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Working Paper

PRIVATE SECTOR ENGAGEMENT FOR TUBERCULOSIS ELIMINATION

India's Journey from Pilots to National Scale-Up (2012–2021)

February 2023

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ABBREVIATIONS

Currency Equivalents:

1 million = 10 lakhs

10 million = 1 crore

BMGF	Bill and Melinda Gates Foundation
CBNAAT	Cartridge-Based Nucleic Acid Amplification Test
CHRI	Center for Health Research and Innovation
CTD	Central TB Division
DBT	Direct Benefit Transfer
DOTS	Directly Observed Treatment (Short Course)
DR-TB	Drug-Resistant Tuberculosis
DST	Drug-Susceptibility Testing
FDC	Fixed Drug Combination
FIND	Foundation for Innovation in Diagnostics
GOI	Government of India
ICT	Information and Communication Technology
IT	Information Technology
JEET	Joint Effort for Elimination of Tuberculosis
MOHFW	Ministry of Health and Family Welfare
NGO	Nongovernmental Organization
NPY	Ni-kshay Poshan Yojana
NSP	National Strategic Plan
NTEP	National Tuberculosis Elimination Program
NTSU	National Technical Support Unit
NTWG	National Technical Working Group
PPIA	Patient Provider Interface Agency
PPSA	Patient Provider Support Agency
PPM	Public-Private Mix
PSE	Private Sector Engagement
PTETB	Program Toward Elimination of Tuberculosis
RNTCP	Revised National TB Control Program
STCI	Standards of Tuberculosis Care in India
STO	State Tuberculosis Officer
STSU	State Technical Support Unit
TB	Tuberculosis
TSU	Technical Support Unit
WHO	World Health Organization
WHP	World Health Partners
WJCF	William Jefferson Clinton Foundation
UATBC	Universal Access to Tuberculosis Care

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Abstract

Tuberculosis (TB) is a leading cause of illness and death worldwide. India accounts for 26 percent of the world's TB burden; hence, the significance of India's role in achieving the global elimination of TB cannot be overstated. India has a mixed health care system comprising a vertical program-oriented public health care system and a fragmented private health care system, which drives out-of-pocket expenditures by households. Approximately 80 percent of TB patients start their diagnostic and treatment journey in the private sector, and nearly 50 percent continue their treatment there. Thus, private sector engagement (PSE) is an essential intervention for the Indian context. PSE is an important pathway for the government of India to achieve national TB targets. Since the mid-1990s, the National Tuberculosis Elimination Program (NTEP) has been implementing various PSE activities, in some cases with support from development partners.

Most early PSE projects and interventions yielded poor-to-mixed results and did not impact the quality of private sector care. From 2012, NTEP began to scale up innovative approaches with support from development partners. Encouraging results from the pilots were instrumental in convincing policy makers and program managers to transition and integrate financing for newer PSE models into India's domestic budgets. The program has successfully transitioned and institutionalized various PSE models.

This working paper examines and documents early experiences and lessons from India's TB PSE journey. While it is still too early to evaluate the impact of the transition, the story of how India transitioned from pilots to national scale-up holds lessons for other health programs and countries with similar TB burdens.

Keywords

Tuberculosis, Private Sector Engagement, Public-Private Mix Models, Scale-up, Sustainability

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PART 1: INTRODUCTION AND BACKGROUND

Tuberculosis (TB) is a leading cause of illness and death worldwide. In 2020, nearly 10 million people were diagnosed with TB, and 1.5 million people died of the disease. Country-level efforts have significantly reduced the global burden of this curable and preventable disease, yet TB remains a global public health crisis (WHO 2021).

The significance of India's role in achieving global elimination of TB cannot be overstated. India has the world's largest burden of TB, accounting for 26 percent of the global burden (WHO 2021). In 2021, a total of 1.9 million TB cases (new and relapse) were notified in India, where TB causes approximately 493,000 deaths each year (GOI 2022). TB has staggering impacts on public health and human capital, as it mainly affects adults in their economic productive prime. The WHO and the World Bank have recommended TB treatment as a core indicator for assessing progress toward Universal Health Coverage (UHC) in high TB burden countries.

The combination of high disease burden, socioeconomic impact, and predilection for economically productive ages makes TB a costly drag on India's development. In 2016, TB caused India to lose an estimated US\$23.7 billion (approximately 1 percent of India's GDP in 2016), and patients often deal with catastrophic out-of-pocket expenditures (Goodchild et al. 2011). On the other hand, these same extensive externalities make TB control one of the most cost-effective health interventions available. Expanded TB control is predicted to prevent 180,000 deaths in India by 2025 at an additional annual cost of approximately US\$430 million. Depending on the assumptions made about the valuation of life and the discount rate, each Indian rupee spent would give benefits of between 11.9 and 71.9 rupees, making a very strong case for continuing to scale up investment toward improved TB control in India (Vassal A n.d.).

TB caused India to lose an estimated US\$23.7 billion

Strong political commitment and leadership, continuous innovation, ample financing, and strategic policy reforms are essential components of a robust TB elimination strategy. The GOI has been taking steps in these directions. The National Strategic Plans (NSPs) of 2012–2017 and 2017–2025 set ambitious targets for TB control in India, recommending key policy reforms, out-of-the-box interventions, and reimagined management of this public health crisis. In March 2018, Prime Minister Narendra Modi launched the TB Free India campaign that set the goal to eliminate TB in India by 2025—five years earlier than the Sustainable Development Goals (SDGs) 2030. This political commitment signaled a shift in strategy. The GOI renamed its program the National Tuberculosis Elimination Program (NTEP)¹ to signify the shift in focus toward eliminating (i.e., reducing TB incidence to 44 per 100,000) rather than simply controlling TB.

Private sector engagement (PSE) is an important approach to eliminate TB in India. More than 70 percent of people suffering any ailment (National Sample Survey Office, 71st Round 2015) and 80 percent of TB patients (National Strategic Plan 2017-2025 2017)—irrespective of their financial status—have their first point of contact in the private health sector.² As per the National TB Prevalence Survey, 49 percent of patients seek care in the private sector. Ninety percent of TB patients prefer to buy anti-TB drugs from private sector pharmacists (GOI 2021). But patients struggle to navigate a fragmented, complex, and expensive private health care sector. Private health care providers in India are predominantly individual practitioners operating small clinics. It is estimated that between 2012 to 2018, nearly 47 percent of TB case notifications were from individual clinics, 48 percent from private hospitals/medical colleges, and the remaining from pharmacists.³ The result is increased transmission because of delayed diagnosis and treatment; excess mortality and morbidity because of inappropriate treatment; increased drug resistance; and catastrophic expenditures of private sector care disproportionately impacting the poorest households (WHO 2021).

Engaging private providers is the biggest challenge and greatest opportunity for improving TB control in India. PSE is a highly beneficial strategy to improve ease of access to services and reduce out-of-pocket expenses for patients. PSE can also help improve case notification, treatment adherence, community awareness, and outreach, among others (Yellappa et al. 2013; Sreemathy 2019). Evaluations conducted across PSE models in India have found it to be a cost-effective strategy for TB control (Bhatia 2010; Arinaminpathy et al. 2021).

¹ Prior to NTEP, the national TB program was called the Revised National TB Control Program (RNTCP). In this paper NTEP and RNTCP are used as per the reference to the time line, that is, events prior to 2020 use RNTCP and those after use NTEP.

²The private health sector consists of formal and informal providers. They often practice in clinics, nursing homes, hospitals, and super-specialty hospitals. The private sector also dominates the medical colleges, diagnostic centers, pathology labs, pharmacies, blood banks, etc., in India.

³ National TB Elimination Program (NTEP) Presentation, 2018.

Various models for engaging the private health sector in TB care service delivery have been implemented approximately the world (WHO 2018). These include grant-in-aid financing of private providers, paying monetary incentives to private providers, and providing free supplies of commodities/ test kits/drugs to the private providers. More recently, new methods of engaging private health care providers—such as social entrepreneurship and social franchising models—have also emerged.

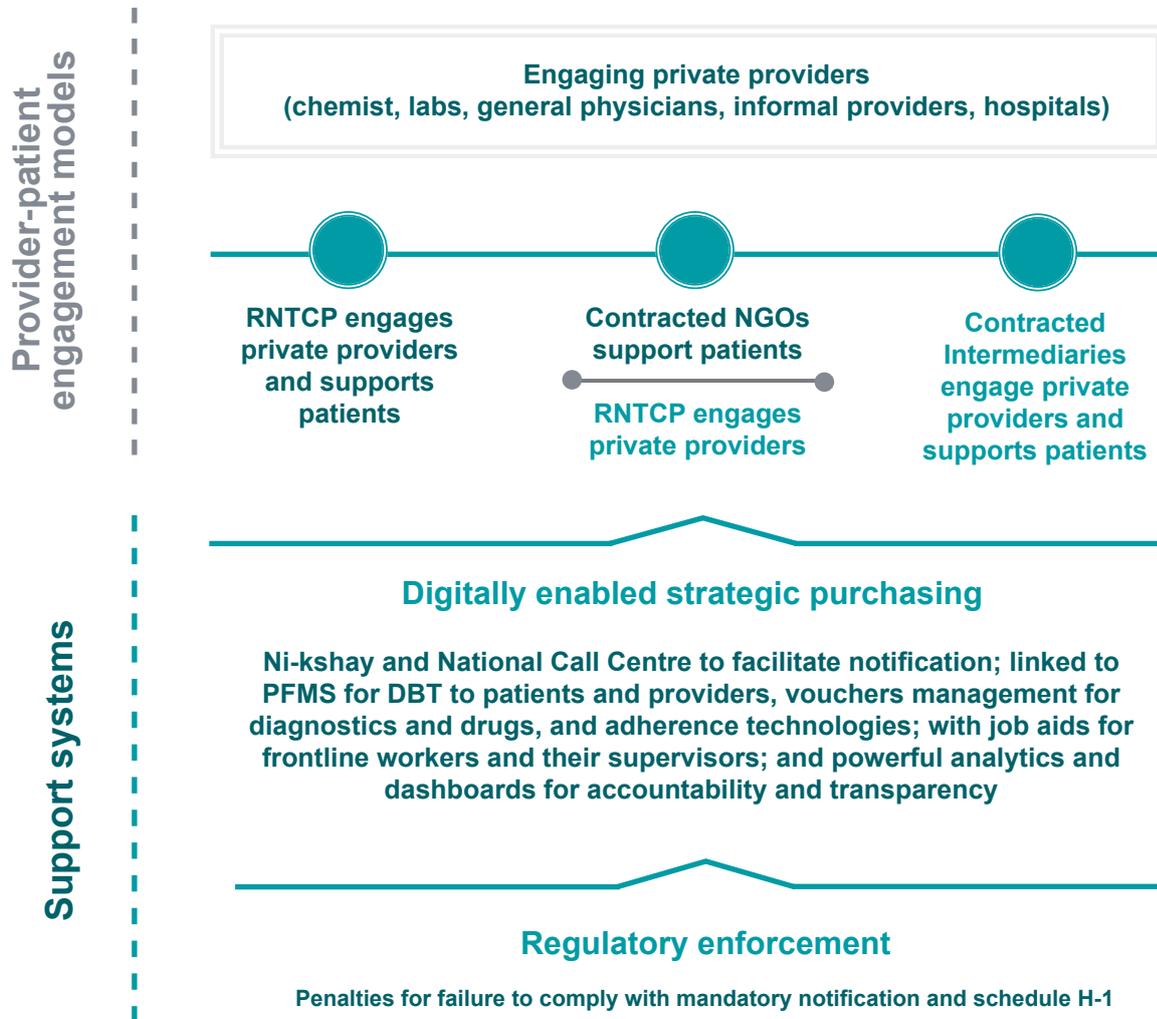
Countries like the Philippines and Indonesia have been engaging private hospitals intensively, whereas Bangladesh, Myanmar, and Pakistan have been focused on engaging the primary care providers, with varying degrees of success. The Philippines, Indonesia, and Thailand have explored provision of TB care services under social health insurance, which has its own complexities. Perhaps the single most important lesson learned in efforts to engage private providers for TB is the importance of flexibility, innovation, and adaptation (WHO 2018). While there are common themes, there is no single operational model, health markets differ significantly from one setting to another, successful implementers have demonstrated the ability to adjust approaches over time, and innovative approaches continue to emerge.

Scale-up of public and private sector partnerships has evolved into a cornerstone approach to eliminating TB in India. The country started its journey of PSE toward TB elimination in the mid-1990s, the first interventions were implemented in 1995. This paper documents the evolution of PSE in the TB care ecosystem in India, particularly from 2012 to 2021. It delves into government , civil society, and private sector efforts to transform public and private health sector collaboration toward TB control and elimination. Figure 1 summarizes the various strategies to engage the private sector, as well as the support systems that strengthen these models to achieve scale while ensuring that every patient receives high-quality, standardized TB treatment.



Perhaps the single most important lesson learned in efforts to engage private providers for TB is the importance of flexibility, innovation, and adaptation.

Figure 1:
Approaches to Engage and Strengthen PSE at Scale.



Source: World Bank 2018.

RNTCP (Revised National TB Control Program), NGOs (Nongovernmental Organization), DBT (Direct Benefit Transfers), PFMS (Public Financial Management System).

Purpose of the Paper

The working paper documents India's bold experiments of piloting and scaling up innovative models for PSE within the TB program from 2012 to 2021. The paper provides suggestions to further strengthen PSE that are relevant not only to NTEP, but potentially to other health sector programs in India and globally. The paper seeks to do the following:

- 1 | Document the approaches used by the NTEP to engage the private health sector at scale for TB elimination in India
- 2 | Provide insights into the paradigm shift and critical policy reform(s) undertaken by NTEP that reshaped its PSE strategy and led to the successful design and implementation of various PSE models
- 3 | Reflect on the strategic purchasing approach(es) implemented by NTEP; and draw lessons for high burden TB countries and other health programs within India in the context of UHC/ Sustainable Development Goals (SDGs) 2030

The World Bank's responsibility for documenting and sharing good global public health practices motivates this activity, which seeks to better understand India's innovative transition from PSE pilots to national scale-up in the fight to eliminate TB.

The documentation will give global visibility to this Indian innovation. This could provide high TB burden countries with a menu of options for future work. The documentation aligns with the Lighthouse India Initiative,⁴ through which the Bank seeks to document lessons and evidence from India, and to participate in best practice and learning exchange with other countries to benefit India and the world.

⁴ <https://www.worldbank.org/en/cpf/india/how-we-work/supporting-lighthouse-india>.

Methodology

This paper used qualitative and quantitative methods of data collection and analysis within a diagnostic study approach. This involved the following:



As part of the desk review, the study team collected and reviewed key documents, such as government policy and strategy documents and official reports of the Central TB Division (CTD), Ministry of Health and Family Welfare (MOHFW). A literature review was undertaken following a search using key terms relevant to PSE with respect to TB in India. This was followed by searches on online databases such as PubMed (MEDLINE), Google Scholar, Social Sciences Research Network (SSRN), EconLit, as well as databases of international development agencies and think tanks. The desk review covered the period from the year 1990 onward and was supplemented by reviewing gray literature, program documents, and newspaper articles.

The study team conducted key informant interviews with subject matter experts, policy makers, and program managers at national and subnational levels; representatives of technical partners and development partners/donors; and implementation agencies involved in the on-the-ground activation of the PSE models. Based on information gaps from the desk review, coupled with the study team's knowledge of the TB program, the team developed a checklist of questions for key informants. The questions explored aspects of implementation of PSE models, the journey from pilots to national-level scale-up, key lessons, challenges, government ownership, and vision toward sustainability. The team pilot tested and refined the interview tool prior to finalization. Given the objective and nature of this study, purposive sampling was used. The team identified a core set of interview participants in consultation with the NTEP. The team supplemented core interviews by interviewing additional stakeholders referred by key informant participants, that is, via a snowball sampling manner. Most interviews were conducted virtually, though when possible face-to-face interviews were held. Verbal consent was sought from all participants at the beginning of the interview. Annex I provides a list of the interviewees.

A quantitative analysis was undertaken primarily based on the data available in the public domain, such as annual TB reports published (2012 onward) by the GOI. Additionally, data were sought from the NTEP and from organizations that implemented various pilots and interventions related to PSE between 2012 to 2020. The data have been analyzed to understand the impact of PSE activities on components such as case notification and treatment outcomes.

Insights and findings from the key informant interviews, desk review, and quantitative data analysis are presented in the subsequent chapters.

The Genesis of PSE for TB Control in India

From 1995 to 2011, PSE was primarily in the form of “schemes” implemented by the GOI in partnership with non-governmental organizations (NGOs), for-profit private providers, and medical colleges. NTEP, then Revised National TB Control Program (RNTCP), also engaged with the Indian Medical Association, Indian Pharmaceutical Association, Indian Academy of Pediatrics and over time, other quasi-government organizations, such as the Employee State Insurance Corporation, Indian Railways, and the Ministries of Ports, Mines, Steel, and Coal. During the mid-1990s, some effective pilot projects were implemented in a few cities across the country;⁵ various studies document these pilots. However, the evidence and lessons of India’s transition from pilots to national scale-up (2012–2021) of PSE has not been well documented.

In 2001, the RNTCP announced the first set of formal guidelines and schemes for engaging the private sector for TB control. The guidelines and associated schemes were then revised in 2003, 2008, and 2014. Engagement of the private sector across these “schemes” largely focused on referring the private patients to the public sector, advocating for Directly Observed Treatment Short Course (DOTS) regimen, adherence to the RNTCP guidelines, undertaking microscopic testing, advocacy and community mobilization, and training of staff.

These schemes had two key characteristics: (i) a grant-in-aid mode of financing, with emphasis on input/process indicators rather than on output/performance, and (ii) a centralized approach with fixed models and templates for contracts.

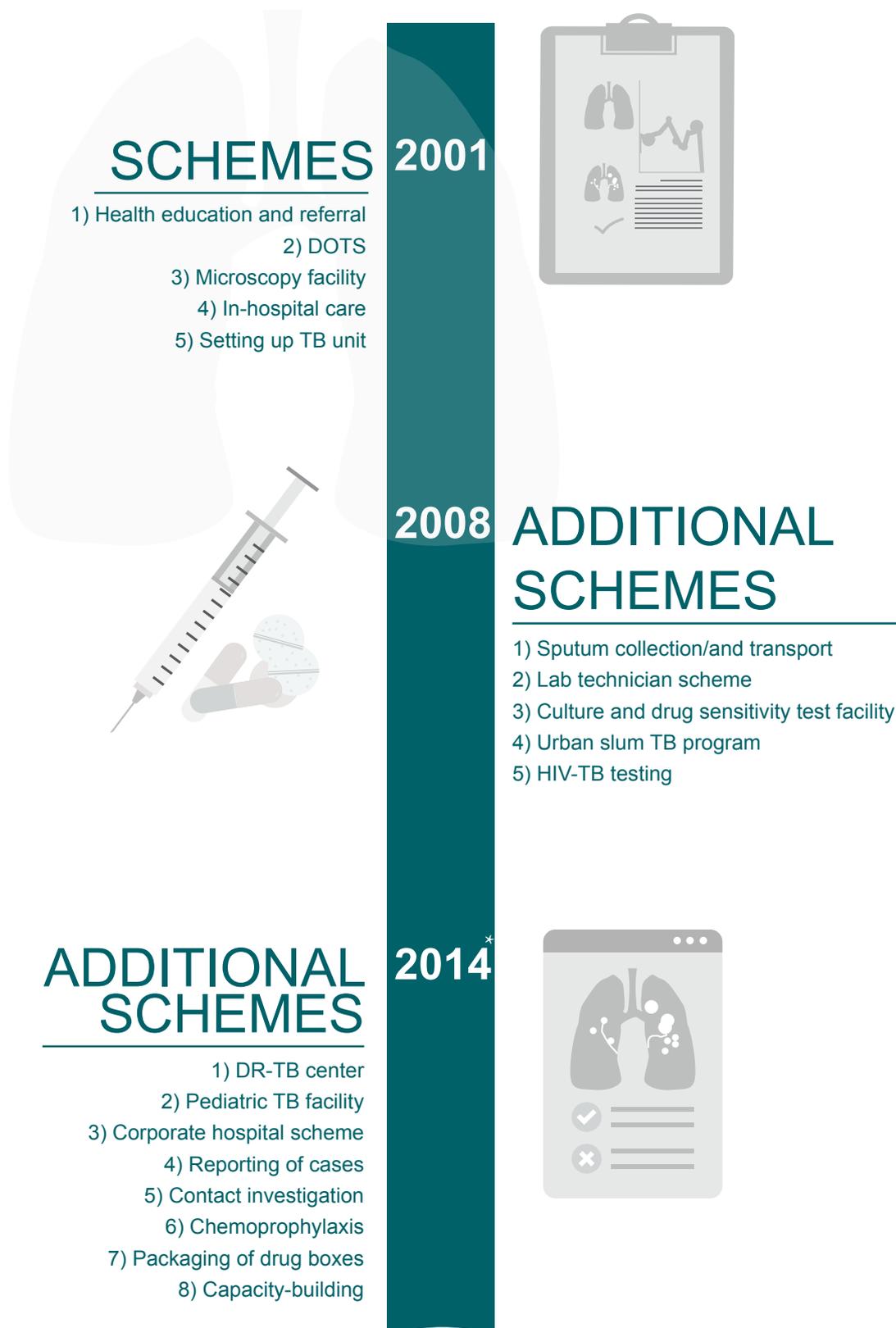
There also were inherent constraints in these schemes: (i) services delivered in a disaggregated manner rather than as an integrated, continuum of care for patients,⁶ (ii) inadequate or lack of administrative systems and capacity to contract, supervise, monitor, and release payments; and (iii) lack of scope for innovation or adoption of new technologies.

The 2008 and 2014 revisions of schemes (Figure 2) expanded the scope of services under PSE and attempted to increase accountability by aligning with the National Health Mission framework and revised budgetary provisions, where feasible.

⁵ For example, the Mahavir Trust hospital PPM project in Hyderabad, Ramakrishna Mission model in Delhi.

⁶ Setting up microscopy center, sputum collection, to treatment were offered as separately by different NGOs and not as a bundle of services at one’s doorstep

Figure 2:
Schemes to Engage with the Private Sector.



Source: Author's own.

*The National Guidelines for Partnership 2014 contained 22 schemes for engaging the private sector.

DOTS (Directly Observed Treatment Short Course), HIV-TB (human immunodeficiency virus-tuberculosis), DR-TB center (drug resistant-tuberculosis)

Limited Uptake of PSE Schemes

By 2012, many PSE pilots were implemented and after nearly two decades of implementation, these PSE strategies yielded limited results.

TB indicators such as notifications and referrals to public sector improved in limited geographies; however, the programs did not achieve scale. The following challenges contributed toward limited uptake of PSE schemes. (Chauhan 2007; National Strategic Plan 2012-2017 2012; Nautiyal and Singh 2018; Sandhu 2011; Sharma et al. 2013).



Photo credit: PATH

01

Nonstandardized treatment regimens

The GOI advocated the intermittent DOTS regimen, while the private sector prescribed the daily regimen without restricting their prescription to the standard four TB drugs.



02

Lack of trust

The public sector did not trust the standards of care followed by the private sector. In contrast, the private sector was wary of the public sector on grounds of quality of services (quality of facilities and provider access) and loss of their own patients to the public sector.



03

Inflexibility and focus on a referral-based model

The PSE schemes focused on bringing the private sector patients to the public sector through a referral-based mechanism, instead of providing flexibility to the patients treated in the private sector to remain with their provider of choice.



04

Delayed payments and low incentives

The volume of services and the reimbursement provided to the private sector from the schemes was meagre. Further, delays in payments to NGOs and private health care providers contracted under the PSE schemes lowered their motivation to implement the activities effectively—subsequently limiting scale and sustainability.



05

Shortage of human resources and inadequate capacity

Program managers under the national TB program were already overstretched with the demands of the DOTS program; they had limited bandwidth to organize the large and dispersed private sector and to manage relationships, organize contracts, and make timely financial reimbursements through archaic administrative structures.



06

Lack of adaptability and contextualization

Being a federally funded program, the states/union territories followed the schemes/guidelines in a rigid fashion, without making contextual adaptations or changes in the templates, thus depriving innovation and efficiency in program implementation.



Although PSE emerged as a useful strategy, its implementation challenges limited scale-up. This prompted the NTEP to consider the piloting of alternative PSE approaches with bigger potential for impact.

PART II: POLICY REFORMS AND STRATEGIES THAT IMPACTED PSE FOR TB MANAGEMENT IN INDIA 2012–2020

The continued suboptimal uptake of PSE schemes, coupled with a growing policy discourse on the importance of PSE, triggered many policy reforms and implementation of innovative PSE models in the TB program. Figure 3 highlights the key policy reforms, strategic shifts, and PSE innovations implemented from 2012 to 2020.

During this time frame, a series of key policy reforms laid the foundation for transforming PSE in TB control and enabled the NTEP to scale up PSE; these are described below.

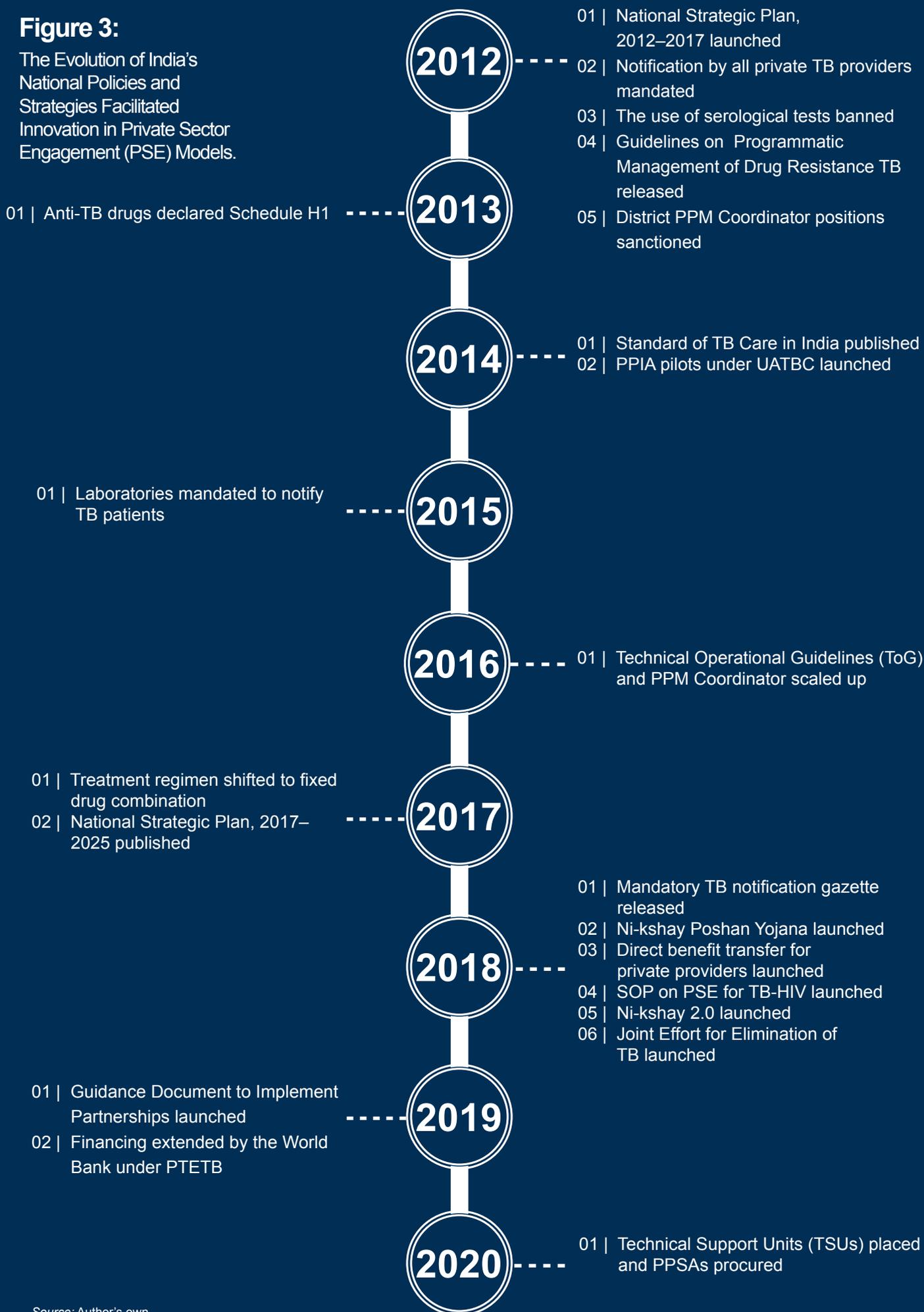
National Strategic Plan (NSP) 2012–2017

The NSP for Tuberculosis Control 2012–2017 was launched with the objective of “universal access to quality TB diagnosis and treatment for all TB patients in the community.” The plan envisioned deployment of new PSE models that would overcome the past challenges of PSE. The NSP called for the formation of a National Technical Working Group on Public-Private Mix (NTWG-PPM) to provide advice on the opportunities to increase the involvement of the private health sector⁷. The NSP recommended the revision of partnership guidelines to improve the quality of outcomes from the ongoing PSE models. The NSP recommended the formation of Technical Support Units (TSUs) at the state level to strengthen contract management and partnerships between the public and private sectors.

⁷ Immediately following the recommendations of NSP, NTWG-PPM was constituted in 2012.

Figure 3:

The Evolution of India's National Policies and Strategies Facilitated Innovation in Private Sector Engagement (PSE) Models.



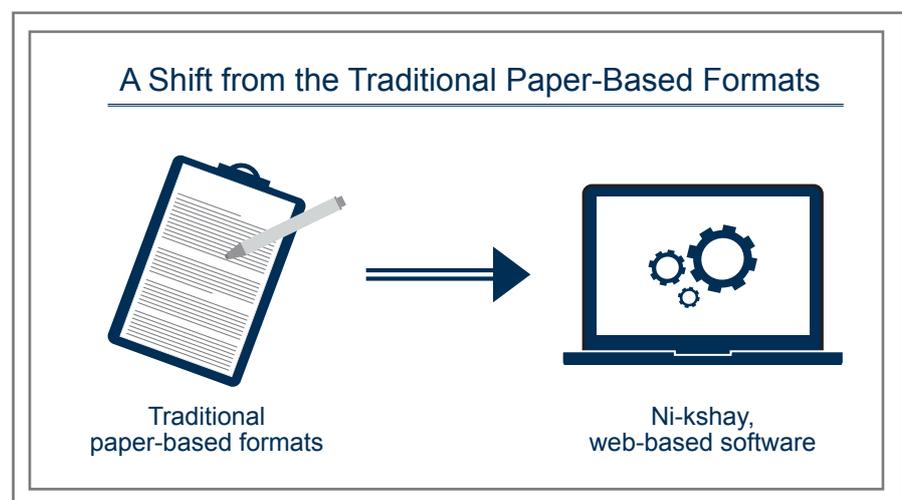
Source: Author's own.

PPM (Public-Private Mix), PPIA (Patient Provider Interface Agency), UATBC (Universal Access to Tuberculosis Care), SOP (standard operating procedure), PSE (public sector engagement), PTETB (Program Toward Elimination of Tuberculosis), TB-HIV (human immunodeficiency virus-tuberculosis), PPSA (Patient Provider Support Agency).

The NSP also recommended earmarking 10 percent of the total budget of PSE for activities to promote the building of NGOs/private practitioner networks; and up to 30 percent of PPM budget for piloting innovations. A majority of the budget was to be dedicated to hiring additional human resources. Consequently, in 2012, 764 Public Private Mix (PPM) Coordinator positions were sanctioned, one for each state and for each district. PPM Coordinators were expected to intensify the PSE, including (but not limited to) facilitating case notifications from the private sector and supervising and supporting interface agency activities. Notably, NSP 2012–2017 allowed for intermediary agencies to be hired in states to manage private sector–focused activities. As a follow-up to this recommendation, in 2014, pilot projects engaging intermediary agencies were implemented under the Universal Access to TB Care (UATBC) program. The next chapter of this paper details these pilot interventions.

Government-Mandated TB Notification

In May 2012, the MOHFW, GOI, issued a nonlegally binding Executive Order mandating that all private and public health practitioners notify all TB cases. The order called for proper TB diagnosis and treatment, reduction in the transmission of the disease, and addressing the problem and increasing incidence of drug-resistant TB (DR-TB) (MOHFW 2012). In June 2012, the GOI launched an institutional mechanism for notification: Ni-kshay, a web-based TB case notification software (www.Ni-kshay.in); and m-Ni-kshay, its accompanying mobile app. Ni-kshay enabled (i) health care providers at the subdistrict level to track every TB patient; and (ii) private providers to notify cases through a standardized online system. This was a shift from the traditional paper-based formats.



Ban on Serological Tests

Prior to 2012, there was widespread concern about the quality of TB care, including diagnostics provided in the private sector. Private providers rarely suggested sputum microscopy, and in most cases relied on chest X-rays, clinical diagnosis, and inappropriate immunological tests. These included serological tests, which are more expensive than culture tests (NSP 2012–2017). In June 2012, the GOI banned the import, sale, and use of serological tests for TB diagnosis due to inaccurate and inconsistent test results.⁸ The objective of the policy reform was to improve the quality of diagnostics in the private sector. This step by the GOI's NTEP culminated from the WHO's policy recommendation, which was confirmed by an expert group set up by the Drug Controller General of India, on the use of serological tests.

Expansion of DR-TB Diagnostic and Treatment Services

Guidelines on Programmatic Management of DR-TB (PMDT) in India were released in 2012. Additionally, the first-ever nationwide anti-TB drug resistance survey conducted in 2014 found that more than 25 percent of TB patients in India have drug resistance to one or more anti-TB drugs. This led to a call for urgent action in the form of strengthening drug resistance surveillance, universal drug-susceptibility testing (DST), and appropriate DST-guided treatment. The PMDT document called for engagement with the private sector to provide DR-TB services in places where government health care services were not present.

Mumbai's DR-TB Crisis

In 2012, Mumbai's DR-TB crisis brought national and global attention to gaps in TB case management and to the impact of delayed treatment on TB drug resistance (Lowenberg, Udwadia et al. 2012). The crisis triggered local, nonrepresentative studies suggesting that nearly 60 percent of patients without any history of TB were resistant to at least one drug. The DR-TB situation in India also spotlighted challenges with India's TB elimination policies and strategies. The DR-TB crisis was a result of poor diagnostic services and improper treatment adherence, largely centered in the unorganized private sector, which fell outside GOI purview and guidelines (Vijayan and Shah 2020).

⁸ Serological tests are tests that are carried out on blood samples. Serological or sero-diagnostic tests for TB means diagnosing TB through looking at a blood sample, and specifically looking for antibodies in the blood sample (tbfacts.org).

Anti-TB Drugs Declared Schedule H1

In December 2013, the GOI restricted the over-the-counter sale of anti-TB drugs by declaring them as Schedule H1⁹ drugs. This restriction mandated pharmacists to only provide medicines based on prescriptions and to maintain a record of buyers and prescribers (MOHFW, GOI 2013). This critical restriction helped to form a database of doctors who were treating TB; identify/track patients who sought care in the private sector; and track those who were lost to follow-up or those who discontinued treatment. This was an important step because out-of-pocket expenses among privately treated patients were high, which heightened private patients' likelihood of abandoning TB treatment, which in turn increased their risk of acquiring DR-TB (National Strategic Plan 2012–2017 2012).

Studies on Implementation of Schedule H1 Policy

Strengthening the TB surveillance system and improving the quality of TB care were key objectives of implementing the Schedule H1 regulation. Studies conducted across cities have identified gaps in terms of patchy implementation. A study conducted in two districts of Tamil Nadu highlighted that in 2018, pharmacies contributed to one-fourth of the TB notifications in these geographies. The study identified important barriers, including patients' hesitancy to share their details with pharmacists, cumbersome recording and reporting process, and difficulties in recording patient details during high workload busy business hours. It concluded that implementation needs to be strengthened and adequately scaled up (Frederick et al. 2021). In Kerala, implementation of the policy led to an increase in private sector notification, a decline in private anti-TB drug sales, and increased efforts for obtaining microbiological confirmation for TB in the private sector. However, the study found that although the GOI established the Schedule H1 in 2014, the government of Kerala only started enforcing it systematically for anti-TB drugs after advocacy by NTEP. Enforcement for other drugs in Schedule H1 is still suboptimal in the state (Rakesh et al. 2021).

⁹Schedule H1 was introduced by the government of India in 2013 and includes drugs that contain certain third-and forth-generation antibiotics, certain habit-forming drugs, and anti-TB drugs.

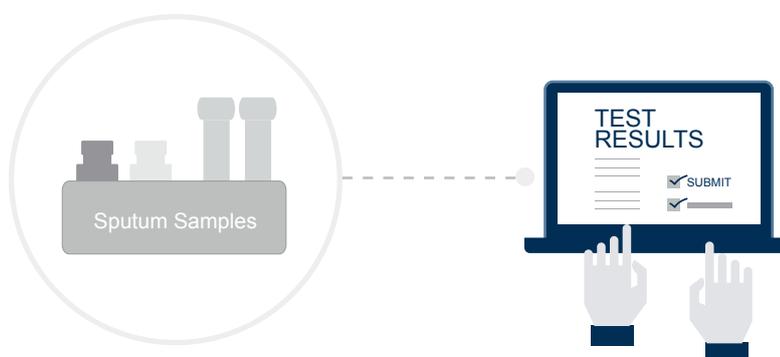


Standards of TB Care in India Published

In 2014, to improve the consistency and quality of TB care in both private and public sectors, the MOHFW published the first-ever Standards of TB Care in India (STCI). The document enlisted 26 standards that covered the entire patient pathway from testing to treatment. The standards were formulated in view of the availability of new diagnostic tools for early TB diagnosis, the emergence of newer drug regimens, and the need for better patient support strategies. The STCI was developed in line with international evidence. The latest version of STCI is under review and finalization at the time of this paper's publication.

Laboratories Mandated to Notify TB Patients

In 2015, all private sector laboratories were mandated to notify cases of TB (MOHFW 2015). This was to further strengthen notifications that were already seeing a rise because of mandating notifications from private doctors, as well as from the pharmacies dispensing anti-TB drugs.



Treatment Regimen Shifted to Fixed Drug Combination

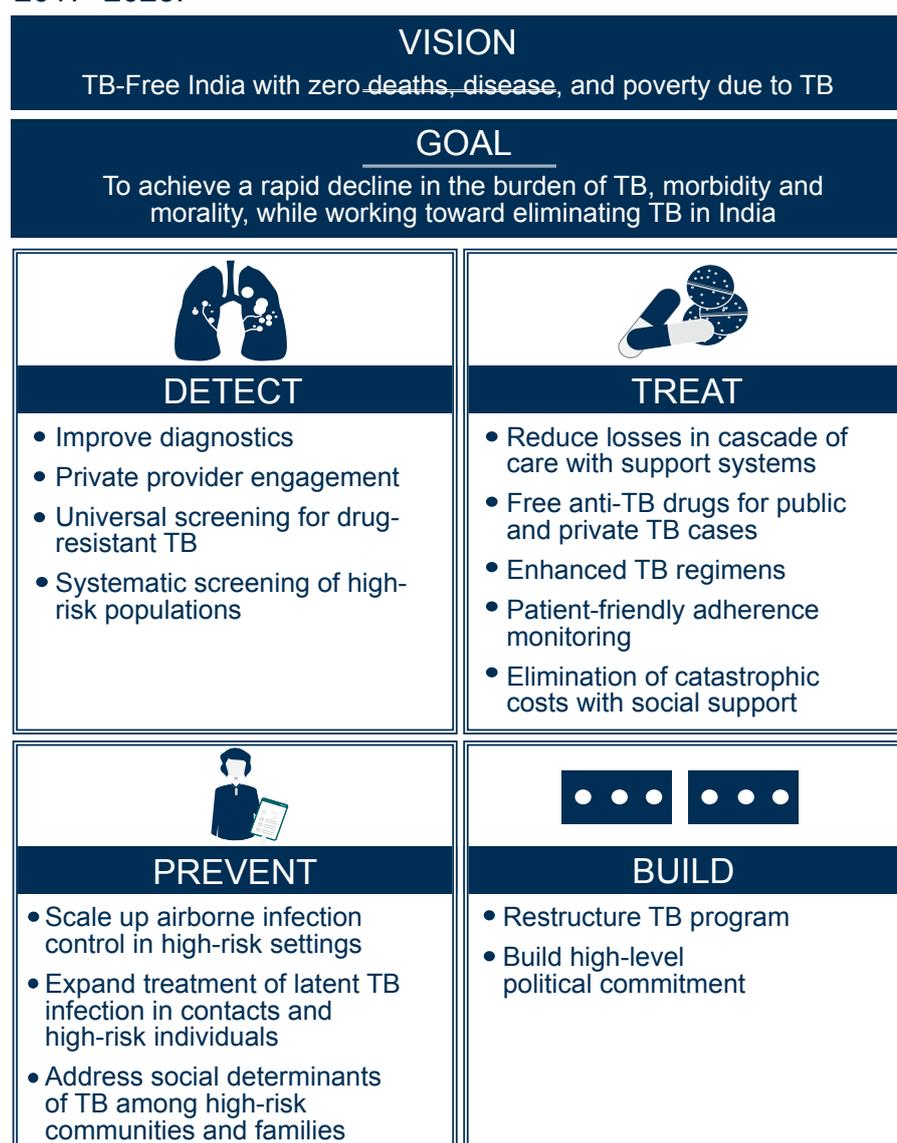
In line with the increasing evidence of the benefits of introducing Fixed Drug Combination (FDC)¹⁰ as a daily regimen and recommendation by the WHO, the RNTCP took the first steps toward adopting a daily FDC regimen for drug-sensitive TB treatment. One of the key objectives of this change was to simplify the treatment protocol for the patients, thereby improving adherence and reducing the risk of drug resistance. The MoHFW extended the FDC drugs free of cost to the private sector (MoHFW 2017).

¹⁰Anti-TB FDCs are usually a combination of two or more first-line anti-TB drugs. These are rifampicin, isoniazid, pyrazinamide, and ethambutol.

The National Strategic Plan 2017–2025

India's National Strategic Plan (NSP) 2017–2025 transformed the way in which the GOI engaged private providers—taking a systematic and large-scale approach. The strategy capitalized on advances in information and communications technology (ICT) and on India's drive toward digital financial inclusion. Rather than compete with private providers, the NTEP aimed to work with them to deliver quality services to the entire population. To avoid further burdening of undertrained and overstretched public sector staff, the NTEP opened to contracting professional agencies with the skills and capacity to engage with thousands of unorganized private providers. For the first time, budgetary resources commensurate with both the problem and the opportunity of private sector care were mobilized to address the various challenges identified across both the sectors.

Figure 4:
Vision, Goal, Strategic Pillars, and Priorities in NSP, 2017–2025.



Source: MoHFW.

The NSP 2017–2025 set targets for patients to be notified from the private sector at 1.2 million in 2025 as compared to the baseline of 0.19 million in 2015. The document reiterated the importance of innovations under PSE. Built on the strategies proposed in NSP 2012–2017 and based on the experiences of pilots under UATBC (detailed in the subsequent chapter), the NSP 2017–2025 supported engaging a Patient Provider Support Agency (PPSA) model to undertake end-to-end engagement with the private provider, including mapping, mobilizing, and advocacy. The NSP 2017–2025 emphasized the provision of free medicines and diagnostic tests to TB patients in the private sector to reduce costs, attract more private providers and their patients into the program fold, and ensure quality care. This was through two possible pathways: (i) access to NTEP-provided drugs and diagnostics through linkages to services in the public and private sector; and/or (ii) reimbursement of market-available drugs and diagnostics.

Additionally, the NSP 2017–2025 emphasized treatment adherence, and completion. Social sector schemes—such as direct benefit transfers (DBTs) and nutritional incentives—were extended to TB patients in the private sector to enhance treatment adherence and patient notification, and to alleviate out-of-pocket expenses. The NSP advocated for bolstering capacity for and utilization of ICT tools for adherence support, drug susceptibility testing, comorbidity detection, tracking treatment outcomes, and infection prevention measures. Further, the NSP highlighted the importance of ICT tools for PSE, patient reporting, adherence monitoring, smooth financial transactions, and provision of digital tools to field staff and care providers. The NSP also proposed the use of a call center integrated within Ni-kshay to monitor the patient's treatment journey and for prescription audits to ensure adherence to STCI.

Technical and Operational Guidelines of RNTCP Published

The revised guidelines of 2017 envisioned the RNTCP to enable provision of TB services more actively through the private sector. This was a departure from the earlier referral-based models that focused on shifting patient care to the public sector instead of continuing high-quality, standardized care in the private sector itself. The guidelines gave a significant role to the PPM Coordinators and Program Managers, who were expected to undertake needs assessments to identify the scope for partnership in the district/state. Additionally, working with the private sector in peri-urban/urban areas was prioritized, as it is a preferred first point of care for most patients. Lastly, the guidelines indicated that any revision of a memorandum of understanding (MOU) with a private partner should be based on performance.

Release of the Mandatory TB Notification Gazette

In 2018, the GOI released the Mandatory TB Notification Gazette for private practitioners, pharmacists, and public health staff. The Gazette mandated all clinical establishments (i.e., individual medical practitioners, clinics and hospitals, laboratories, and pharmacies) to notify every TB patient to the national program. At the same time, it mandated public health staff to take necessary public health action for each notified TB patient; provide all the necessary care and support; and prevent further transmission. While the executive order passed in 2012 was not legally binding, the Gazette gave the power to the District TB Officer to hold a private provider accountable and ensure that all cases are duly notified (MOHFW 2018). If a provider failed to notify a diagnosed TB case, they faced up to six months in prison, or a fine, or both.

Launch of Ni-kshay Poshan Yojana

In April 2018, the Prime Minister of India launched Ni-kshay Poshan Yojana (NPY). This conditional cash transfer program provides Indian Rupees 500 (approximately US\$7) monthly to a notified TB patient to purchase nutritional food during treatment. The NPY is directly transferred to the bank account of the notified TB patient.

Launch of Direct Benefit Transfer for Private Providers

In addition to NPY (to TB patients), in 2018, the GOI introduced DBTs to private sector providers who notify TB patients on Ni-kshay. This includes private practitioners, laboratories, pharmacies, and hospitals. An amount of INR 500/- (approximately US\$7) is transferred under DBT as one-time payment on notification and INR 500/- is transferred on updating the patient's treatment outcome.

Launch of Standard Operating Procedure on PSE for TB-HIV

In 2018, to extend the cascade of care and cover more patients through private sector engagement, a standard operating procedure was developed to expand TB-HIV activities in the private sector for public health action of notified TB cases.

Launch of Enhanced Ni-kshay

In 2018, enhanced Ni-kshay was launched to address certain gaps as the app was scaling in use. The changes included a unified interface for public and private sector health care providers, integration of all adherence technologies to improve tracking of treatment outcomes, unified data entry forms for drug-susceptible TB and DR-TB, and a mobile-friendly website, among others. The app allowed entry of TB patients from all sources and covered the continuum of care management from diagnosis to treatment. In addition, as recommended in NSP 2017–2025, Ni-kshay Sampark, the NTEP Call Center, was introduced to make provision for a health care provider or patient to call on a toll-free number (1800-11-6666) to notify TB status.

We developed Ni-kshay and rapidly developed the mobile app to facilitate the notification. We also allowed hard copies. It was an inclusive approach. The call center was set up over a period. The notification order also was revised in 2015 again, and later the real teeth came with the Gazette notification that happened in 2018. The implementation of notification order per se evolved over a period

– Expert, TB India Landscape



Guidance Document to Implement Partnerships, 2019

In light of limitations of past PSE strategies, in 2018, the NTWG on PSE in TB Elimination drafted the Guidance Document on Partnerships. The document made a marked shift from the traditional, prescriptive, rigid, and top-down approach (as seen in the schemes introduced in 2001, 2008, and 2014) to flexible, contextually appropriate, and patient-centered approaches. This flexibility to allow states to use PSE approaches that are appropriate for their contexts and private sector markets was a game changer for India's PSE. The Guidance Document was developed through a consultative process with participation from public and private sector stakeholders. The document borrowed principles of output-based contracting and aligned with India's General Financial Rules 2017 for Procurement. Features differentiating this guidance from previous GOI partnership schemes for TB control can be summarized into nine key points.

01

Expanding the definition of private sector patients

With a few exceptions, the NTEP traditionally catered to public sector patients, designing partnership schemes to engage the private sector to fill gaps in service delivery exclusively for the benefit of public sector patients. Through the experience accrued in pilots, NTEP broadened its definition to include patients who preferred the private sector for their treatment and care. This Guidance Document recommended state and district NTEPs to assure quality for all TB patients—public and private sector alike.

02

Output/performance-based contracting using market discovery service costing

The Guidance Document recommended contracting service providers who can deliver high-quality services at prices commensurate with market rates. This change from input-based financing to performance-based contracting moved away from the mindset of selecting the lower-cost bidder toward budgeting to execute the program effectively. Traditional low-cost bidder selection was replaced with quality and cost-based selection (QCBS). The guidance also introduced a payment mechanism for service providers based on the composite metrics of output(s), rather than the mere completion of activities.

03

Needs-assessment based PSE

The Guidance Document introduced need-based partnerships customized to suit the local context. Each state or district is empowered to design partnership options based on local needs, capacity of the public health system, and availability of competent quality service providers. This kind of flexibility is a significant move away from a centralized, standardized, template-oriented approach.

04

Bundling of services

The Guidance Document recommended that in scenarios where multiple systemic gaps in service delivery have been identified, the purchaser (district and state TB teams) may consider combining complementary services into a single partnership option to increase efficiency. With this bundling approach, sample collection and sample transport, for example, could be combined into one contract.

05

Use of an interface agency

The Guidance Document recommended that NTEP hire an interface agency to act on behalf of NTEP to liaise with laboratories, physicians, pharmacists, and other clinical/medical establishments. Use of an interface agency for end-to-end or specific services ensures that all private-sector patients have access to the highest quality of services with their preferred provider and with minimum out-of-pocket expenditures.

06

Expansion of contracting (engagement) options

The Guidance Document broadened the scope of partnerships beyond the purview of NGOs to other private sector entities and startups. It also encouraged joint ventures/consortia among NGOs, international NGOs, and private sector entities: such ventures leverage complementary skill sets and experience to provide end-to-end services that fill gaps in the TB care cascade.

07

IT-enabled tracking of performance

The Guidance Document recommended the use of technology to track performance at all levels of the program to allow for data-based decision-making, real-time redressal of challenges to smooth payment processing, and reduced delays.

08

Shift from "guidelines" to "guidance"

Past PSE guidelines were prescriptive and rigid in defining the scope of services or nature of contract. As a result, states/districts used the guidelines and contracting templates as is, without alterations. The Guidance Document allows for greater flexibility, autonomy, and local adaptation.

09

Integrating technology and fostering innovations in service delivery

Prior to this document, PSE was mostly focused on engaging NGOs. However, the new guidance recommended testing innovations to improve service delivery, for example, exploring components along the care cascade that could be digitized, cross-learning from other divisions with experience in extending services, etc.





PART III: IMPLEMENTATION OF PPIA AND PPSA PILOTS

The GOI's national scale-up of innovative PSE models was preceded and informed by pilots implemented with the support of the Bill and Melinda Gates Foundation (BMGF) and the Global Fund from 2014–2020. These pilots presented an opportunity for states, the NTEP, and other key stakeholders to implement models whereby the public and private sectors work together to achieve results in TB control. While these pilots were documented, the subsequent scale-up by the GOI has not been well-documented.

This chapter provides a summary analysis of two key PSE models: the BMGF-supported Private Provider Interface Agency (PPIA) implemented from 2014–2017 under the UATBC; and the Global Fund-supported PPSA, which was implemented from 2018–2020 under the Joint Effort for Elimination of Tuberculosis (JEET).

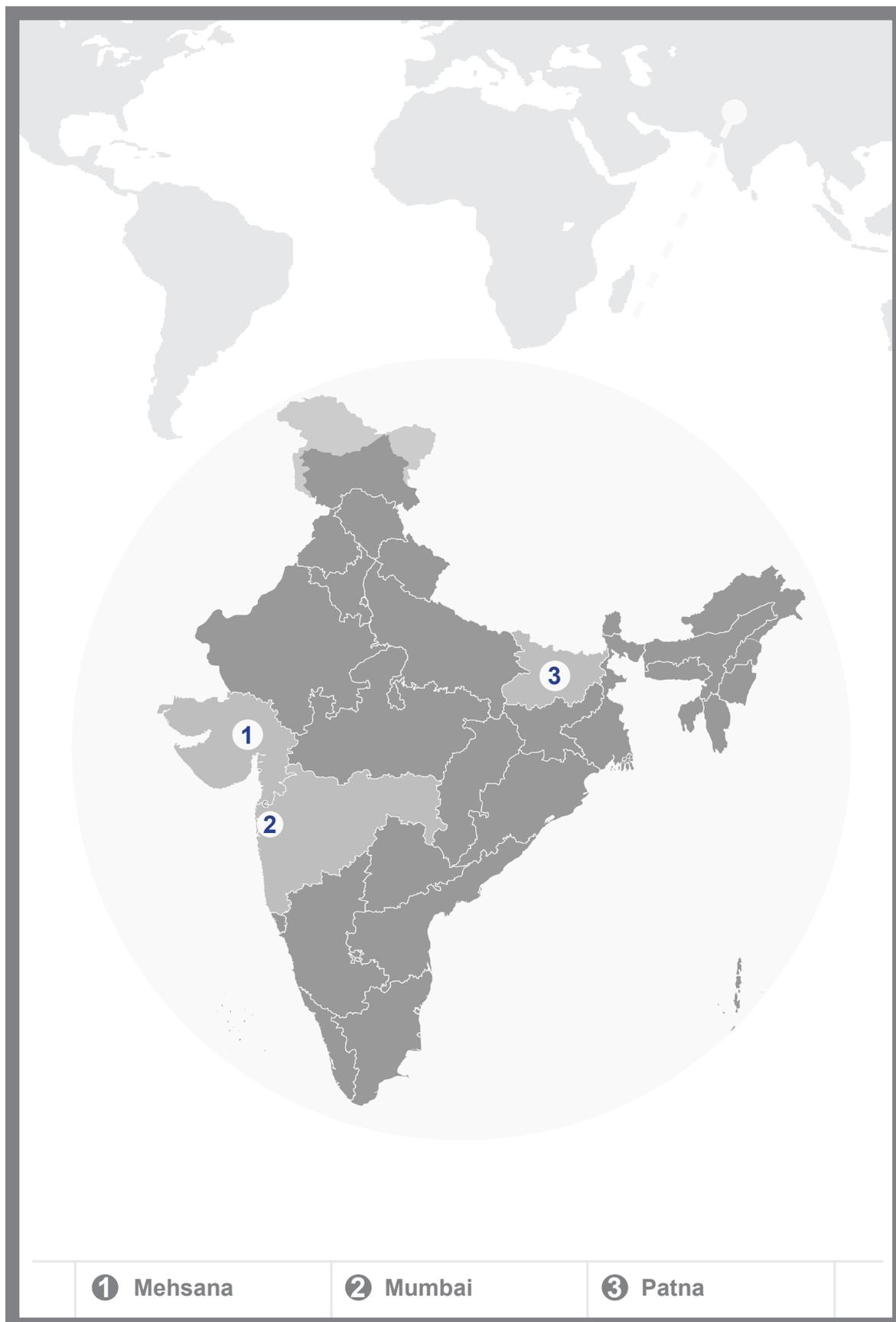
PPIA (2014–2017)

The PPIA was launched under the UATBC, a program funded by the BMGF and designed to improve access to and quality of TB care in India. The PPIA was an intermediary agency focused on mobilizing and engaging the private sector; improving notification of TB cases by the private sector; verifying adherence to STCI regimens; and deploying innovative mechanisms to realign provider incentives. The intermediary agencies were drawn from the private sector and leading not-for-profit agencies.

In a joint decision between the RNTCP and the BMGF, three sites were selected for the pilot, viz. Patna (peri-urban), Mehsana (rural), and Mumbai (India's most densely populated and cosmopolitan city) (Figure 5). In Mumbai, PATH, an international NGO, was recruited to implement the project. In Patna, World Health Partners (WHP) led the implementation. In Mehsana, the project was implemented by the government's district-level TB administration. Each geography brought its own unique factors; hence, the model allowed for customization to suit the local context while keeping the core of the PPIA model intact. The costs of pilot projects were US\$10 million and US\$6 million in Mumbai and Patna, respectively.¹¹

¹¹The PPIA was cost-intensive because it was implemented as a proof of concept and the first-of-its-kind. The major cost drivers were efforts to map and engage provider engagement, coverage of drugs and diagnostics, extensive use of digital tools, and evaluation and research.

Figure 5:
PPIA Implementation Geographies.

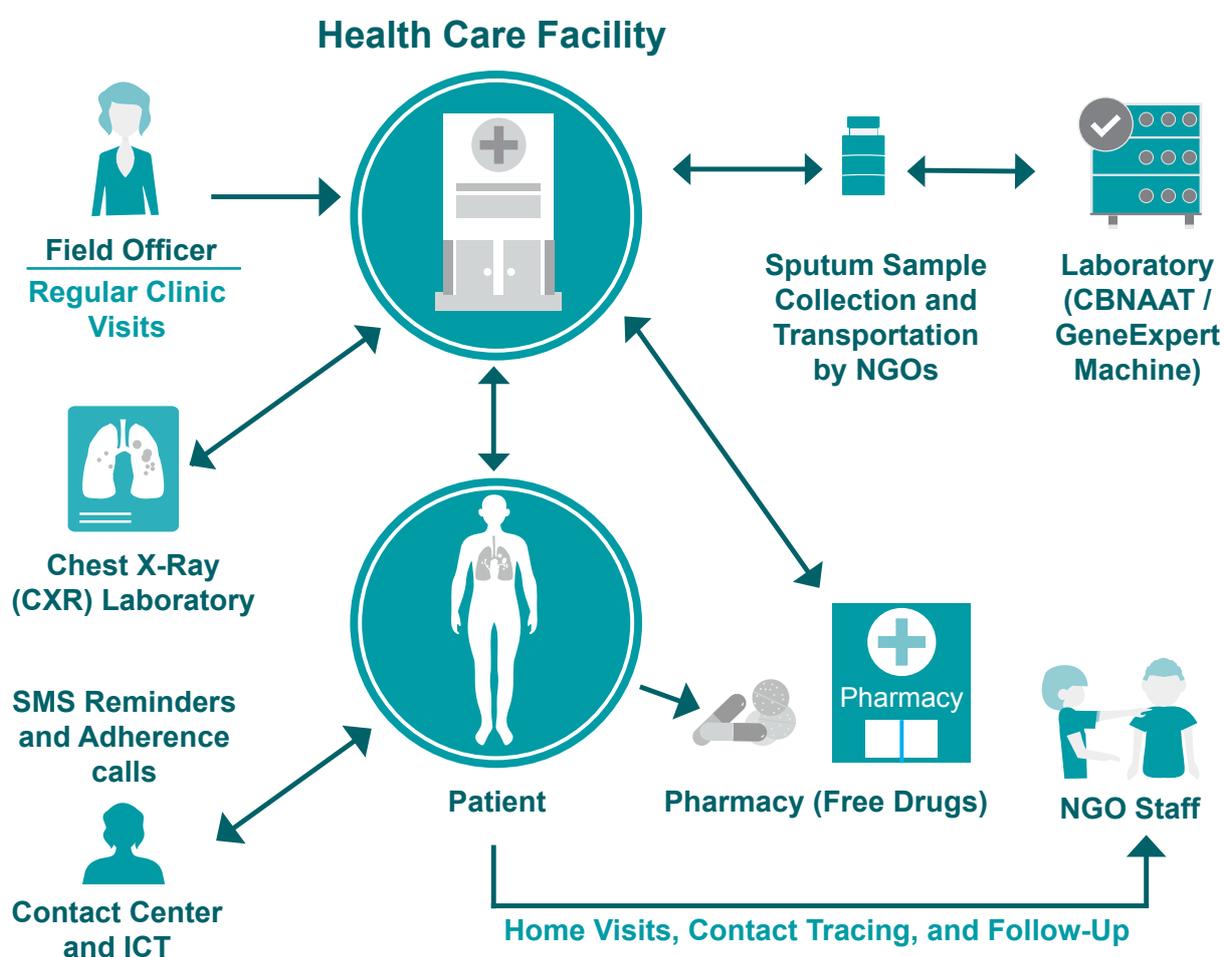


Source: Author's own.

Implementation of the PPIA Model

The PPIA model engaged a network of private providers (i.e., doctors, pharmacists, and laboratories providing TB services in the region) to identify presumptive cases of TB, facilitate diagnosis, and provide anti-TB drugs for confirmed patients. This network of engaged providers was connected through an ICT system designed to ensure smooth implementation and coordination of all services through the patient care cascade (Figure 6). Treatment adherence was an essential component of the model, wherein SMS reminders, weekly phone calls, and home visits (as per need) were used to follow up with patients. While the core model was consistent, the operational modalities varied in all three geographies. These are summarized in Annex 2.

Figure 6:
A Visual Representation of the PPIA Model.

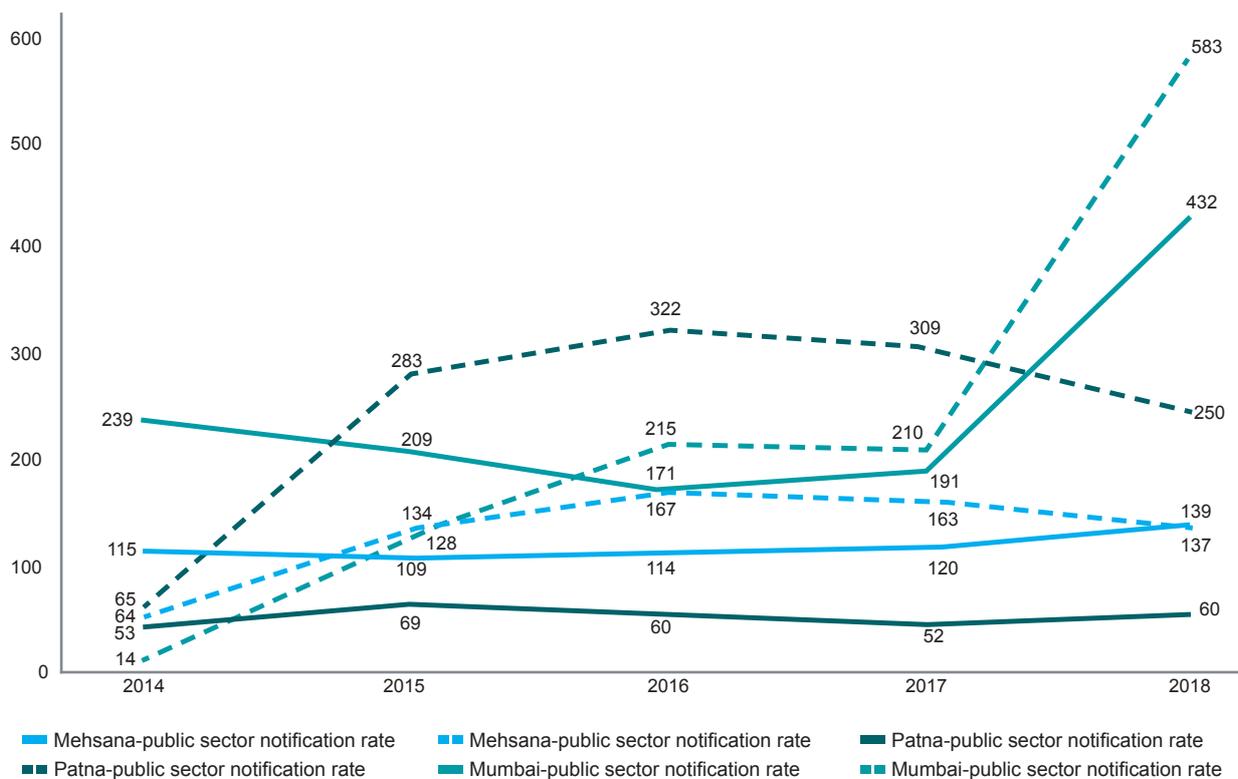


Source: Adapted from Vijayan, Shah 2020.
CBNAAT (Cartridge-Based Nucleic Acid Amplification Test), ICT (Information and Communication Technology), SMS (Short Messaging Service), NGO (Nongovernmental Organisation).

Impact of PPIA

The PPIA model meant that for the first time, data on notifications, treatment outcome, and for patients managed by private providers were available with the NTEP. To enable comparison across the sites, a snapshot of the data for the period 2014–2018, as received from the implementing agencies, are presented in Figures 7 and 8. Data for 2018 are included because the data on treatment outcome are recorded for every patient after one year of being diagnosed/started on treatment.

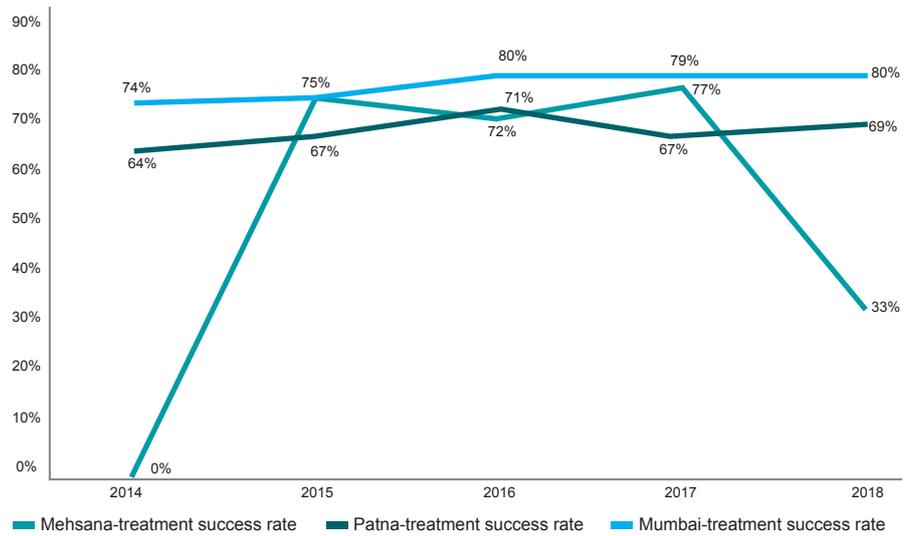
Figure 7:
TB Case Notification in the Public and the Private Sector Across PPIA Geographies.



Source: City-Level Data, Ni-kshay, Relevant Years.

The TB case notification in the private sector saw an increase after implementation of PPIA across the three geographies. This increase is attributed to enhanced and repeated engagement/follow-up of PPIA staff with the additional services being offered. In Mumbai, the notification rate jumped from 14 (per 100,000 population) in 2014 to 210 in 2017. From 2017 to 2018, the notification more than doubled, reaching 583 (per 100,000 population) in 2018. In Mumbai, public sector notifications remained steady until 2017 and saw a significant rise in 2018. Mehsana saw an increase from 65 (per 100,000 population) to 163 in 2017. The trend of public sector notification remained steady from 2014 to 2017 in Mehsana. Patna saw a substantive increase for the period 2014 to 2017 from 64 to 309 (per 100,000). However, the public sector notification rate remained almost static. Compared to Mumbai, Mehsana and Patna saw some reduction in notification in 2017 to 2018, but this was not a significant decline, and the gains made under the PPIA model continued.

Figure 8:
Treatment Success Rate Reported by the Private Sector
Across PPIA Geographies.



Source: City-Level Data, Ni-kshay, Relevant Years.

The treatment success rate reported by the private sector showed an upward trajectory. The highest treatment success rate was reported by Mumbai (79 percent) in 2017 and maintained momentum in 2018 (80 percent). In Patna, treatment success rates ranged from 64 percent in 2014 to 69 percent in 2018. In Mehsana, private sector data on treatment success became available for the first time due to PPIA. Mehsana’s treatment success rate was an average of 75 percent from 2014–2018. Mehsana saw a dip in reporting of treatment outcomes with the closure of the PPIA project.



Photo credit: PATH

Insights from PPIA Implementation

In 2016, the NTEP and WHO conducted a concurrent assessment of the UATBC (WHO 2016). The evaluation provided evidence on the significant impact of such an intermediary agency on key TB indicators, including notifications, treatment outcomes, DR-TB prevalence, microbiological confirmation, etc. Other studies conducted by external agencies on patient pathways and cost-effectiveness of the UATBC brought out four main points listed below:

1 |

In terms of patient pathways, persons accessing care at engaged facilities as the first point of care had shorter pathways compared to nonengaged facilities. In Mumbai it was 32 versus 43 days; and in Patna 15 days compared to 40 days, respectively (Shah et al. 2020).

2 |

Retention of patients by PPIA facilities was high, especially in Patna. Ninety percent of patients sought end-to-end care from the first PPIA-engaged facility where they went for check-up and diagnosis. In Mumbai, the retention of patients was low (13 percent) due to the hub (allopathic practitioners) and spoke (practitioners of indigenous systems of medicine) model that also accentuated treatment delay¹² (Shah et al. 2020).

3 |

In terms of cost-effectiveness, one study showed that the cost per privately notified TB case from PPIA was comparable to that already being spent by the public sector. The study concluded that the scale-up costs of the PPIA model were likely to be financially viable (Deo et al. 2019).

4 |

In 2021, another cost analysis study showed that PPIA scaled up to reach 50 percent of privately treated TB patients in Mumbai and Patna would cost US\$228 per DALY averted and US\$564, respectively. It also analyzed the cost-effectiveness of specific interventions, wherein, in Mumbai, the PPIA emerged to be highly cost-effective relative to all interventions. However, in Patna, PPIA would be highly cost-effective¹³ only if the focus was on adherence rather than improved diagnosis (Arinaminpathy et al. 2021).

The evidence from PPIA pilots confirmed the model's effectiveness in improving access to quality TB care. In 2018, in line with the recommendation made in NSP 2017–2025, the Global Fund partnered with the RNTCP to scale the PPIA model as the PPSA model under JEET. In Mumbai, the model was integrated within the local government's TB efforts in 2018. In Patna, the model continued to be supported by the BMGF till 2020. In Mehsana, the model was implemented by RNTCP but it was converted to a PPSA lite district in 2018 after implementation of JEET (detailed in the subsequent section).

¹²The Mumbai MDR-TB levels remain unchanged, this treatment delay could have been a contributing factor.

¹³Both interventions were highly cost-effective applying the regular criteria (cost per DALY averted is less than the annual per capita GDP), but when applying the more stringent criteria that quantify the opportunity costs and include these, then Patna.

JEET Implementation (2018–2020)

NTEP conceptualized JEET to scale up the interface agency model to more states. The Global Fund, a long-term partner of the GOI, saw the potential of the PPIA model to effectively engage with the private sector, and extended financial support through a US\$40 million grant to the NTEP and to three primary recipients: Foundation for Innovation in Diagnostics (FIND); the Center for Health Research and Innovation (CHRI); and the William Jefferson Clinton Foundation (WJCF). The project was implemented from 2018 to 2020 across 457 districts in 21 states and three union territories (Figure 9), with on-the-ground implementation support of secondary recipients (JEET Report (2018–2020) 2021).

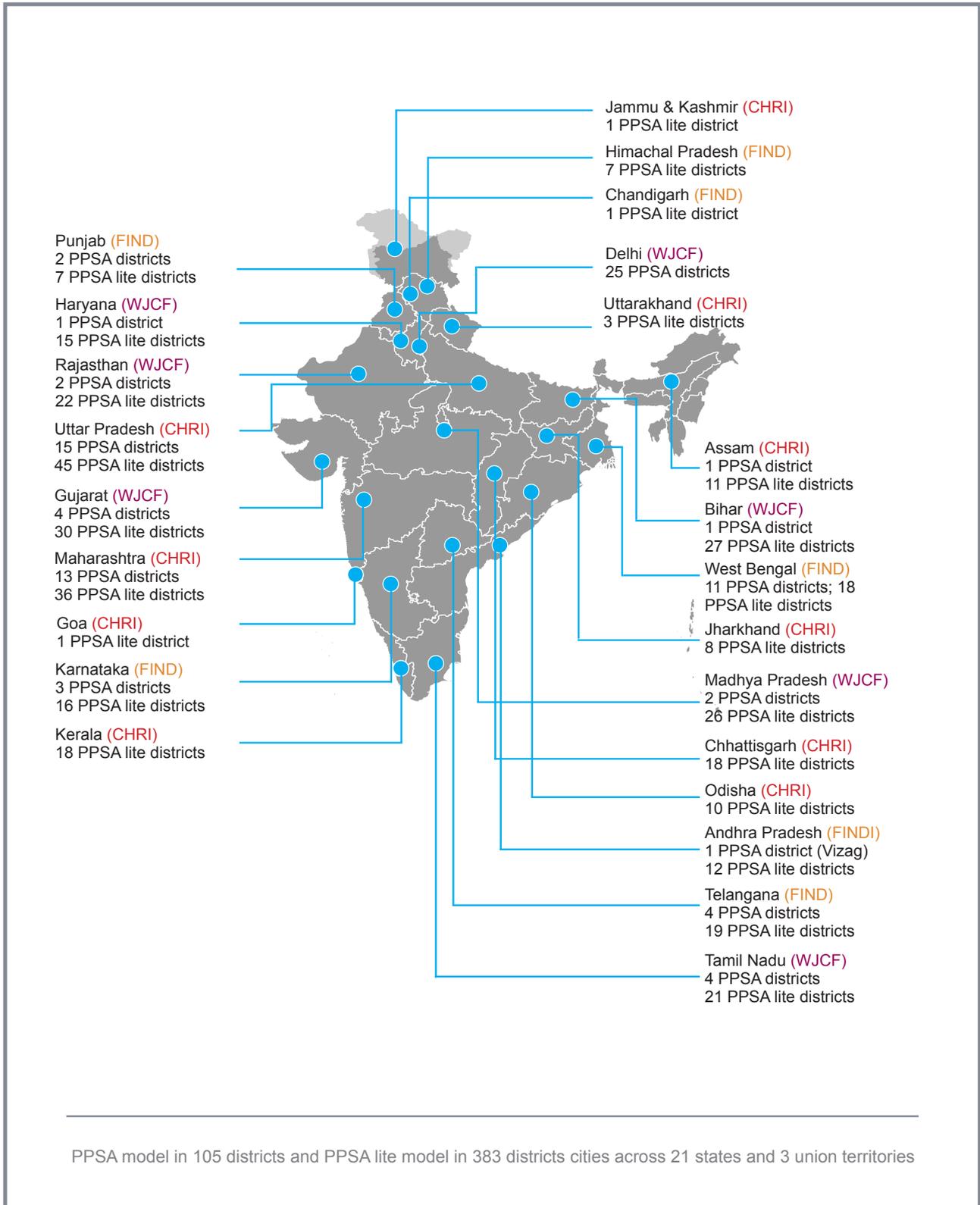
The PPSA Model

The PPSA model was envisioned as a scale-up of the PPIA model, wherein elements such as engaging private providers, linkage to diagnostic services, provision of anti-TB drugs, and treatment adherence monitoring were adopted under JEET. However, some aspects were different. The ICT component of PPIA, call center, e-vouchers, and provider prescription audits were not a part of PPSA. In JEET, the Global Fund supported the primary operations, and the NTEP provided free CBNAAT and FDCs to private sector patients. Lastly, PPSA was relatively less human resource-intensive than PPIA. The PPSA model facilitated incentives under the NTEP such as DBT, NPY to the engaged private providers and patients seeking care through them. Under JEET, two models were implemented: PPSA in high-burden TB districts and PPSA lite in low-burden TB districts (Annex 3).



Photo credit: PATH

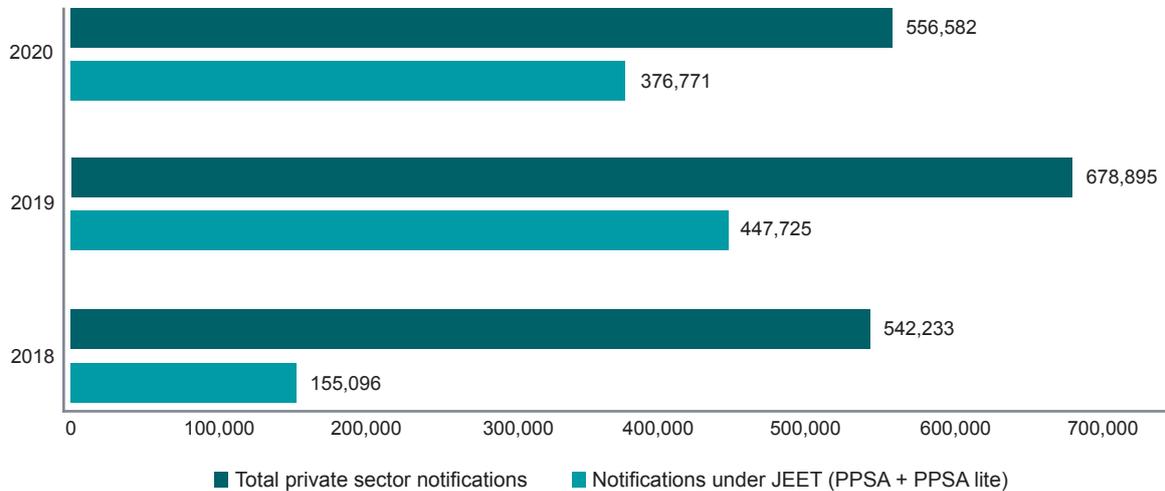
Figure 9:
Geographies Where PPSA and PPSA Lite was Implemented.



Source: Author's Own.

Impact of the PPSA Model

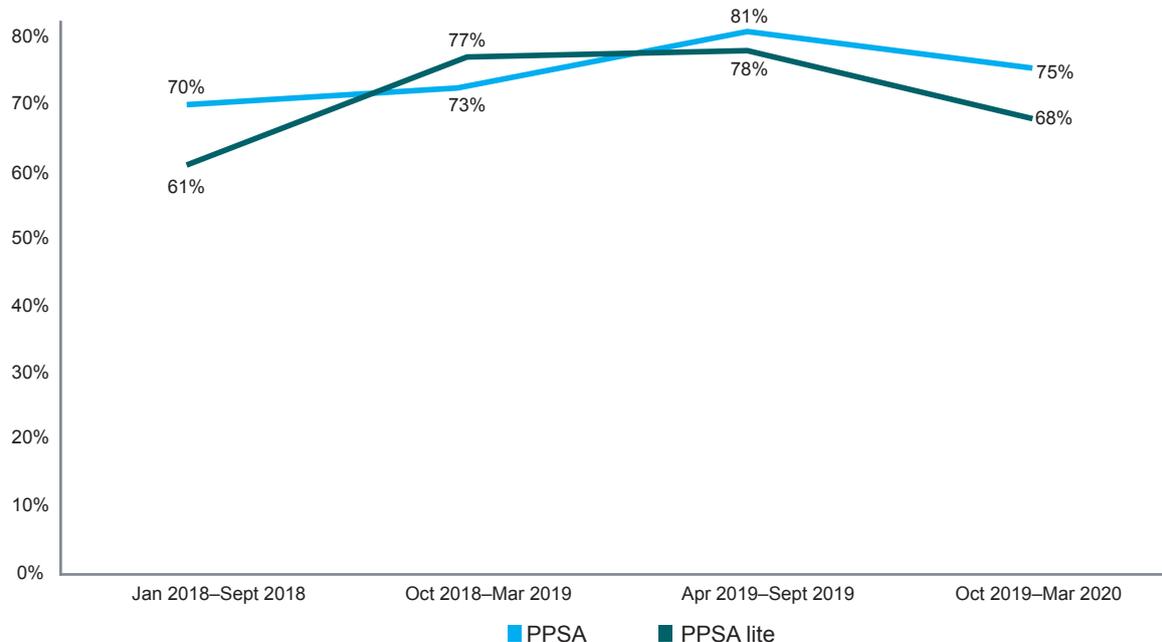
Figure 10:
TB Case Notifications in JEET Geographies and Total Private Sector Notifications.



Source: JEET Report 2018-2020 and Central TB Division.

Since its initiation in 2018, though gradually, JEET contributed significantly to national-level private sector TB notifications. In 2018, JEET contributed to 29 percent of total private sector notifications, which increased to 66 percent and 68 percent in 2019 and 2020 respectively. COVID-19 affected the momentum gained and led to decrease in notifications in 2020 across JEET geographies and at the national level.

Figure 11:
Treatment Success Rate Across PPSA and PPSA Lite Districts.



Source: JEET Report 2018-2020.

The general trend was in line with the Global Fund commitment of achieving treatment success for at least 70 percent of patients who were notified. The achievement exceeded 70 percent consistently from 2018 to 2020 in PPSA districts. This includes patients who were reported to have completed their TB treatment or been cured.



HOW TALL ARE YOU ?

C-FURO

C-FURO

44cm

40cm

Both UATBC and JEET (PPSA) were able to demonstrate that mobilizing and engaging India's disparately spread-out, unorganized private sector, especially individual practitioners, is a means to addressing a public health challenge. The PPSA project improved awareness about mandatory notification as well as enhanced use of Ni-kshay on a large scale. The awareness and uptake of DST also significantly increased throughout the country under the model. Treatment outcome and adherence mechanisms, such as follow-up and counseling, reducing the stigma of the disease among the community, home visits by program staff, etc., had a positive contribution. The project was able to identify many missing TB cases by strengthening surveillance mechanisms to find additional cases within a family. This effort resulted in more patients initiating early diagnosis, beginning timely treatment, and reducing the chance of transmission. In 2019, after NPY was launched, JEET also ensured that 60 percent of notified patients received the entitled DBT. From what was seen as a distant possibility, the JEET project enabled the orientation of a vast majority of district and state-level program officials on the nuances of PSE and instilled confidence in them.

Insights from PPSA Implementation

TB case notifications: For the first time in 2019, India saw more than 680,000 TB patients notified from the private sector—an increase of approximately 35 percent from the previous year. The PPSA model contributed to this achievement. JEET adopted an ongoing optimization mechanism to strengthen the model rural and urban regions.

Broadening the scope of provider engagement and monitoring indicators: The project was successful in mapping and engaging private providers across geographies. Initially, engagement activities largely focused on ensuring case notifications. But over time, engagement processes extended to other aspects of the program, such as aligning private practitioners to follow the STCI, diagnosis using microbiological testing, and ensuring prescription of FDCs through continuous engagement.

Broadening the set of monitoring indicators: Although JEET successfully tracked critical TB indicators such as treatment outcome, case notifications, and microbiological testing, conversations with experts brought out that other critical indicators, such as uptake of FDCs and treatment adherence support, should also be tracked under the program.

35% increase in patient notifications from the private sector

The Global Fund JEET project was instrumental in ensuring that UATBC did not just remain a pilot and was critical in ensuring momentum of NTEP's PSE work. It served as a useful case for the program to understand how to plan, and to forecast drugs and diagnostics for the private patients in the private sector—something that had not been tried before. The intervention was also important to nudge the program managers, especially at state and district level, across the country. In their mental landscape, it moved from a three-city pilot to something they had to work with and demonstrate ownership as well

– National PSE expert



The coordination between the public sector and the private sector (including NGOs) is essential. This extends to strengthening linkages regarding diagnostics, especially CBNAAT and universal DST, as well as provision of FDCs. At the same time, supply chain management to ensure seamless supply of diagnostic commodities (e.g., reagents, cartridges) and drugs is critical. The role of the PPM Coordinator is essential in keeping the link between all the stakeholders strong

– State JEET Lead



Capacity of implementation partners: Interviews with PPSA experts and stakeholders illuminated variations in the technical and implementation capacities of organizations. The JEET structure was divided into primary recipients and secondary recipients. The primary recipients were international agencies and/or global health NGOs that played a key role in strategic thinking and providing technical direction. Secondary recipients were local/country-based NGOs and ground-level implementers. Experts pointed out that the project design was skewed in favor of strengthening only the primary recipient agencies. There were no systematic efforts to build the capacities of subrecipients to take on a larger leadership role or to develop their systems to take on complex projects independently.

Standardized approach and design: The JEET models followed a rigid and standard model across implementation sites. By design, it was not amenable to change operational designs as per the local need requirements. This was a deterrent for local innovations or to respond to the unique needs of a geography.

In spite of these shortcomings, the PPSA model demonstrated the effectiveness of this intervention at scale and its significant positive impact on key indicators of TB. PPSA gave policy makers confidence and understanding of implementation nuances and set the stage for conversations on domestic integration and scale-up.



Photo credit: PATH

PART IV: NATIONAL-LEVEL SCALE-UP OF PSE THROUGH DOMESTIC FUNDING WITH WORLD BANK SUPPORT 2019 ONWARD

In 2019, building on the lessons and successes of the BMGF pilots and the Global Fund–supported programs, the GOI moved toward direct financing of PSE programs through India’s domestic budget. What makes India’s approach unique is the shift in GOI attitude toward PSE, and in particular the use of domestic financing to contract private providers and intermediary agencies, including NGOs to improve TB diagnosis and outcomes.



GOI Scale-Up and the World Bank's Support¹⁴

The GOI-World Bank-supported Program Toward Elimination of Tuberculosis (PTETB) was designed as part of high-impact evidence-based interventions envisaged in the NSP 2017–2025, including deployment of new technologies, cutting-edge innovations, and significant institutional reforms. The overall goal of the PTETB is to improve the coverage and quality of TB control interventions in the private and public sectors in select states of India. Although India implemented different models of donor-funded PSE, the PTETB supported the GOI to systematically bring these to scale. This was achieved through government systems using a results-based financing model that strengthened mutual accountability for results at national and subnational levels in India.

Based on the estimated TB burden and the gap between private notifications and the TB burden, the program prioritized intervention activities in nine states: Uttar Pradesh, Maharashtra, Bihar, Rajasthan, Madhya Pradesh, Karnataka, West Bengal, Assam, and Tamil Nadu. The nine priority states account for 60 percent of the public sector notification in the country, 62 percent of the existing gap in private sector notification (based on NSP targets), and 70 percent of all private TB treatment nationwide (or 12 out of 19 million patient-months of anti-TB treatment distributed via private pharmacists). The remaining states and union territories are expected to benefit from cross-cutting system interventions and innovation under the program.

¹⁴The GOI, World Bank, and the Global Fund partnered through an innovative financing mechanism known as a loan buy-down. The loan buy-down supported India to implement its most innovative and high-impact interventions at scale.



India has done well by pushing forth for integrating the PPSA model into the domestic budget. This paves the way for similar low- and middle-income countries to envision that they too can do the same if bold policy reforms are pushed through. India now needs to focus on strengthening the quality of care and improving the effectiveness of their investments in private sector engagement

– Global PSE expert

The PTETB is based on the following design principles:

- i | Financing flexible PSE scale-up that allows states to respond to different contexts and private sector markets.
- ii | Enhancing the role of PPM coordinators from direct engagement of private sector to monitoring the performance of the PPSA and other implementation agencies and partner organizations.
- iii | Leveraging Ni-kshay and digital transformation at scale to engage private providers.
- iv | Implementing a results-based model that engenders accountability for results at all levels of the NTEP.

Accordingly, the program focuses on four result areas:

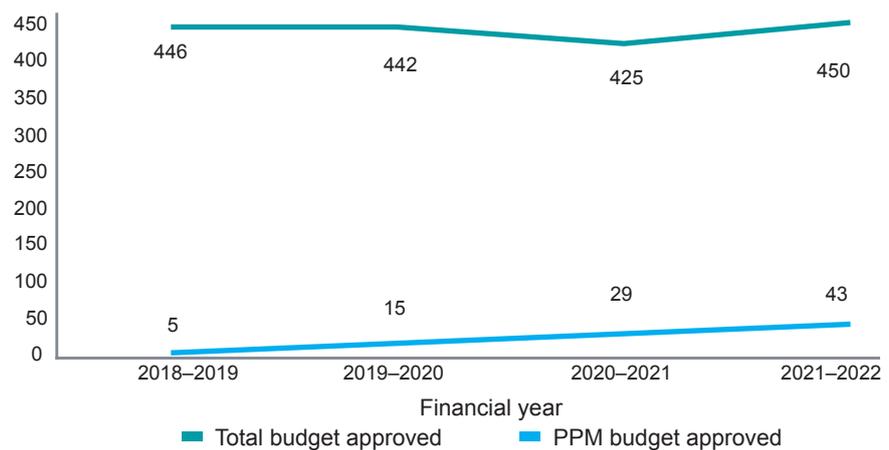
- 01 | Scaling-Up PSE 
- 02 | Rolling Out TB Patient Management and Support Interventions 
- 03 | Strengthening Diagnostics and Management of DR-TB 
- 04 | Strengthening the NTEP's Institutional Capacity and Information Systems 

These result areas are interlinked and mutually reinforcing. They represent the transformative changes required for service delivery to meet the NSP's ambitious targets.

Moving Toward National Scale-Up

Over the years, GOI efforts on PSE, including domestic integration of PPSA, have been gaining momentum. The NTEP's commitment to expanding and strengthening PSE is evident from the increasing allocations to the annual PPM budget. Figure 12 shows that PPM allocations (which include NGO-PPM partnerships, PPSA, and private provider incentives), as a proportion of the overall TB budget have steadily increased from 1.15 percent in financial year (FY) 2018–2019 to 9.5 percent in FY 2021–2022. However, budget utilization at the state and district levels are still lagging. The program must leverage the Technical Support Units (TSUs) and build sufficient capacity of state-level NTEP staff to plan and utilize PPM budgets optimally.

Figure 12:
Proportion of Budget Allocated to PPM of the Total Budget (in US\$ million).



Source: Central TB Division.

The transition from JEET to domestic integration was set to begin in early 2020. Procurement of PPSA was decentralized to the states. However, several of the planned PPSA procurements were either not procured or there was a delay due to the (but not limited to) delay in procurement of the TSU, which was to be positioned to augment state capacity. Further, given the departure from input to output-based contracting, states were also trying to assimilate the requirements and ensure readiness for implementing such a system. Few states expressed their preferences to not go down the PPSA route and use existing NTEP staff to strengthen private provider engagement. Smaller states like Mizoram in northeast India for the first time attempted to engage a dedicated agency to engage with the private sector, albeit in the input grant.

COVID-19 further disrupted the procurement of PPSAs. NTEP issued guidance to states on how to ensure the continuum of services to private sector patients. NTEP guidance laid out how district-level NTEP staff would, take over from the JEET-supported PPSAs, including key interventions, knowledge and skills that would need to be transitioned, communication plans, and transition plan templates. Procurement, hand-holding, and on-boarding of PPSA has since picked pace. Several states like Delhi, Telangana, and Gujarat are in process of on-boarding the PPSAs.

As of the first week of June 2022, NTEP procured PPSAs for 203 districts across the country. In the nine PTETB states, 190 districts have functional PPSAs in accordance with the 2019 Partnership Guidance Document. This has paved the way for states to choose from a menu of PSE options that best address their state/district needs. Operationalization of these PSE options is supported by a Ni-kshay case-based information system which serves, as a force multiplier for NTEP. Enhanced Ni-kshay enables large-scale monitoring, direct electronic payments to providers and patients, and adherence support technologies. This mix of PSE engagement models and incentives supported by digital systems for recording and reporting has facilitated accountability and rapid-cycle performance management, further augmenting the ecosystem for PSE. The agencies on board are experimenting with the standard PPSA model and exploring additional options. These include a Health Staff Honorarium model, layering local and dedicated call center operations for treatment adherence, embedding paper voucher mechanisms to track FDC drug refills, and digital applications to verify data quality.

These early experiences from India's PSE scale-up underscore that states and districts acknowledge the need for dedicated resources to manage the private sector. They are developing their own state-specific modalities to augment their capacities, either by procuring services or strengthening their in-house capabilities. The NTEP recognizes that giving state counterparts flexibility is a cornerstone for the scale-up. While it is premature to evaluate if the scale-up is a success, the need to remain continuously invested in PSE is evident to program managers.

Institutionalized HR support has continued to be the cornerstone of a successful PSE program. The PPM Coordinator positions at the state and district levels began to be filled by 2015. By 2022, 83 percent of the sanctioned positions were in place, thereby institutionalizing human resource support for PSE. The NSP 2017–2025 recommended the setting-up of TSUs as a pre requisite to support the scale-up of PSE activities, providing expert advice on PSE, including strategic purchasing, managing DBTs, developing systems, and other reforms jointly identified by the NTEP and the World Bank.¹⁵

83%

sanctioned positions of
PPM Coordinator filled

¹⁵Domain expertise in TB and key competencies in operations, capacity-building, contract management, monitoring and evaluation, communication and knowledge management, information and ICT, finance, public-private partnership (PPP), and intersectoral coordination to name a few.

Between June 2021 to February 2022, the NTEP completed the placement of one National TSU at the NTEP level and nine State Technical Support Units (STSU) in the PTETB states. Recognizing the catalytic role that these TSUs will play, USAID has come forward to support TSUs in five more states. The NTSU are expected to guide and mentor the STSU to strengthen the state's strategic and programmatic PSE capabilities.

While still early days, the TSUs have undertaken significant activities, including the following:

- Organizing learning opportunities between states and current and potential PPSA agencies to share operational experiences; and provide them with a platform to share their ideas and concerns on PSE.
- Leading discussions on creating linkages with national- and regional-level diagnostics and hospital chains.
- Developing a dashboard tool that maps both public and private sector entities involved in TB services, and designing social media campaigns to encourage private providers to engage and collaborate with the program.



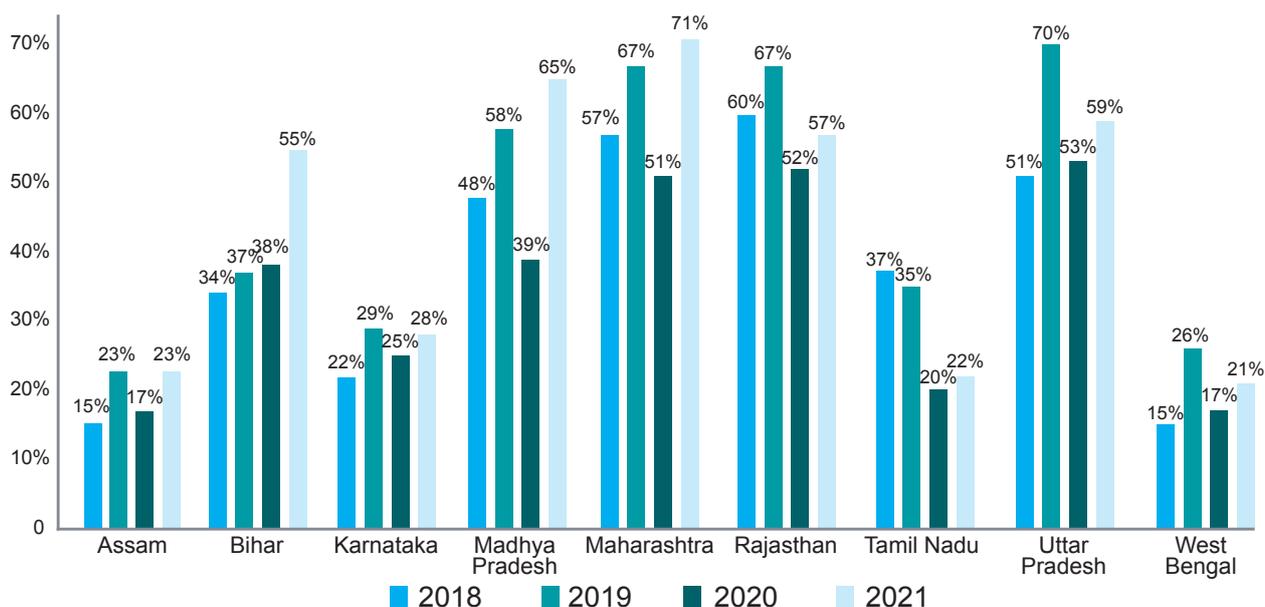
Photo credit: PATH

Shift in TB Indicators in PTETB States

The GOI's commitment to using domestic resources to contract NGOs at scale is exceptional. Figures 13 and 14 highlight trends in private sector notification and treatment success across nine PTETB states.

Figure 13:

Private Sector Notification Rate in the Private Sector Across PTETB States from 2018–2021.

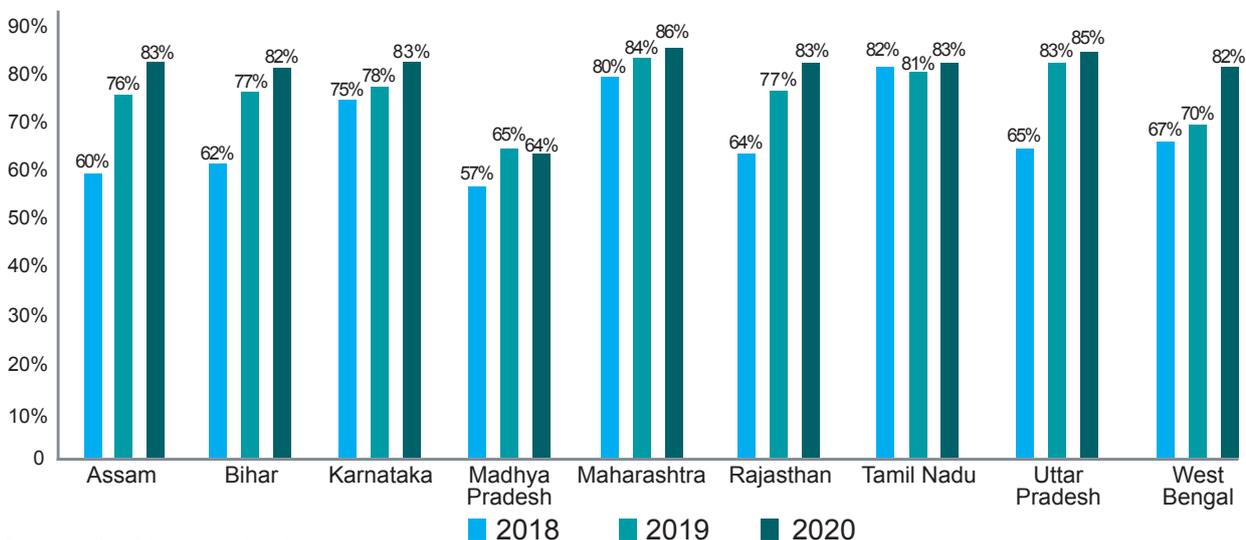


Source: India TB Report, Various Years.

Figure 13 shows that there has been an upward trend in the notifications from the private sector since JEET and well into domestic integration. The dip in notifications in 2020 can be attributed to the COVID-19 pandemic, and states have been able to play catch-up in 2021 with the numbers moving toward the same trend as seen pre-2020.

Figure 14:

Treatment Success Rate in the Private Sector Across PTETB States from 2018–2020.



Source: India TB Report, Various Years.

As depicted in Figure 14, treatment success rates have continued to improve in the private sector across the PTETB states, with a significant increase in 2020, when all states witnessed treatment success rates above 80 percent.

Support through PTETB has helped start, accelerate, and institutionalize changes needed to meet the ambitions and targets of the NSP and the TB-free India campaign. Box 1 and Box 2 highlight experiences from states of Bihar and Maharashtra, two of the nine PTETB states that witnessed significant progress in PSE since domestic integration.

BOX 1: BIHAR

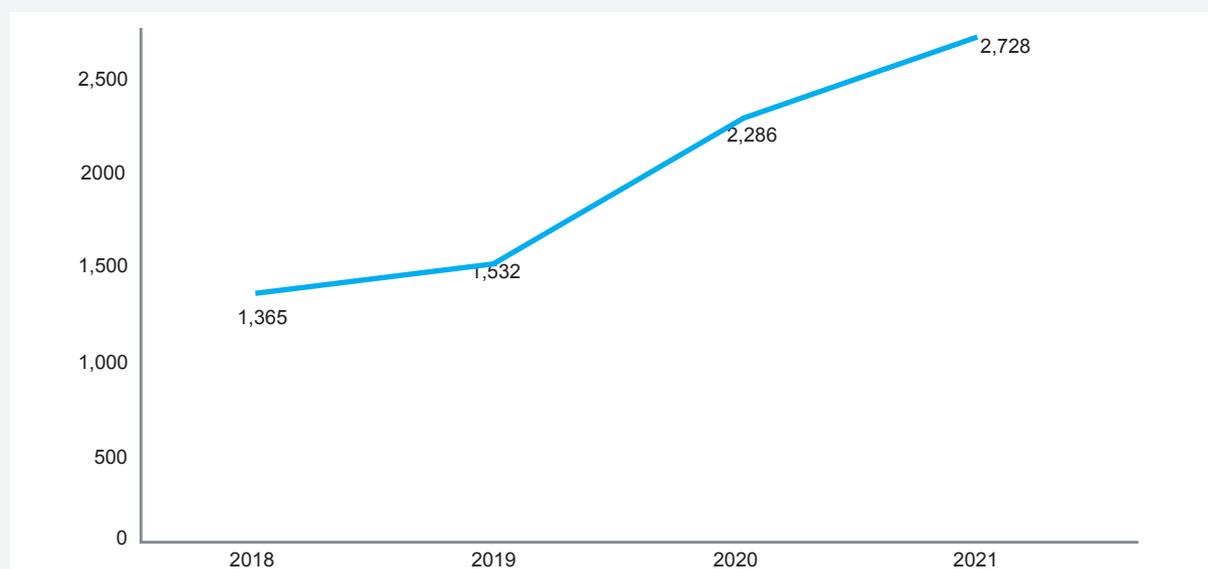
Bihar is one of the states covered under the PTETB program. As of June 2022, PPSA has been approved in 29 out of the total 38 districts in the state. Among the 29 districts, PPSAs are functional in 19 districts and the request for proposal has been sent for legal review in the remaining 10 districts.

Patna, the capital city of Bihar, was one of the intervention geographies for PPIA from 2014 to 2020. Thereafter, Patna was converted to a PPSA district. PPSA was implemented in 2018 in rest of the districts of Bihar.

Engagement of facilities under PPSA is also increasing in the state. The number of facilities engaged under PPSA have increased from 1,365 facilities in 2018 to 2,728 facilities in 2021, as shown in Figure 15.

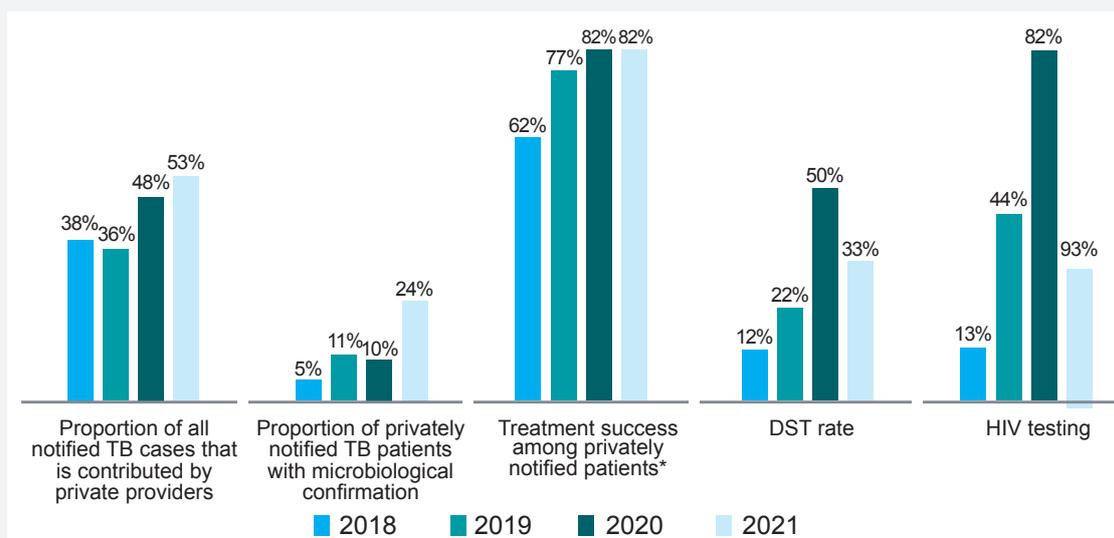
Figure 16 highlights the impact of the PPSA model on TB indicators in the state of Bihar. There has been a consistent increase in the proportion of notifications from the private sector. The treatment success rate increased from 62 percent in 2018 to 82 percent in 2021. Since the scale-up of PPSA, HIV testing rate of TB patients has increased significantly and is inching toward universal coverage of HIV testing for all TB patients. Although DST testing increased from 12 percent to 50 percent in 2018, and 2020 respectively, there was a decline in 2021. Although still low, the rate of microbiological confirmation has also increased from 5 percent in 2018 to 24 percent in 2021.

Figure 15:
Trend of Health Facilities Engaged Under PPSA in Bihar.



Source: Central TB Division.

Figure 16:
Trend of TB Indicators in Bihar From 2018–2021.



Source: Central TB Division.

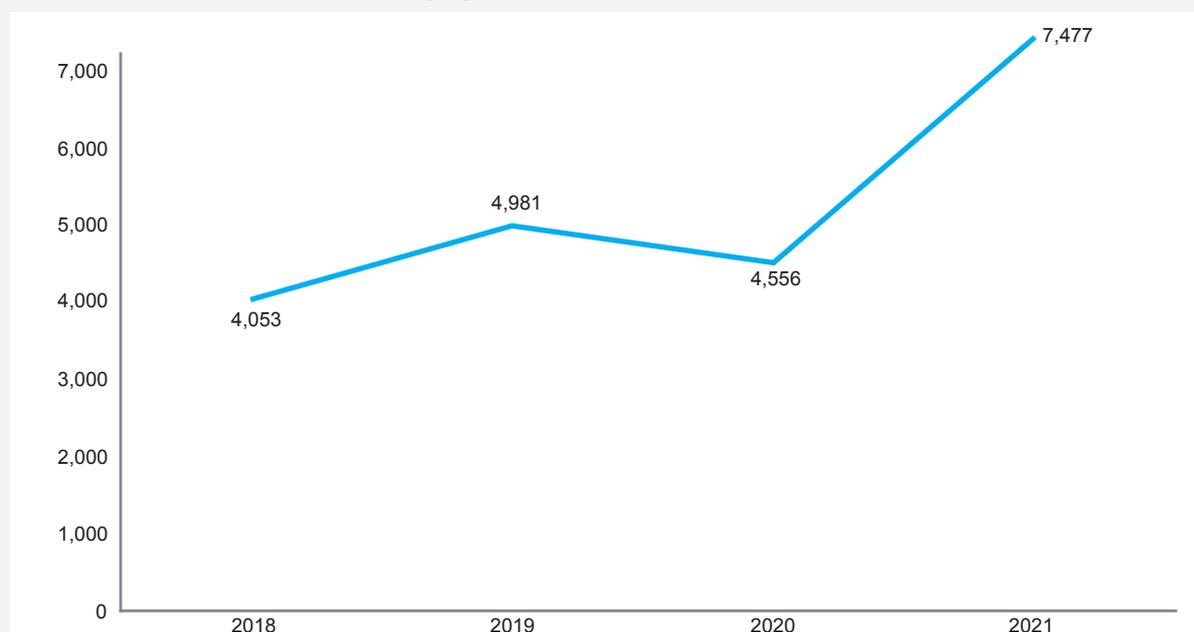
*The data source of treatment success rate is India TB reports (2018 to 2022) and the remaining data have been shared by the Central TB Division.

BOX 2: MAHARASHTRA

Maharashtra, where Mumbai, one of the high-burden geographies of India and the world is located, is one of the nine PTETB intervention states. After PPIA concluded in Mumbai in 2018, the model was integrated in the government’s TB program and implemented in the city at scale. Since the domestic integration in 2020, PPSAs are functional in 35 districts and the request for proposal has been sent for legal review in the remaining 45 districts.

The integration of PPSA in Maharashtra has led to a positive shift in TB indicators. Engagement of health facilities under PPSA is also increasing in the state. The number of facilities engaged under PPSA has increased from 4,053 facilities in 2018 to 7,477 facilities in 2021 (Figure 17). However, given the vast private sector, there does remain scope to further scale up the number of facilities covered under the program

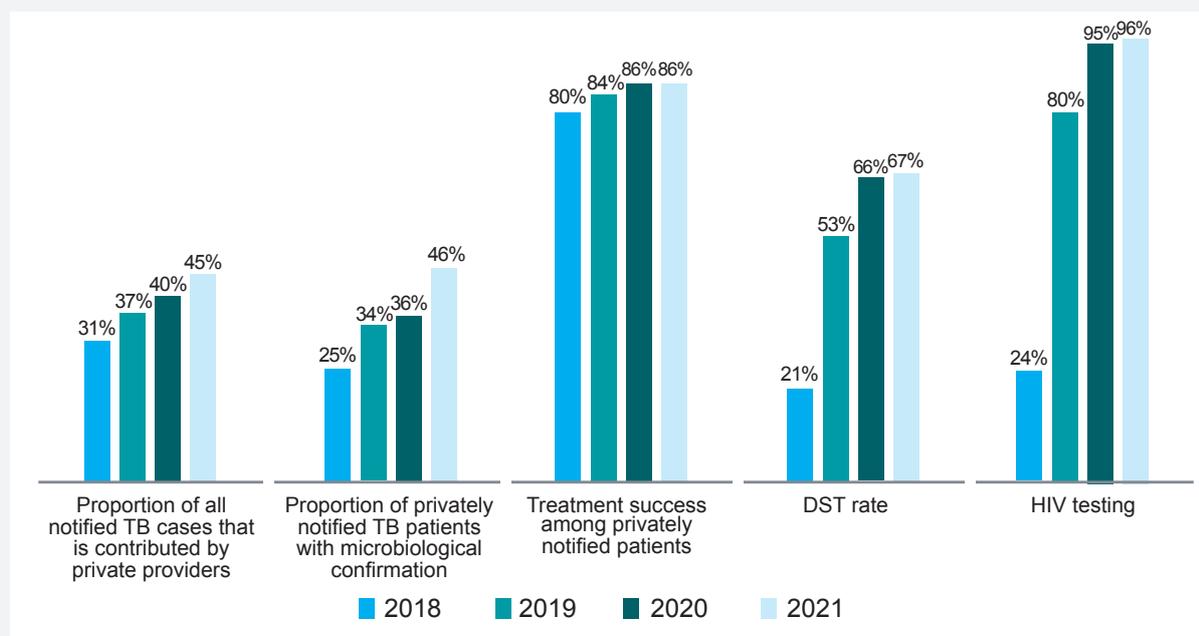
Figure 17:
Trend of Health Facilities Engaged Under PPSA in Maharashtra.



Source: Central TB Division.

Figure 18 highlights that the proportion of private notifications has increased from 31 percent in 2018 to 45 percent in 2021. A similar trend is seen in privately notified TB patients with microbiological confirmation with a 46 percent coverage. The DST rate has significantly increased from 21 percent in 2018 to 67 percent in 2021 with no drop or decline in the trend. HIV testing rate stands at 96 percent as in 2021, an increase by 72 percent since 2018. The treatment success rate, at 86 percent, has remained steady since 2020.

Figure 18:
Trend of TB Indicators in Maharashtra From 2018–2021.



Source: Central TB Division.

*The data source of treatment success rate is India TB reports (2018 to 2022) and the remaining data have been shared by the Central TB Division.

Similar positive trends have emerged in other PTETB states as well. The data for the seven remaining states are provided in Annex 4.

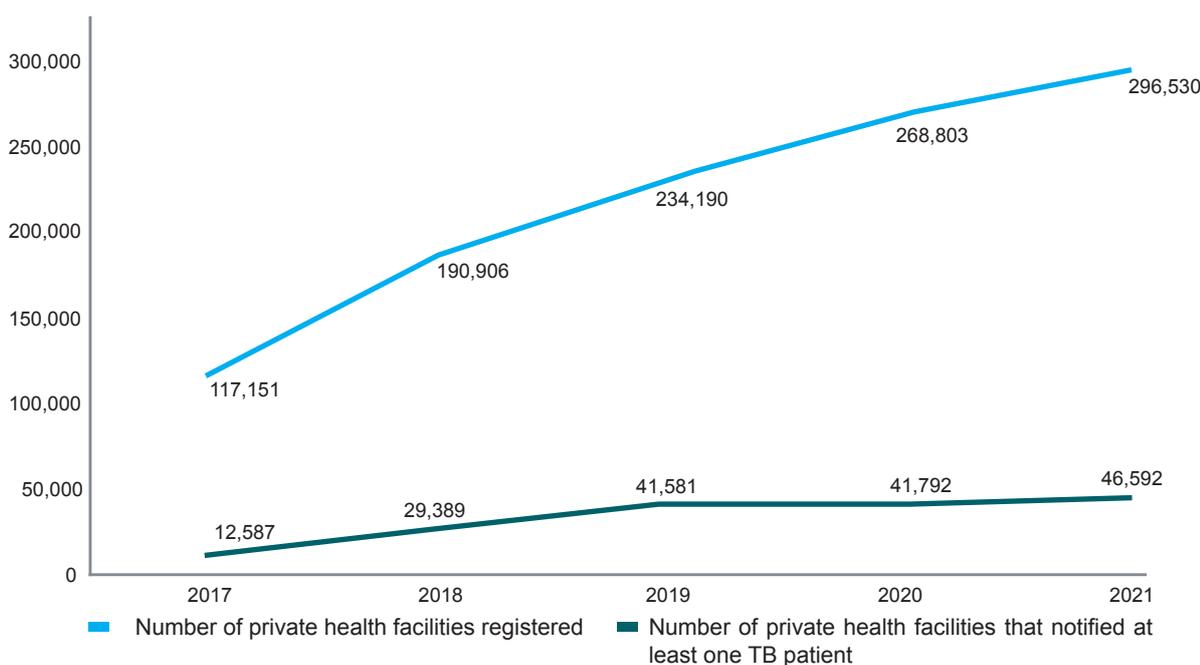
However, as expected, transitioned PPSAs are at varying stages of operationalization. Many NGOs engaged under PPSA are working with such a model for the first time. NGOs are expected to take about six months for operations to stabilize. Anecdotal evidence suggests challenges related to cash flow. Delayed payments (even up to six months) to PPSAs leads to high attrition of PPSA staff. There are also procurement challenges including but not limited to the ability of NGOs to design and bid for effective outcome based payment contracts. These conditions are not conducive to building trust with private sector partners nor motivate them toward effective performance. NGOs lack access to operating credit, given that it may take one to two years for cumulative payments to cover cumulative outlays. It becomes pertinent to generate robust evidence to establish the effectiveness of the model and document the performance of the contracts. While measuring and documenting the effectiveness and impact of the scale-up is beyond the scope of the current paper, it is an important area to explore in the future.

The Shift in TB Indicators at National Level

As India embraces PSE at scale, trends related to key TB indicators show that policy reforms, innovative models, and other government efforts have had a positive impact. The figures below showcase the improvement in notifications and treatment outcomes at the national level, based on available data.

Since 2017, there has been an increase in the number of private sector health facilities registered on Ni-kshay (Figure 19). This is complemented with an increase in the number of facilities notifying at least one TB patient—from 12,587 facilities in 2017 to 46,592 facilities in 2021, an increase of 270 percent. The JEET project had a huge role to play in the massive increase in enrolling private health facilities across the countries. These facilities are a combination of single doctor clinics, multispeciality clinics, and mid-large size hospitals—both charitable and for-profit entities. Concurrently, Ni-kshay’s functionality to capture facilities with notifications was also rolled out and gives a picture of how many more facilities had been activated and sensitized to notify TB cases.

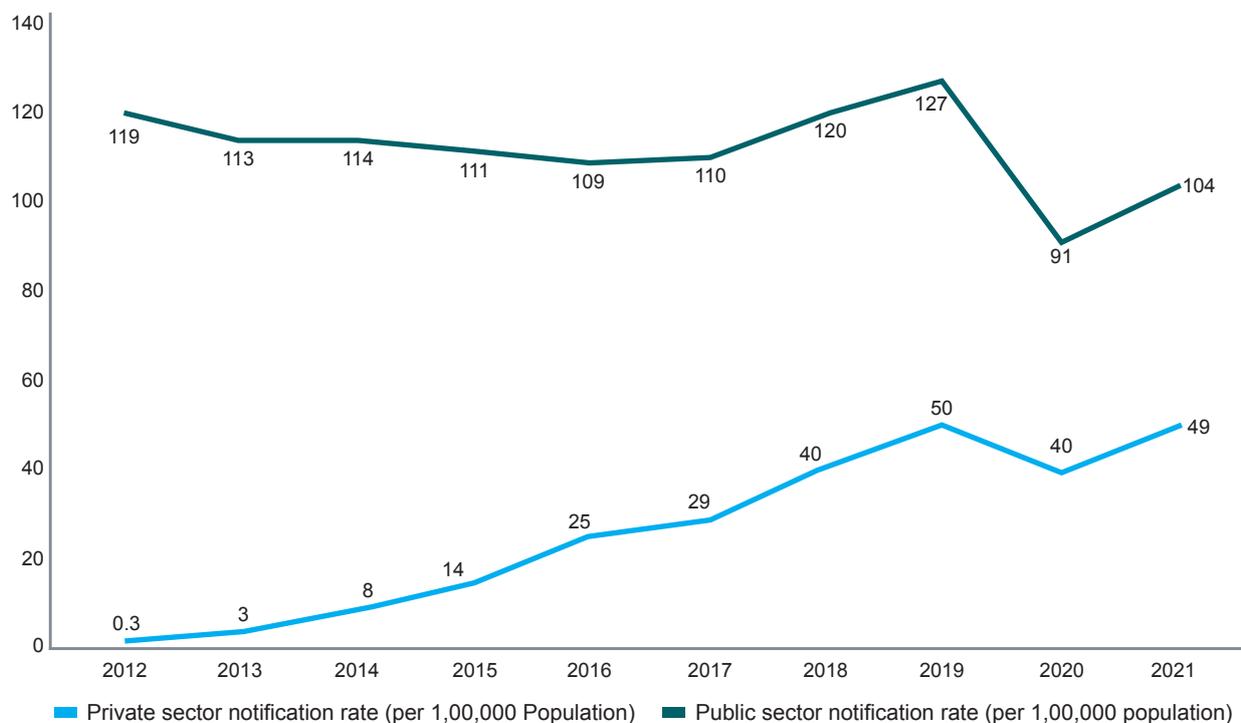
Figure 19:
Trend of TB Notifications from Private Sector Health Facilities.



Source: Central TB Division.

At the national level, the private sector notification rate substantially improved from a low baseline of 0.3 per 100,000 in 2012 to over 50 per 100,000 in 2019. A reduction was seen in 2020 due to the impact of COVID-19. However, thereafter, the notification rate is again showing an upward trend (Figure 20). The increase in public sector notification shows a similar trend.

Figure 20:
National Private and Public Sector TB Case Notification (2012–2021).



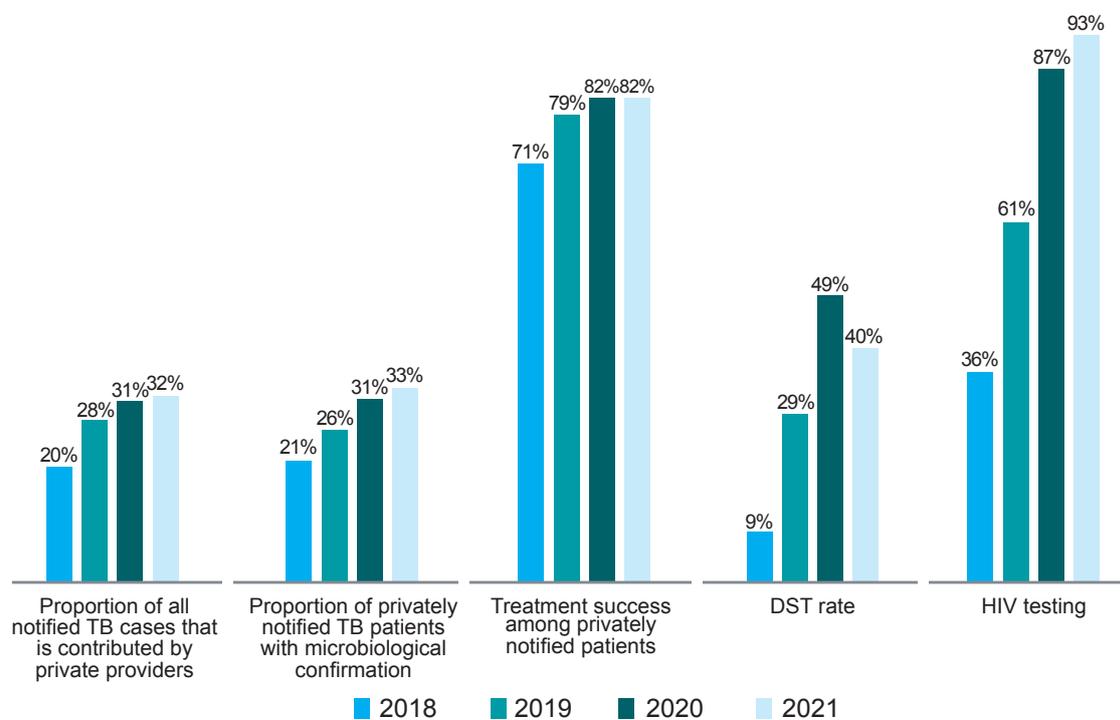
Source: Central TB Division.

Domestic funding for PPSA has positively impacted critical TB indicators. Figure 21 highlights a steady improvement across TB indicators including an increase in the proportion of private sector notifications from 20 percent in 2018 to 32 percent in 2021. However, momentum is needed to achieve the 2025 target of 60 percent. The treatment success rate among privately notified patients has increased from 71 percent to 82 percent from 2018 to 2021, inching toward the 2025 target of 90 percent. HIV testing of TB patients has seen a significant jump from 36 percent in 2018 to 93 percent in 2021, moving toward universal coverage. The DST rate, although increasing, saw a slump in 2021, possibly due to reallocation of resources to COVID-19 testing during the period.

93%

Increase in HIV testing of TB patients in 2021, in comparison to 36% in 2018

Figure 21:
National-Level Trends of TB Indicators from 2018–2021.



Source: Central TB Division.

India's TB program has laid the necessary foundations for eliminating TB, including systemic collaboration with the private sector. India's engagement with private providers is a game changer, which many countries are closely following and learning from. The next chapter highlights the way forward for key stakeholders to sustain and grow PSE to eliminate TB in India.

India's TB program has laid the necessary foundations for eliminating TB, including systemic collaboration with the private sector. India's engagement with private providers is a game changer, which many other countries are closely following.



PART V: WAY FORWARD

In India, health service delivery is largely the responsibility of the state governments. States have varying degrees of inclination and experience in PSE in the health sector. In most states, PSE is predominantly in the delivery of primary care services, laboratory diagnosis, and emergency transport, through contracting and purchasing arrangements. Health infrastructure PPPs and management contracts are rapidly on the rise. Most states in India, however, lack the policy, legal, institutional framework, and organizational capacity for PSE in the health sector (Venkatraman and Lahariya 2016). Given this background of decentralized health systems, and modest experience of states in implementing PSE in the health sector in general, the transition to a newly formulated, output-based PSE strategy in TB, is indeed a bold and radical approach by the NTEP. The new PSE strategy, with domestic funding, empowers states (even districts) to contextually customize the implementation. For most states, this transition is hugely challenging, yet potentially more effective in improving program outcomes, as highlighted in this paper. Given the ambitious goal of TB elimination set by India, it is imperative to not only sustain the momentum gained from the new PSE strategy, but also scale up the PSE strategy with more vigor and innovation. Lessons from past experiences and discussions with key stakeholders provided some key considerations to further amplify the impact of PSE scale-up presented here in three broad dimensions.



A. Strengthening the Implementation of Current Strategy and Contract Management Systems

i

Sustain the (organizational) change management:

The new PSE strategies—including performance-based contracting, PPSA, and other innovations—require attitudinal and organizational changes, not only within the TB program, but throughout the entire health system. Staff and officials within and outside the program, who are still reticent about the new PSE strategy, need to be persuaded to understand the potential benefits of the new PSE strategy, and adopt changes in the operational management of the program (e.g., need to release payments-based validation of performance milestones). While NTEP is facilitating the changeover, it needs to sustain the change continuously to foster the new work culture.

Sustaining the change requires (a) identifying and nurturing change management champions within the program, who could act as catalysts for sustaining the change; and (b) developing a knowledge management strategy to encourage peer to peer/cross-learning, including exchange of ideas, best practices, and even addressing apprehensions among the program officials. Instead of episodic interventions, NTEP, in consultation with state officials, could develop a roadmap for sustaining such organizational change.



Change management champions



Peer-to-peer cross-learning

ii

Continue building capacities at all levels:

Technical and managerial capacity to design, implement, monitor, and manage contracts is crucial for effective implementation of PSE. NTEP has the dual responsibility of not only managing organizational aspects of PSE scale-up, but also building capacities of the NTEP staff across all levels. Capacity-building is an ongoing effort. While NTEP has already created a mechanism (NTSU and STSUs) to build capacities of the program staff, it may be worthwhile to collaborate with technical partners (donors) to build capacities of NGOs, civil society partners, and private providers. Over time, the capacity-building training could be undertaken through state- or regional- level training (academic) institutions.



Technical and managerial capacity-building

iii

Strengthen contract management system using a standardized IT-enabled platform:

Performance-based contracting requires a nimble, efficient, and responsive contract management system that continuously monitors the performance milestones and triggers timely release of payments. Currently, the IT-enabled contract management system is not fully deployed in many states, which delays verification, validation, and release of payments, and negatively impacts the perception of potential PPSAs while scaling up. NTEP should consider developing an integrated IT-based contract management system (software), layered on Ni-kshay, and in combination with other ICT platforms, such as call centres, that allow more efficient verification and validation of patient data and timely release of payments (to PPSA) and incentives (to private providers and patients). Such software could be made available to the states with an option for customization. The contract management system also could incorporate features such as a grievance redressal (of PPSA).

iv

Establish robust review and evaluation mechanism:

Transitions to new PSE strategies and other local innovations are still at the early stages of implementation in most states. Therefore, it is imperative to understand the early lessons and experiences of implementation partners (as well as those of program officials). NTEP convening a national workshop of experience sharing among PPSAs (in August 2022) is one such step in this direction. NTEP may consider creating an institutional mechanism to periodically review, document, and systematically evaluate the PSE strategies; and to modify and strengthen them, as needed.

v

Improve data quality and decision support system:

The quantum of data coming into the program has steadily increased during the past decade; however, quality of data beyond private sector notifications needs greater attention. While NTEP is continuously making attempts to improve the data platform (Ni-kshay), there is a need to validate (audit) the completeness of the data vis-à-vis patient outcome. It is equally critical to deploy decision support system for senior (program) officials to monitor the program effectiveness (e.g., DBT, treatment outcomes), especially with respect to the patients in the private sector.



Data validation

B. Creating and Sustaining Enabling Conditions

i

Facilitate stakeholder communication, dialogue, and an enabling ecosystem:

Effective partnerships require building trust, and nurturing and deepening relationships between the public and private sectors. The transition in the PSE strategies is a radical change for a large number of private providers, especially NGOs and civil society organizations. Their apprehensions about various components of the PPSA model (e.g., preparing an request for proposal) largely stems from lack of clarity on the new approach. Similarly, a number of private (for-profit) health care providers, such as start-ups, health technology firms, and e-pharmacies, are unaware of the opportunities for them in the TB program. NTEP may consider creating or supporting an institutional mechanism to facilitate public-private-stakeholder dialogue (forum) for improving communication, building trust, networking, learning exchange, and even sharing of mutual apprehensions. For example, concerns about the financial capacity of NGOs to bid for the PPSA and lack of technical capacity to prepare the RFP, etc., have come up frequently from the NGO partners. A dialogue forum may help in understanding and resolving these issues, such organizational change mutually. The TB-PPM Network (India), an online learning network of WHO TB-PPM subgroup, is a platform that may be readily deployed as the dialogue forum.¹⁶

ii

Promote private sector interest and build a larger pool of private agencies for PPSA:

To improve access to TB care services and achieve the goal of TB elimination by 2025, it is necessary to mobilize all types of private health service providers and stakeholders in the provision of services. The definition of the private sector in the TB program needs to encompass a broader array of service providers, such as health care start-ups, diagnostic labs, e-pharmacies, and corporate social responsibility wings of corporate houses—beyond NGOs, civil society organizations, and private hospitals. Each entity brings their own relative strengths. Opportunities should be created to enable collaboration of each other, say in the form of consortia, to function as PPSAs. For example, collaboration between an NGO, a hospital, a diagnostic lab chain, and an e-pharmacy company in the form of consortium PPSA, could promote each other to deploy their core expertise and cater to the entire spectrum of services (“bundle of services”) a TB patient seeks. This could also be an effective strategy for expanding the PSE model. NTEP may consider promoting (or even giving priority to) consortium-based bids for PPSA. NTEP may also promote networking events, roadshows, and workshops.

¹⁶TBPPM Learning Network (TBPPM LN) was launched in October 2019 to provide a vibrant community of practice-sharing resources, information, and lessons learned by community members. The TB PPM Working Group has annual meetings, and the TBPPM Learning Network will support communication and ongoing exchanges in support and in between those WG meetings. The Learning Networks facilitates timely, dynamic, effective, and efficient interaction among a full range of policy makers, implementers, researchers, and others interested in engaging all providers for TB care and prevention. At the same time, it allows all stakeholders to learn from adjacent communities of practice in universal health care (UHC), strategic purchasing, health finance, family planning, HIV, malaria, digital health, etc.

C. Planning for the Future

i

Expand involvement of private hospitals to scale:

Private hospitals (and medical colleges) contribute a significant proportion of TB case notifications. Involvement of many large, private for-profit hospitals do not receive as much attention as the PPSA approach under the new PSE strategy. NTEP may consider developing an exclusive partnership guidance on engaging the private hospitals (with its diagnostic facilities and in-house pharmacies) with flexible partnership options.

ii

Explore at-scale strategic purchasing and linkages with social health insurance:

Although technically more complex, India's TB program may consider exploring coverage of TB care services as a package (diagnosis, drugs, and treatment) under its social health insurance program. Even outpatient services are usually not included in health insurance programs, a bundled package of services could be more amenable. Hospitals are likely to be equipped to offer such a bundle of TB care services. Since India's social health insurance program, Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) primarily covers low-income populations in hospitals, the key objective of reducing catastrophic out-of-pocket expenses among the poor could be a valid reason to explore a package model. A case-based bundled payment method, in particular, would make it easier to expand the availability of TB care services in the private sector. Insights from the Philippines, Indonesia, and Korea could be useful while exploring this option in the Indian context. NTEP may consider facilitating a dialogue between National Health Authority and NHM to leverage Health and Wellness Centre at the community level for screening and providing TB patients the package of services.

iii

Induct human resources with program management skills:

India's TB program experienced massive changes and expansion, affecting the workload, skills, and competencies of the program staff. New skill sets, such as contracting, contract management, costing, IT interfaced monitoring, and social media skills, are critical to sustain these changes. Yet the numbers and competencies of program staff have not kept pace with the expansion and innovations. TSUs are unlikely to deploy additional manpower to manage this transition. Inducting additional manpower and redeploying existing manpower according to the program requirements are two critical moves toward the goal of TB elimination in the next few years.

It must be noted that the PSE strategy in the TB program is likely to have spillover effects on the public health system at large. If public-private-stakeholder dialogue for capacity-building for PSE, bundling of services, insurance coverage, and collaboration among the private sector providers, among other strategies, are implemented well, it could lead to system-wide impact on PSE.





PART VI: CONCLUSION

India's TB elimination ambitions hinge, in part, on successful implementation of PSE at scale. This paper documents early insights and trends in the country's journey to scale up PSE, and is not an evaluation. Rigorous evaluation of at-scale PSE in the nine PTETB-funded states is needed to generate critical evidence to inform next steps in India's institutionalization of PSE. Institutionalized PSE will mobilize the reticent private sector in TB care and requires deployment of innovative partnership mechanisms. After two decades of experimenting with various models of engaging the private sector, recent achievements made through aggressive PSE strategies reinforce confidence that India can achieve its TB elimination goals. Particularly since 2014, these approaches to PSE have transformed India's public sector-led TB elimination program.

India's bold PSE exploration is anchored by a series of policy reforms by the GOI. In addition, strategic direction from the NSP; consistently increasing annual budgetary commitments; augmentation of human resources at all levels of implementation; ongoing technical assistance from experts globally and in India; and the reimagining of organizational structures have propelled the country toward its TB elimination goals. The NTEP was quick to adopt and leverage digital technologies to improve case notifications and to monitor the progression of patient treatment outcomes, quality of care, DBT, and patient incentives. Further, the NTEP has created institutional mechanisms and governance structures for regular review of PSE. These spaces are opportunities for cross-learning of best practices both from within and outside India, and for encouraging innovations in program implementation.

The 2019 Partnership Guidance Document is a clear signal to all TB stakeholders that the program will continue to encourage innovations toward TB elimination. Taking a patient-centric approach, the document calls for all future PSE strategies to ensure that everyone in India can access TB services as a step toward universal health coverage.

In such a vast, complex, and diverse country, change is not easy. However, India's TB program has absorbed extraordinary changes over the past decade and demonstrated the benefits of such perseverance and adaptability. From the NTEP's front-line staff to high-level decision-makers, India's TB control stakeholders have adapted to these changes. Although the COVID-19 pandemic disrupted this momentum, the NTEP is working at recovering from these setbacks. India's political commitment is at an unprecedented high, and the gains of recent years cannot be lost.

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ANNEX 1 – LIST OF KEY INFORMANT INTERVIEWEES

1. Dr. A.B. Jagtap, Government of Maharashtra
2. Dr. Aakshi Kalra, FIND
3. Dr. Akshat Jain, CHRI
4. Dr. Bharati Kalottee, The Union
5. Dr. Bhavin Vadhera, USAID
6. Dr. Deepika Khaladkar, PATH
7. Dr. Di Dong, World Bank
8. Dr. Guy Stallworthy, BMGF
9. Dr. Kalpana Kunte, Government of Maharashtra
10. Dr. Kayla Laserson, BMGF
11. Dr. Kiran Rade, WHO
12. Dr. Kuldeep Sachdeva, The Union
13. Mr. Maulik Choksi, Government of Gujarat
14. Dr. Mukund Uplekar, ex-WHO
15. Dr. Neeraj Raizada, IQVIA
16. Dr. Nisarg Desai, World Health Partners
17. Dr. Nita Jha, World Health Partners
18. Dr. Pankaj Nimavat, Government of Gujarat
19. Dr. Prachi Shukla, World Health Partners
20. Dr. Raghuram Rao, NTEP, Ministry of Health and Family Welfare
21. Dr. Ronald Upenyu Mutasa, World Bank
22. Dr. Sameer Kumta, BMGF
23. Dr. Sandeep Bharaswadkar, BMGF
24. Dr. Santosh Gupta, Government of Uttar Pradesh
25. Dr. Shamim Mannan, CHAI
26. Dr. Y.K. Jani, WHO (Gujarat)

ANNEX 2 – OPERATIONAL MODALITIES OF THE PPIA MODEL

Activity	Patna (urban)	Mumbai (urban)	Mehsana (rural)
Interface agency	World Health Partners	PATH	RNTCP
On ground implementation	World Health Partners	Community Based Organizations (CBOs) MJK and ALERT India	The model was implemented by RNTCP (i.e., District TB Office)
Private sector providers mapped and engaged	Yes	Yes	Yes
Non formal providers mapped and engaged	Yes	Yes, using the hub and spoke model	No
Diagnostic services through voucher generation	Free CXR Free microscopy Subsidized CBNAAT (free for people below poverty line)	Free CXR Free CBNAAT in empaneled laboratories through e-vouchers	Linkages established with microscopy services under RNTCP
ICT support (call center)	Yes	Yes	Yes
Free drugs	Yes	Yes	Yes
Patient visits for treatment adherence	PPIA Field Officer	CBO Staff	RNTCP staff
Coordination with private providers and chemists	PPIA Field Officer	PPIA Field Officer	RNTCP staff
Review and approval of reimbursement	PPIA Field Officer	PPIA Field Officer	RNTCP staff
Treatment adherence support and follow-up	Mixed. Human intervention and ICT based on prioritization protocol for follow-up	More human led than ICT. Weekly or bi-weekly home visits to the patient and self-reporting to the call center and refill monitoring	Initial human system with ICT-dependent follow-ups. Home visits for patient counseling and self-reporting to the call center and refill monitoring
Technical support unit with PSE expertise housed with RNTCP	No	Yes	Yes

ANNEX 3 – OPERATIONAL MODALITIES OF THE PPSA AND PPSA LITE MODELS

	PPSA	PPSA Lite
Human resources	Intensive deployment through on-the-ground NGOs	Less intensive, as the majority of activities were expected to be implemented by the district-level NTEP staff with minimal staff support from JEET
Private sector mobilization	Mapped most private practitioners and identified TB champions	Mapped only a proportion of private practitioners and identified TB champions
Empaneling strategy	Engaged with the private sector providers through primarily through in-clinic visits and continued medical education	Facilitated private sector engagement primarily through CMEs as well as joint in-clinic visits with NTEP staff
Patient support services	Established linkages with the government to provide CBNAAT and FDCs to all patients seeking care in the private sector	Designed interventions for linkages and supported NTEP staff to provide patient support services
Treatment adherence	Provided treatment adherence support	Designed interventions for linkages and supported NTEP staff for treatment adherence
Implementing agency	Implemented through a subrecipient, i.e., local NGO with relevant experience	Implemented directly by the primary recipient – FIND/CHRI/WJCF

ANNEX 4 – STATUS OF TB INDICATORS IN PTETB STATES

ASSAM

Indicators	2018 (in %)	2019 (in %)	2020 (in %)	2021 (in %)
Proportion of all notified TB cases that is contributed by private provider	12	17	17	18
Proportion of privately notified TB patients with microbiological confirmation	18	17	21	27
HIV testing	6	29	74	88
DST rate	3	20	33	19
Treatment success rate	28	63	76	87

KARNATAKA

Indicators	2018 (in %)	2019 (in %)	2020 (in %)	2021 (in %)
Proportion of all notified TB cases that is contributed by private provider	18	22	26	27
Proportion of privately notified TB patients with microbiological confirmation	25	37	36	44
HIV testing	45	68	92	95
DST rate	9	27	45	41
Treatment success rate	78	79	79	83

MADHYA PRADESH

Indicators	2018 (in %)	2019 (in %)	2020 (in %)	2021 (in %)
Proportion of all notified TB cases that is contributed by private provider	22	26	24	33
Proportion of privately notified TB patients with microbiological confirmation	6	11	15	29
HIV testing	7	52	79	93
DST rate	3	27	44	25
Treatment success rate	70	63	66	71

RAJASTHAN

Indicators	2018 (in %)	2019 (in %)	2020 (in %)	2021 (in %)
Proportion of all notified TB cases that is contributed by private provider	28	30	30	31
Proportion of privately notified TB patients with microbiological confirmation	20	18	17	25
HIV testing	19	63	80	94
DST rate	4	17	32	20
Treatment success rate	67	74	78	84

TAMIL NADU

Indicators	2018 (in %)	2019 (in %)	2020 (in %)	2021 (in %)
Proportion of all notified TB cases that is contributed by private provider	26	26	23	22
Proportion of privately notified TB patients with microbiological confirmation	24	32	39	52
HIV testing	11	38	75	79
DST rate	10	28	58	54
Treatment success rate	82	85	85	85

UTTAR PRADESH

Indicators	2018 (in %)	2019 (in %)	2020 (in %)	2021 (in %)
Proportion of all notified TB cases that is contributed by private provider	26	33	34	31
Proportion of privately notified TB patients with microbiological confirmation	12	09	09	24
HIV testing	16	51	86	94
DST rate	4	18	41	29
Treatment success rate	61	67	84	86

WEST BENGAL

Indicators	2018 (in %)	2019 (in %)	2020 (in %)	2021 (in %)
Proportion of all notified TB cases that is contributed by private provider	15	23	22	24
Proportion of privately notified TB patients with microbiological confirmation	33	39	35	45
HIV testing	27	52	85	90
DST rate	16	36	45	45
Treatment success rate	76	72	72	83



PRIVATE SECTOR ENGAGEMENT FOR TUBERCULOSIS ELIMINATION

India's Journey from Pilots To National Scale-Up (2012-2021)