33	0	2	0	0	9	145
Ladakh	0	0	0	0	0	0	0	0	0	0
Lakshadweep	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	2550	1661	89	657	14	2	2	112	34	1059
Maharashtra	13040	5954	1346	3668	248	302	268	501	426	3423
Manipur	44	21	1	2	0	0	0	0	17	10
Meghalaya	217	128	4	29	2	0	0	0	24	47
Mizoram	25	14	0	8	0	0	0	1	2	9
Nagaland	43	17	0	6	1	0	1	0	15	12

				Resistant	stant				Final	Total H
State	lotal subjected to SLPA	Total Susceptible	FQ+SLID	FQ	SLID	Mono low level KAN	Invalid	MTBC Not Detected	results not available	resistant subjected to SL-LPA
0disha	427	344	2	65	4	1	0	6	8	66
Puducherry	37	36	0	1	0	0	0	0	0	29
Punjab	751	438	7	154	4	8	0	38	109	391
Rajasthan	6216	4191	136	1413	30	23	135	267	21	1560
Sikkim	56	20	3	27	0	0	3	0	3	2
Tamil Nadu	3497	2801	26	371	31	10	92	113	53	2010
Telangana	1579	494	26	135	26	1	96	179	289	551
Tripura	121	74	0	8	5	0	0	16	18	74
Uttar Pradesh	7035	2547	540	2552	97	65	53	512	675	1131
Uttarakhand	554	292	34	162	1	3	0	10	52	189
West Bengal	1839	622	52	307	22	9	139	8	683	625
India	58239	31420	2920	14803	700	468	1436	2825	3667	18654
Data Source: Data submitted by IRL	by IRL									

9.4 Second Line Liquid DST

State	Number of SL DSTs conducted	Total Susceptible to FQ&SLID	Number of MDR + FQ reistance detected	Number of MDR + SLI resistance detected	Number of XDR detected	Number of MDR + Mox (2) resistance dettected	DST Contaminated	Results awaited/ Ongoing
Andaman & Nicobar Islands	17	15	2	0	0	0	0	0
Andhra Pradesh	53	49	0	1	0	0	3	0
Arunachal Pradesh	0	0	0	0	0	0	0	0
Assam	72	43	13	4	0	10	1	1
Bihar	20	20	0	0	0	0	0	0
Chandigarh	4	3	0	0	0	0	1	0
Chhattisgarh	0	0	0	0	0	0	0	0
Dadra and Nagar Haveli and Daman and Diu	5	0	0	0	0	2	0	3
Delhi	1667	912	387	98	51	70	77	134
Goa	4	1	0	1	1	0	1	0
Gujarat	1144	548	125	0	0	91	2	378
Haryana	0	0	0	0	0	0	0	0
Himachal Pradesh	0	0	0	0	0	0	0	0
Jammu & Kashmir	0	0	0	0	0	0	0	0
Jharkhand	0	0	0	0	0	0	0	0
Karnataka	1119	746	72	56	3	13	113	143
Kerala	12	0	0	0	0	0	1	11
Ladakh	0	0	0	0	0	0	0	0
Lakshadweep	0	0	0	0	0	0	0	0
Madhya Pradesh	648	454	55	39	14	41	28	17
Maharashtra	4950	2285	739	478	455	565	26	402
Manipur	0	0	0	0	0	0	0	0
Meghalaya	0	0	0	0	0	0	0	0
Mizoram	0	0	0	0	0	0	0	0
Nagaland	0	0	0	0	0	0	0	0

State	Number of SL DSTs conducted	Total Susceptible to FQ&SLID	Number of MDR + FQ reistance detected	Number of MDR + SLI resistance detected	Number of XDR detected	Number of MDR + Mox (2) resistance dettected	DST Contaminated	Results awaited/ Ongoing
Odisha	28	8	6	0	2	4	3	2
Puducherry	8	3	2		0	0	0	2
Punjab	18	6	0	8	0	0	1	0
Rajasthan	089	485	11	38	16	62	32	36
Sikkim	0	0	0	0	0	0	0	0
Tamil Nadu	307	125	48	11	4	10	16	93
Telangana	184	75	36	19	17	14	23	0
Tripura	0	0	0	0	0	0	0	0
Uttar Pradesh	066	401	102	164	22	89	119	62
Uttarakhand	0	0	0	0	0	0	0	0
West Bengal	18	1	1	0	0	0	0	16
India	11948	6183	1602	829	620	950	447	1317
Data Source: Data submitted by IRL								

9.5 List of Certified Labs under NTEP

State	NRL/IRL / C-DST Laboratory	LJ FLDST	LC FLDST	LC SLDST	FL LPA	SL LPA	Linezolid	Pyrazinamide
Andaman & Nicobar	RMRC, Port Blair	Certified						
Andhra Pradesh	DFIT, Nellore	Certified			Certified	Certified		
Andhra Pradesh	SVIMS, Tirupati	Certified						
Andhra Pradesh	IRL, Visakhapatnam	Certified	Certified	Certified	Certified	Certified		
Andhra Pradesh	RDT Hospital Bathalapalli				Certified	Certified		
Arunachal Pradesh	IRL-Naharlagun	Certified						
Assam	RMRC, Dibrugarh	Certified					No.	
Assam	IRL, Guwahati	Certified	Certified	Certified	Certified	Certified	Certified	
Bihar	IRL, Patna		Certified	Certified	Certified	Certified		
Bihar	JLNMCH, Bhagalpur		Certified	Certified	Certified	Certified		
Bihar	DFIT, Darbhanga				Certified	Ce <mark>rt</mark> ified		
Bihar	IGIMS, Patna		Certified					
Chandigarh	PGIMER Chandigarh	Certified	Certified	Certified	Certified	Certified		
Chhattisgarh	IRL Raipur	Certified	Certified	Certified	Certified	Certified		
Chhattisgarh	AIIMS Raipur				Certified			
Delhi	NRL NITRD	Certified	Certified	Certified	Certified	Certified	Certified	Certified
Delhi	IRL NDTB Delhi	Certified	Certified	Certified	Certified	Certified		
Delhi	AIIMS - Medicine	Certified	Certified	Certified	Certified	Certified		
Delhi	AIIMS - Laboratory Medicine				Certified			
Goa	IRL Goa	Certified	Certified					
Gujarat	IRL Ahmadabad	Certified	Certified	Certified	Certified	Certified		
Gujarat	MPSMS, Jamnagar	Certified	Certified	Certified	Certified	Certified		
Gujarat	Microcare, Surat	Certified			Certified			
Gujarat	Schmaka TeKnology, PVT, LTD, Vadodara,Gujarat				Certified			
Haryana	IRL Karnal	Certified			Certified	Certified		

State	NRL/IRL / C-DST Laboratory	LJ FLDST	LC FLDST	TC SLDST	FL LPA	SL LPA	Linezolid	Pyrazinamide
Himachal Pradesh	IRL Dharampur	Certified			Certified	Certified		
Himachal Pradesh	TB C-DST Laboratory, Tanda							
Jammu &Kashmir	IRL Jammu	Certified						
Jammu & Kashmir	IRL Srinagar	Certified			Certified	Certified		
Jharkhand	IRL Ranchi	Certified	Certified		Certified	Certified		
Karnataka	NRL NTI	Certified	Certified	Certified	Certified	Certified	Certified	Certified
Karnataka	IRL, Bangalore		Certified	Certified	Certified	Certified	Certified	Certified
Karnataka	KIMS, Hubli	Certified	Certified	Certified	Certified	Certified		Certified
Karnataka	RIMS, Raichur		Certified	Certified	Certified	Certified	Certified	Certified
Karnataka	KMC Manipal				Certified			
Kerala	IRL Thiruvananthapuram	Certified	Certified	Certified	Certified	Certified		
Kerala	GMC Kozikode				Certified	Certified		
Madhya Pradesh	NRL BMHRC	Certified	Certified	Certified	Certified	Certified		Certified
Madhya Pradesh	IRL Indore	Certified	Certified	Certified	Certified	Certified	Certified	Certified
Madhya Pradesh	Choitram Hospital, Indore	Certified						
Madhya Pradesh	NIRTH, Jabalpur	Certified	Certified		Certified	Ce <mark>rt</mark> ified		Certified
Madhya Pradesh	GRMC Gwalior Medical Collge				Certified	Certified		
Maharashtra	IRL Nagpur	Certified	Certified	Certified	Certified	Certified	Certified	Certified
Maharashtra	IRL Pune	Certified	Certified	Certified	Certified	Certified	Certified	Certified
Maharashtra	JJ Hospital, Mumbai	Certified	Certified	Certified	Certified	Certified	Certified	Certified
Maharashtra	MGIMS, Wardha	Certified						
Maharashtra	Metropolis, Mumbai		Certified	Certified	Certified			Certified
Maharashtra	SRL, Mumbai		Certified	Certified			Certified	Certified
Maharashtra	Infexn, Thane		Certified	Certified	Certified	Certified	Certified	Certified
Maharashtra	PD. Hinduja, Mumbai		Certified	Certified	Certified	Certified	Certified	Certified
Maharashtra	GTB, Sewree, Mumbai		Certified	Certified	Certified	Certified	Certified	Certified
Maharashtra	GMC Aurangabad	Certified	Certified	certified	Certified	Certified	Certified	Certified
Maharashtra	BJMC, Pune	certified	Certified					Certified

State	NRL/IRL / C-DST Laboratory	LJ FLDST	LC FLDST	TC STDST	FL LPA	SL LPA	Linezolid	Pyrazinamide
Maharashtra	Thyrocare lab Navi Mumbai		Certified	Certified	Certified	Certified	Certified	Certified
Maharashtra	Military Hospital Pune				Certified			
Maharashtra	Aspira Path Lab, Navi Mumbai		Certified		Certified			Certified
Maharashtra	KEM Hospital Mumbai		Certified	Certified				Certified
Meghalaya	Nazerath, Shillong				Certified	Certified		
Odisha	NRL RMRC	Certified	Certified	Certified	Cert <mark>if</mark> ied	Certified	Certified	
0disha	IRL Cuttack	Certified	Certified	Certified	Certified	Certified		
Puducherry	IRL Puducherry	Certified	Certified	Certified	Certified	Certified		
Punjab	IRL Patiala	Certified	Certified	Certified	Certified	Certified		
Rajasthan	IRL Ajmer	Certified	Certified	Certified	Certified	Certified	Certified	
Rajasthan	SMS Jaipur	Certified	Certified	Certified	Certified	Certified	Certified	Certified
Rajasthan	DMRC, Jodhpur	Certified						
Rajasthan	SNMC, Jodhpur				Certified	Certified		
Sikkim	IRL Gangtok	Certified						
Tamilnadu	NRL NIRT	Certified	Certified	Certified	Certified	Certified	Certified	Certified
Tamilnadu	IRL Chennai	Certified	Certified	Certified	Certified	Certified		
Tamilnadu	CMC, Vellore	Certified						
Tamilnadu	Shankar Nethralaya, Chennai		Certified					
Tamilnadu	GMC, Madurai		Certified	Certified	Certified	Certified		
Tamilnadu	GHTM, Tambram				Certified	Certified		
Telangana	IRL Hyderabad	Certified	Certified	Certified	Certified	Certified		
Telangana	BPHRC, Hyderabad	Certified	Certified	Certified	Certified			
Tripura	AGMC, Agartala		Certified					
Uttar Pradesh	NRL JALMA	Certified	Certified	Certified	Certified	Certified		
Uttar Pradesh	IRL Lucknow	Certified	Certified	Certified	Certified	Certified		Certified
Uttar Pradesh	BHU, Varanasi		Certified	Certified	Certified	Certified		Certified
Uttar Pradesh	IRL, Agra		Certified	Certified	Certified	Certified		Certified

State	NRL/IRL / C-DST Laboratory	LJ FLDST	LC FLDST	TC SLDST	FL LPA	SL LPA	Linezolid	Linezolid Pyrazinamide
Uttar Pradesh	AMU, Aligarh				Certified	Certified		
Uttar Pradesh	Subharti Medical College, Meerut				Certified			
Uttar Pradesh	LLRM, Meerut, UP		Certified					
Uttarakhand	IRL Dehradun	Certified			Certified Certified	Certified		
West Bengal	IRL Kolkata	Certified	Certified	Certified	Certified	Certified		
West Bengal	SRL,Kolkata		Certified					
West Bengal	NBMC Siliguri		Certified		Certified Certified	Certified		
Data Source: CTD.								

10. Human resource:

10.1a State Level - Programme Staffing Status in 2020

į	State TB Officer	Officer	Epidemiologist (APO)	ologist 0)	MO – State TB Cell	ate TB II	TB-HIV Coordinator	HV nator	PPM Coordinator	M nator	DR TB Coordinator	rB nator
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Andaman & Nicobar	1	1	0	0	1	0	1	0	0	0	0	0
Andhra Pradesh	1	1	1	1	1	1	1	1	1	1	1	1
Arunachal Pradesh	1	1	1	1	1	0	0	0	0	0	0	0
Assam	1	1	1	0	1	0	1	1	0	0	0	0
Bihar	1	1	1	1	1	0	1	0	1	1	1	1
Chandigarh	1	1	0	0	1	0	1	1	0	0	1	0
Chattisgarh	1	1	1	1	1	1	0	0	1	7	0	0
Dadra & Haveli & Daman & Diu	1	1	2	2	2	2	1	1	0	0	0	0
Delhi	1	1	1	1	1	1	1	1	1	0	1	1
Goa	1	1		0	1	1	1	0	0	0	0	0
Gujarat	1	1	1	1	1	1	1	1	1	0	1	1
Haryana	1	1	1	0	1	0	1	1	1	1	1	0
Himachal Pradesh	1	1	1	1	0	0	0	0	0	0	0	0
Jammu & Kashmir	1	2	2	1	2	0	2	2	2	1	1	0
Jharkhand	1	1	1	1	1	1	1	0	1	1	1	0
Karnataka	1	1	1	0	1	0	1	0	1	1	1	0
Kerala	1	1	1	0	1	1	1	0	1	1	1	0
Ladakh												
Lakshadweep	1	1	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	1	1	1	0	1	0	0	0	1	1	0	0
Maharashtra	1	1	2	2	1	0	1	0	1	0	1	0
Manipur	1	1	1	1	1	1	1	0	1	1	1	1
Mizoram	1	1	0	0	1	1	1	Т	1	1	0	0

Š	State TB Officer	Officer	Epidemiologist (APO)	iologist '0)	MO – State TB Cell	ate TB	TB-HIV Coordinator	HIV	PPIM Coordinator	M nator	DR TB Coordinator	TB nator
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Meghalaya	1	1	1	1	1	1	1	1	1	1	1	1
Nagaland	1	1	1	1	1	1	0	0	1	1	0	0
Odisha	_	1	1	1	1	1	1	$\vdash$	1	0	1	
Puducherry	-	1	0	0	1	1	1	1	0	0	0	0
Punjab	1	1	1	0	1	1	1	1	0	0	0	0
Rajasthan	1	1	2	0	2	0	1	0	1	1	1	0
Sikkim	1	1	1	1	1	1	1	0	1	0	1	0
Tamil Nadu	1	1	1	0	1	1	1	0	1	1	1	0
Telangana	0	1	1	0	1	0	1	0	1	0	1	1
Tripura	1	1	1	1	1	1	0	0	1	0	0	0
Uttar Pradesh	1	1	2	2	2	0	2	1	2	1	2	0
Uttarakhand	1	1	1	0	1	1 (PMC)	0	0	0	0	0	0
West Bengal	1	1	2	1	1	0	2	0	2	2	2	0
India	34	36	36	22	37	19	30	15	27	18	22	8
Data Source: State submitted data	lata											

10.1b State Level - Programme Staffing Status in 2020

Chair	State II	State IEC Officer	State Accountant	ccoun- nt	Techni an	Technical Officer-Proc. and Logistics	Data Analyst	nalyst	DEO	DEO-STC	Secretarial asst.	tarial st.
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Andaman & Nicobar	1	1	1	1	0	0	1	0	1	1	1	0
Andhra Pradesh	1	1	1	1	1	1	1	1	1	1	1	1
Arunachal Pradesh	1	1	1	1	1	0	0	0	1	1	1	1
Assam	1	1	1	1	1	0	1	1	1	1	1	1
Bihar	1	1	1	0	1	1	0	0	1	1	1	0
Chandigarh	1	1	1	1	0	0	0	0	1	1	1	1
Chattisgarh	1	0	1	1	0	0	0	0	1	1	1	0
Dadra & Haveli & Daman & Diu	2	1	2	2	0	0	0	0	2	2	1	1
Delhi	1	1	1	1	1	0	1	1	1	1	1	1
Goa	1	1	1	1	1	1	0	0	1	1	1	1
Gujarat	1	1	1	1	1	0	0	0	1	1	1	1
Haryana	1	1	1	1	1	1	1	0	1	1	1	1
Himachal Pradesh	1	1	1	1	0	0	0	0	1	1	1	0
Jammu & Kashmir	2	1	2	2	2	1	0	0	2	2	2	2
Jharkhand	1	1	2	1	1	1	1	0	1	1	1	0
Karnataka	1	1	2	2	1	1	1	0	2	2	1	0
Kerala	1	1	1	1	0	0	0	0	1	1	1	1
Ladakh												
Lakshadweep	1	1	0	0	0	0	0	0	1	1	0	0
Madhya Pradesh	0	0	1	1	0	0	0	0	0	0	1	1
Maharashtra	1	1	3	2	1	0	2	2	2	2	2	2
Manipur	1	1	1	1	1	0	0	0	1	1	1	1
Mizoram	1	1	1	1	0	0	0	0	1	1	1	1
Meghalaya	1	0	1	1	1	1	1	1	1	1	1	1
Nagaland	1	1	1	1	1	1	0	0	1	1	1	1

	State IEC Offi-	SC Offi-	State Accountant	Accoun-	Technic	Technical Officer-Proc.	Data Analyst	nalyst	DEO-STC	-STC	Secretarial asst.	retarial
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Odisha	1	0	1	1	0	0	0	0	1	1	1	1
Puducherry	1	1	1	1	0	0	0	0	1	1	1	П
Punjab	0	0	1	1	0	0	0	0	1	1	0	0
Rajasthan	1	1	1	1	1	1	П	1	2	1	2	1
Sikkim	1	0	1	1		0	Н	Т	1	1	1	1
Tamil Nadu	1	1	2	1	1	1	1	0	2	1	1	0
Telangana	1	1	1	1	1	0	1	1	1	0	0	0
Tripura	1	1	1	1	1	1	1	1	1	0	1	1
Uttar Pradesh	2	2	2	2	2	2	2	1	2	2	1	1
Uttarakhand	1	1	1	1	0	0	0	0	1	1	1	0
West Bengal	2	1	2	2	1	0	2	2	2	1	1	1
India	37	30	43	39	24	14	19	13	42	37	35	56
Data Source: State submitted data	lata											

10.2 STDC - Programme Staffing Status in 2020

	Pharmacist - SDS	acist – S	Store Assistant - SDS	re nt - SDS	Director (STDC)	Director (STDC)	МО -	MO - STDC	Epidemiologist	iologist	Niks Oper	Nikshay Operator	Secretarial Assistant-STDC	tarial ıt <b>-</b> STDC
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Andaman & Nicobar	1	1	1	1	0	0	0	0						
Andhra Pradesh	1	1	1	1	0	0	0	0			1	1	0	0
Arunachal Pradesh	1	0	1	1	0	0	0	0						
Assam	1	1	1	1	0	0	0	0						
Bihar	1	0	2	1	2	2	14	4	1	0	0	0	0	0
Chandigarh	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Chattisgarh	1	1	1	1	0	0	2	0	1	0	1	1	0	0
Dadra & Haveli & Daman & Diu	2	2	1	1	0	0	0	0	0	0	0	0	0	0
Delhi	2	1	2	0	1	1	1	1	1	1				
Goa	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Gujarat	1	0	1	1	1	0	9	9			1	1	1	1
Haryana	1	$\leftarrow$	$\leftarrow$	$\vdash$	0									
Himachal Pradesh	1	0	1	1	1	1	1	1	1	1	1	1	1	1
Jammu & Kashmir	2	2	2	2	1	1	0	0	0	0	0	0	0	0
Jharkhand	2	1	2	1	1	1	1	1	1	0	1	0	0	0
Karnataka	1	1	1	0	1	1	0	0	0	0	0	0	0	0
Kerala	1	1	1	1	1	1	2	2	0	0	0	0	0	0
Ladakh														
Lakshadweep	0	0	0	0	0	0	0	0						
Madhya Pradesh	1	1	1	1	1	1	4	4	0	0	0	0	0	0
Maharashtra	50	7	8	2	3	3	9	9	0	0	0	0	0	0
Manipur	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Mizoram	1	1	1	1	0	0	0	0						
Meghalaya	1	1	1	1	0	0	0	0	0	0	7	7	0	0
Nagaland	1	1	1	П	NA	NA	NA	NA			0	0		

O. C.	Pharm SL	Pharmacist - SDS	Store Assistant	Store Assistant - SDS	Director (STDC)	ctor )C)	МО -	MO - STDC	Epidemiologist	iologist	Nikshay Operator	hay	Secretarial Assistant-STI	Secretarial Assistant-STDC
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
0disha	1	1	1	0	1	1	1	1	Н	П	1	П	1	1
Puducherry	1	1	1	1	1	1	2	2	0	0	0	0	0	0
Punjab	0	0	0	0	1	1	1	1	1	1	1	0	0	0
Rajasthan	2	2	4	2	1	1	4	4						
Sikkim	1	1	1	0	1	1	1	0	1	0	1	0	1	0
Tamil Nadu	2	2	3	2	1	1	0	0						
Telangana	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Tripura	1	1	1	1	0	0	0	0						
Uttar Pradesh	4	4	8	2	1	1	3	0	0	0	0	0	0	0
Uttarakhand	2	2	2	1	1	1	1	0						
West Bengal	2	1	4	2	1	0	3	2	1	1	1	0	1	0
India	93	43	09	35	24	22	57	39	10	9	17	12	r.	3
Data Source: State submitted data	iitted dati	τ												

10.3 IRL- Programme Staffing Status in 2020

į	Microbiolo (IRL)	Microbiologist (IRL)	Microbiolo (EQA)	robiologist (EQA)	Senior Lab. Tech.	· Lab.	Technical Officer	nical cer	Lab Techni- cians	chni- ns	Data Entry Operator	Entry ator	Lab Attendant	endant
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Andaman & Nicobar	1	1	1	1	1	1	0	0	1	1	1	1	0	0
Andhra Pradesh	1	1	0	0	1	1	0	0	0	0	0	0	0	0
Arunachal Pradesh	1	1	1	0	1	1	0	0	1	1	1	1	0	0
Assam	1	1	1	0	1	1	1	0	1	1	1	0	0	0
Bihar	1	0	1	0	9	1	0	0	0	0	1	1	0	0
Chandigarh	1	1	0	0	0	0	0	0	3	1	1	0	2	1
Chattisgarh	1	1	1	1	8	7	0	0	2	0	1	1	1	1
Dadra & Haveli & Daman & Diu	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delhi	2	2	2	2	2	1	0	0	0	0	2	1	0	0
Goa	1	1	1	1	2	1	0	0	1	1	1	1	0	0
Gujarat	1	1	1	1	1	1	0	0	14	13	2	2	7	7
Haryana	1	1	1	1	1	1	0	0	1	1	1	1	2	0
Himachal Pradesh	1	1	1	1	3	2	1	1	5	3	1	1	1	1
Jammu & Kashmir	2	2	1	1	2	2	0	0	0	0	2	2	0	0
Jharkhand	1	1	1	1	1	1	1	1	2	2	1	1	1	0
Karnataka	2	2	2	0	20	13	0	0	9	0	5	5	5	2
Kerala	1	1	1	1	1	1	2	2	8	2	2	2	3	3
Ladakh														
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	2	1	2	2	3	1	0	0	0	0	3	1	0	0
Maharashtra	2	1	2	0	3	3	0	0	8	5	3	2	0	0
Manipur	1	1	1	1	1	1	0	0	4	1	1	1	2	2
Mizoram	0	0	0	0	1	1	0	0	0	0	1	1	0	0
Meghalaya	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Nagaland	NA	NA	NA	NA	NA	NA	0	0	NA	NA	NA	NA	NA	NA

	Microbiolo (IRL)	Microbiologist (IRL)	Microbiolo (EQA)	obiologist (EQA )	Senior Lab. Tech.	r Lab. :h.	Technical Officer	nical cer	Lab Techni- cians	chni- ns	Data Entry Operator	Entry ator	Lab Attendant	endant
State	Sanc-	In	Sanc-	In	Sanc-	In	Sanc-	In	Sanc-	In	Sanc-	In	Sanc-	In
Odisha	1	1	1	1	1	0	1	1	3	3	2	2	2	2
Puducherry	1	1	1	1	1	1	0	0	0	0	1	1		
Punjab	1	0	$\vdash$		$\vdash$	0	0	0	0	0	1	0	0	0
Rajasthan	П	1	1	1	2	+	4	4	18	18	2	2	6	2
Sikkim	П	Н	П	0	П	-	П	0	3	$\vdash$	1	1	3	1
Tamil Nadu	0	0	3	2	Н	H	0	0	13	6	2	0	9	0
Telangana	1	0	1	0	2	0	2	0	4	2	1	0	1	0
Tripura	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Uttar Pradesh	8	2	4	1	24	4	0	0	6	2	9	2	9	2
Uttarakhand	1	1	1	1	1	1	0	0	7	7	1	1	3	3
West Bengal	1	4	1	0	7	0	0	0	4	2	1	0	0	0
India	41	35	35	22	103	20	13	6	118	82	49	34	54	30
Data Source: State submitted data	tted data													

10.4 CDST - Programme Staffing Status in 2020

į	Microb (C-E	Microbiologist (C-DST)	Technical Officer	l Officer	Senior Lab, Tech.	ıb. Tech.	Data Entry Operator	Sntry ator	Lab technicians	nicians	Lab Attendant	endant
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Andaman & Nicobar											<b>P</b> -	
Andhra Pradesh	2	1	0	0	6	9	2	2	9	9	2	2
Arunachal Pradesh	1	1	0	0	1	1	0	0	0	0	4	4
Assam	0	0	0	0	0	0	0	0	0	0	0	0
Bihar	4	1	0	0	15	0	4	0	0	0	0	0
Chandigarh	0	0	0	0	0	0	0	0	0	0	0	0
Chattisgarh	1	1	0	0	0	0	1	0	2	0	0	0
Dadra & Haveli & Daman & Diu	0	0	0	0	0	0	0	0	0	0	0	0
Delhi	1	1	0	0	1	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												
Himachal Pradesh	2	1	0	0	5	3	0	0	4	2	0	0
Jammu & Kashmir	0	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	2	0	0	0	0	2	2	1	1	4	4
Kerala	1	1	0	0	0	0	1	1	2	2	2	2
Ladakh												
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	3	1	0	0	2	1	3	2	0	0	4	2
Maharashtra	7	5	0	0	3	3	2	0				
Manipur	0	0	0	0	0	0	0	0	0	0	0	0
Mizoram		9-										
Meghalaya	1	0	0	0	0	0	0	0	0	0	0	0
Nagaland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

	Microbiolog (C-DST)	Microbiologist (C-DST)	Technica	Technical Officer	Senior Lab, Tech.	ıb. Tech.	Data Entry Operator	Entry ator	Lab technicians	nicians	Lab Attendant	endant
State	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
0disha	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	3	3	2	2	3	3	5	4	15	15	2	2
Sikkim	0	0	0	0	0	0	0	0	0	0	0	0
Tamil Nadu	1	1	0	0	3	3	1	0	0	0	0	0
Telangana	1	0	0	0	0	0	1	0	2	0	1	0
Tripura	1	1	0	0	1	1	1	1	0	1 (FIND)	0	2 (FIND)
Uttar Pradesh	8	3	0	0	26	1	9	1	0	0	9	1
Uttarakhand	0	0	0	0	0	0	0	0	0	0	0	0
West Bengal	5	3	0	0	16	0	1	0	4	11	0	0
India	50	31	3	2	87	22	34	15	52	51	35	56
Data Source: State submitted data	lata											

10.5 DRTB Centre level - Programme Staffing Status 2020

	Senior MO - DRTB Centre	B Centre	Counsellor - DRTB Centre	B Centre	SA - DRTB Centre	entre
State	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place
Andaman & Nicobar	1	0	1	0	1	1
Andhra Pradesh	6	4	13	6	13	11
Arunachal Pradesh	2	1	0	0	2	2
Assam	5	3	5	2	5	3
Bihar	6	1	46	0	6	9
Chandigarh	1	0	0	0	1	1
Chattisgarh	4	2	4	3	4	4
Dadra & Haveli & Daman & Diu	0	0	0	0	0	0
Delhi	4	3	4	0	4	4
Goa	1	0	1	1	1	0
Gujarat	3	3	2	2	5	5
Haryana	0	0	3	2	3	1
Himachal Pradesh	3	1	4	3	3	3
Jammu & Kashmir	2	2	1	1	2	2
Jharkhand	5	2	5	2	5	3
Karnataka	8	5	9	4	9	9
Kerala	2	1	0	0	2	2
Ladakh						
Lakshadweep	0	0	0	0	0	0
Madhya Pradesh	6	3	0	0	6	0
Maharashtra	19	13	18	8	22	6
Manipur	1	0	1	1	2	2
Mizoram	1	1	1	1	1	1
Meghalaya	2	1	2	2	2	2
Nagaland	2	2	2	2	2	2
Odisha	4	4	4	2	4	2
Puducherry	1	0	0	0	1	1

Cross	Senior MO - DRTB Centre	B Centre	Counsellor - DRTB Centre	B Centre	SA - DRTB Centre	entre
State	Sanctioned	In Place	Sanctioned	In Place	Sanctioned	In Place
Punjab	3	3	0	0	2	1
Rajasthan	7	2	7	9	9	9
Sikkim	1	0	1	0	1	1
Tamil Nadu	8	4	13	7	8	9
Telangana	2	2	4	1	7	9
Tripura	1	1	1	1	1	1
Uttar Pradesh	23	14	23	18	23	18
Uttarakhand	2	1	2	2	2	2
West Bengal	6	9	6	8	6	8
India	154	85	186	91	168	122
Data Source: State submitted data						

10.6a District level - Programme Staffing Status in 2020

State	District TB Officer	ct TB cer	MO – DTC	DTC	MO-TC	TC.	- ОМ	MO – PHI	District Programme Coordinator	rict amme inator	Senior DR TB - TBHIV Supervisor	r DR BHIV visor	District PPM Coordinator	t PPM nator
	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Andaman & Nicobar	3	3	3	2	9	4	143	118	3	3	3	3	0	0
Andhra Pradesh	13	10	5	2	225	225	1600	1589	13	13	13	11	13	11
Arunachal Pradesh	15	15	14	9	14	9	830	800	0	0	17	15	0	0
Assam	27	27	16	0	350	156	4283	1816	0	0	27	26	27	23
Bihar	38	36	38	18	544	480	2686	865	38	28	38	24	38	0
Chandigarh	1	0	1	0	4	4	0	0	0	0	1	0	0	0
Chattisgarh	28	28	11	6	155	155	3672	1312	27	21	27	25	27	24
Dadra & Haveli & Daman & Diu	0	0	1	1	0	0	0	0	1	1	2	2	0	0
Delhi	25	25	12	11	38	20	286	987	25	0	27	23	25	0
Goa	2	2	0	0	9	9	225	210	2	0	2	2	2	2
Gujarat	36	33	44	42	306	306	4816	4180	35	33	38	38	35	33
Haryana	22	22	0	0	0	0	0	0	21	17	21	19	21	16
Himachal Pradesh	12	12	5	1	74	74	547	411	10	6	12	11	0	0
Jammu & Kashmir	12	12	10	9	107	106	917	437	12	6	12	12	6	9
Jharkhand	24	24	8	1		192	1920	1297	24	14	24	21	24	16
Karnataka	31	31	13	4	0	0	0	0	34	31	33	32	33	31
Kerala	14	14	14	14	73	72			0	0	14	13	9	3
Ladakh														
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	51	51	51	14	0	0	0	0	51	22	51	36	0	0
Maharashtra	79	79	17	11					34	19	84	77	79	69
Manipur	16	13	3	1	13	13	0	0	0	0	6	6	6	6
Mizoram	8	8	1	0			0	0			8	8	8	9
Meghalaya	7	7	1	1	24	24	620	613	7	7	7	7	7	7

State	District T Officer	District TB Officer	- ОМ	o - DTC	MO-TC	-TC	MO - PHI	. РНІ	District Programme Coordinator	rict ımme nator	Senior DR TB - TBHIV Supervisor	r DR 'BHIV visor	District PPM Coordinator	t PPM nator
	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Nagaland	11	11	2	2	0	0			0	0	11	11	2	2
Odisha	31	31	6	2	0	0	0	0	31	28	31	28	31	25
Puducherry	1	1	1	1	7	9	123	121			1	1	0	0
Punjab	22	22	3	3	134	134	3169	3135	0	0	22	21	0	0
Rajasthan	34	34	36	32	283	263	4908	3950	34	25	34	30	34	30
Sikkim	5	2	5	0	5	1	43	43	5	3	5	4	5	4
Tamil Nadu	31	31	20	14	461	461	2977	1860	35	31	36	34	35	31
Telangana	11	8	0	0	171	135	750	100	8	8	11	11	19	19
Tripura	8	8	1	1	0	0	0	0	0	0	1	0	0	0
Uttar Pradesh	75	75	10	8	993	661	4138	2693	75	67	89	83	89	92
Uttarakhand	13	13	13	8	92	95	450	450	13	12	13	12	0	0
West Bengal	37	37	28	28	464	464	3950	2749	28	26	48	43	35	25
India	743	728	396	246	4552	4063	43053	29035	266	427	772	692	613	468
Data Source: State submitted data	itted data													

10.6b District level - Programme Staffing Status in 2020

State	Accountant	ntant	Senior Treatment Supervisor (STS)	Senior eatment pervisor (STS)	Senior TB Lab Supervisor (STLS)	TB Lab visor LS)	Lab. Techs. (LT) – RNTCF Contractual	Lab. Techs. (LT) - RNTCP Contractual	LT-DMC (All sources)	c (All	ТВНV	HV	Data Entry Opertaor	Intry taor
	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Andaman & Nicobar	3	3	6	6	4	4	4	3	18	18	4	3	0	0
Andhra Pradesh	13	12	239	222	134	110	209	174	610	489	161	135	13	12
Arunachal Pradesh	15	15	20	20	18	18	12	12	35	35	11	11	15	15
Assam	27	23	153	142	78	75	88	84	350	253	30	30		
Bihar	0	0	534	311	223	158	436	355	828	590	110	29	38	37
Chandigarh	0	0	4	4	5	5	15	7	15	7	14	7	0	0
Chattisgarh	27	25	155	152	69	63	146	112	6	5	45	39	27	22
Dadra & Haveli & Daman & Diu	1	1	9	3	3	3	5	5	11	11	3	2	0	0
Delhi	25	0	72	31	38	31	186	168	215	189	189	172	26	25
Goa	1	1	9	9	2	4	8	9	24	24	6	5	2	2
Gujarat	36	35	301	298	148	148	189	175	2006	1989	243	222	38	38
Haryana	21	21	119	113	52	47	72	71			66	85	21	21
Himachal Pradesh	14	11	82	74	53	45	106	91	218	198	13	10	14	12
Jammu & Kashmir	12	10	104	97	39	39	0	0	82	82	7	7	9	5
Jharkhand	24	14	207	135	101	74	168	131	415	365	74	49	24	24
Karnataka	30	27	284	269	149	137	224	217	0	0	298	263	31	30
Kerala	14	14	85	72	74	74	79	65			55	54		
Ladakh														
Lakshadweep	0	0	1	1	1	1	3	0	4	3	0	0		
Madhya Pradesh	0	0	357	138	357	134	250	185	818	246	251	134	51	41
Maharashtra	79	65	521	463	317	301	352	332	318	295	460	439		
Manipur	6	8	27	22	19	16	25	20	25	20	9	9	0	0
Mizoram	8	8	12	12	6	6	7	7	0	0	4	4	0	0

State	Accon	Accountant	Senior Treatmei Supervise (STS)	Senior Treatment Supervisor (STS)	Senior Super	Senior TB Lab Supervisor (STLS)	Lab. Techs. (LT) – RNTCI Contractual	Lab. Techs. (LT) - RNTCP Contractual	LT-DMC (All sources)	c (All	TBHV	HV	Data Entry Opertaor	intry
	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place	Sanc- tioned	In Place
Meghalaya	7	7	24	23	15	15	20	20	70	70	7	7	7	7
Nagaland	2	2	22	22	13	13	13	13			7	7	11	11
Odisha	31	28	318	221	109	75	156	71	584	584	64	62	31	15
Puducherry	1	0	7	9	2	2	4	4	28	28	6	8	0	0
Punjab	0	0	134	107	69	51	142	106	268	208	102	69	22	22
Rajasthan	34	25	338	258	152	122	29	38	1415	1310	06	58		
Sikkim	5	2	5	4	2	2	5	2	43	43	1	1	1	0
Tamil Nadu	36	31	461	424	145	120	326	263	738	376	373	337		
Telangana	3	3	171	157	96	06	150	150	750	618	100	100		
Tripura	8	9	20	19	13	10	6	6		59	3	3	8	7
Uttar Pradesh	76	29	1197	819	584	378	1045	910	2020	1896	562	443	93	84
Uttarakhand	13	12	95	90	31	29	72	99	153	138	28	28	13	13
West Bengal	28	27	467	427	193	159	375	338	945	916	373	224	38	34
India	603	206	6557	5171	3316	2568	5001	4213	13045	11065	3805	3053	530	477
	1 1 1													

Data Source: State submitted data

## 11. Community Engagement: Members of National TB Forum

Sl. No	Name & Designation of the Member
1	Mr Rajesh Bhushan, Secretary (Health), MoHFW, GoI (Chairperson)
2	Dr G S Toteja, Additional Director General (ICMR), GoI (Co-Chair)
3	Dr Abhay Bang, SEARCH Gadchiroli (Co-Chair)
4	Ms Arti Ahuja, Additional Secretary (TB), MoHFW
5	Shri Vikas Sheet, Joint Secretary (Policy, TB), MoHFW
6	Shri Surendra Singh, Joint Secretary, Coordination, Ministry of Social Justice & Empowerment
7	Ms Kalyani Mishra, Economic Advisor, Ministry of Rural Development
8	Shri Bijaya Kumar Behera, Economic Advisor, Ministry of Panchayati Raj
9	Mr Samir Sinha, Principal Secretary (Health), State Govt. of Assam
10	Principal Secretary (Health), State Govt. of Telangana
	(Ms Karuna Vakati, MD NHM represented)
11	Mr. Nirmal Kerketta, Representative, Jharkhand State TB Forum
12	Mr. YaswantMarathe, Representative, Maharashtra State TB Forum
13	Mr. Bibhuti Bhushan Sahu, Representative, Odisha State TB Forum
14	Ms. Anjana Singh, Representative, TB Mukt Vahini, Bihar
15	Ms. Kalyani Nishad, Representative, TB Mukt Chhattisgarh Foundation
16	Mr. ShazadAbdurrahman, TB Champion, Uttar Pradesh
17	Mr. Dalbir Singh, President, GCAT
18	Dr. Yogesh Jain, Chhattisgarh
19	Dr. Nalini Krishnan, REACH
20	Dr. Reuben Swamickan, Division Chief (Tuberculosis and Infectious Diseases), USAID India
21	Subroto Mohanty, The UNION, South East Asia
22	Dr. Neeraj Jain, Pulmonary Medicine, Sri Gangaram Hospital
23	Ms. MaitreePorecha, Journalist
24	Swami Satyaswarupananda, DTO, Karol Bagh, New Delhi
25	Prof. Ramila Bisht, Faculty, Centre for Social Medicine and Community Health, JNU, New Delhi
26	Prof. Rajni Bagga, HOD, Social Sciences, NIHFW
27	Deputy Director General (TB), MoHFW(Member Secretary)
	Standing Invitees
28	Addl DDG, CTD (Dr Sudarshan Mandal)
29	Deputy Director (TB), (Dr Nishant Kumar)
30	Deputy Director (TB), (Dr Raghuram Rao)
31	Dr Ranjani Ramachandran, NPO TB, WHO
32	Mr Balaji Babu, Community Representative – NTEG on TB Co-morbidities
33	Dr Santosh Giri, Community Representative, NTWG on Women & TB including Gender issues
34	Mr Manoj Pardesi, Community Representative, NTEG on LTBI

Sl. No	Name & Designation of the Member
35	Mr ChapalMehra, Community Representative, NTWG Private sector engagement
36	Ms Deepti Chavan, Community Representative, NTWG Private sector engagement
37	Mr Saurabh Rane, Community Representative, NTEG Peadiatric TB
	Special Invitees
38	Dr R V Asokan,Hony Secretary General, IMA
39	Ms Blessina Kumar, CEO, Global Coalition of TB Activists
40	Dr M A Balasubramanya, Advisor, NHSRC
41	Ms AshnaAshish, Representative, Survivors Against TB
42	Mr Dipendu Bhattacharya, TB Survivor & activist

## 12. Research: 12.1 Operational Research Projects Funded by Global Fund Grant (2018-2021)

Sr No	Title	PI	Status
1	Prevalence of Microbiologically Positive Pulmonary Non-tuberculous Mycobacteria (NTM) including Species Information under the Nation-al TB Elimination Programme, India.	Dr. Shripad Patil, NJIL&OMD, AGRA	On Going
2	Prevalence and Determinants for TB Disease among Contacts of TB Dr. Mamta Arora, NJIL&OMD, AGRA Patients, A bi-directional Study	Dr. Mamta Arora, NJIL&OMD, AGRA	On Going
3	Strengthening Mechanisms for TB Death Reporting under the Revised National Tuberculosis Control Programme (National TB Elimination Programme) and the Registrar General of India.	Dr. Avi Kumar Bansal, NJIL & OMD, AGRA	On Going
4	Sentinel Surveillance for measuring the TB Burden and trends in High Dr Srinivas B M. NIRT-ICMR Risk Group for TB.	Dr Srinivas B M. NIRT-ICMR	On Going
N	Effectiveness of 12 dose Rifapentine–Isoniazid in preventing Tuber-culosis among household contacts of patients diagnosed with Tuber-culosis under programmatic conditions in India– a feasibility study.	Dr. Pradeep A Menon, NIRTICMR	On Going

## 12.2 Operational Research Projects Funded by CTD

Evaluation of Gene X pert as compared to conventional method in di- agnosis of Genital TB among infertile women.  Tuberculosis among Paediatric household contacts of drug sensitive and multidrug – resistant tuberculosis natients- a multicentric pro-
Evaluation of the Effect of Pharmacogenetics on Pharmacokinetics of First Line Anti Tubercular Drugs in Paediatric Intra thoracic Tuberculosis  Enhanced and improved diagnosis of Paediatric TB and LTBI in Dr. Radha Munje, IGMC Nagpur Household contacts of TB cases in Nagpur, India

