

Challenges in Engaging the Private Sector for Ensuring Standards of TB Care: A Case Study from Delhi, India

P. S. Rakesh^{1,2} , Mohd Shannawaz¹, Kamalini Mukhopadhyaya², K. S. Sachdeva³

ABSTRACT

Introduction: Despite many efforts by the National TB Elimination Program (NTEP), ensuring standards of TB care for people with TB have not been really converted into routine practice in the private sector of the state of Delhi. The current study aims at documenting the challenges faced by the Delhi state to partner with formal private healthcare delivery providers for ensuring quality TB care. **Methods:** A case study approach was adopted to understand the case through a primary descriptive exploration. A scoping review of nine research studies and analysis of data from various TB annual reports from 2015 to 2024 and project reports were performed. 23 In-depth interviews with private providers, policy makers, and program staff were conducted. The grounded theory approach was used to generate a single theory of the case itself that explains it. **Results:** With limited human resources and their managerial capacity, NTEP found it difficult to reach out to the fragmented multitude of private healthcare providers. Private sector had various concerns to engage with NTEP including breach in the confidentiality of the clients and cumbersome documentation process. TB care indicators improved in terms of quality service delivery from the private sector when a third-party agency was engaged by NTEP; however, the same started declining with the project closure. Poor stakeholder interests, lack of mutual trust, lack of sustained interaction between the sectors, and lack of a system for co-ordination were major challenges leading to poor sustainability beyond the project duration. **Conclusion:** A proactive effort by the public sector with a strategic policy direction for private sector engagement, understanding and addressing the concerns of the private sector and gaining their trust, capacity building of NTEP staff to deal with private sector, making the documentation process simple, and creating a platform for dialog between sectors can enhance further engagement.

Keywords: Public-private mix, Public-private partnership, Tuberculosis
Asian Pac. J. Health Sci., (2026); DOI: 10.21276/apjhs.2026.13.1.1

INTRODUCTION

Recognizing the importance of engaging the private sector for ending TB, the National Strategic Plan for TB Elimination in India (2017–2025) enlisted strategies to ensure Standards of TB Care in India (STCI) are available to clients in the private sector.^[1,2] Subsequently, the National TB Elimination Program (NTEP) has adopted approaches including training, regulations, provisions of services such as drugs and diagnostics free of cost, incentives, and partnership schemes to engage with the private sector.^[3] Many Non-Governmental Organizations (NGOs) are empaneled as Patient Provider Support Agencies (PPSA) and tasked with engaging the private sector for notifying cases to NTEP and coordination for services such as free drugs, follow-up, contact investigations, and reporting of treatment outcomes.

Delhi state has the highest prevalence of all forms of TB in India (747/lakh population).^[4] The National TB Prevalence Survey (NTPS) revealed that 56% of people with TB symptoms sought care from the private sector in Delhi.^[4] Delhi's market share of private anti-TB drugs was reported as 74% which is 2.8 times higher than that of public.^[5] Notification of TB from the private sector remains suboptimal in Delhi.^[6] NTPS has revealed that the prevalence to notification gap in Delhi is 2.2, indicating a significant proportion of cases missing from the surveillance system.^[4] Other TB care indicators including treatment success rate, proportion of people with TB who knew their HIV status, proportion of people with TB who received universal drug susceptibility testing were comparatively lesser in the private sector vis-à-vis the public sector in Delhi.^[6] TB notifications and ensuring public health actions for people with TB have not been really converted into routine practice in the private sector of Delhi.

The current study aims at documenting the approach and efforts taken by the Delhi state to partner with "for profit" formal private

¹Department of Public Health and Hospital Administration, Amity Institute of Public Health and Hospital Administration, Amity University, Noida, Uttar Pradesh, India.

²The Union (International Union against TB and Lung Diseases) South East Asia Office, New Delhi, India.

³Molbio Diagnostics, New Delhi, India.

Corresponding Author: P. S. Rakesh, Amity Institute of Public Health and Hospital Administration, Amity University, Noida, Uttar Pradesh, India. E-mail: rakeshrenjini@gmail.com

How to cite this article: Rakesh PS, Shannawaz M, Mukhopadhyaya K, Sachdeva KS. Challenges in Engaging the Private Sector for Ensuring Standards of TB Care: A Case Study from Delhi, India. *Asian Pac. J. Health Sci.*, 2026;13(1):1-7.

Source of support: Nil.

Conflicts of interest: None.

Received: 11/09/2025 **Revised:** 19/11/2025 **Accepted:** 27/11/2025

health service delivery providers for ensuring quality TB care and documenting the challenges in engaging the private sector. This is expected to help policymakers and program managers of Delhi and similar settings across the world who face challenges in partnering with the private sector for ensuring universal access to quality TB care.

METHODS

Design

A case study approach was adopted with review of the literature followed by 23 in-depth interviews (IDIs) with relevant stakeholders.

Desk Review

As a first step, desk review was attempted for policy documents, operational plans, guidelines, annual reports, and evaluation studies available in public domain and in the official websites of health department and NTEP to look for (1) State specific policy and plan to engage the private sector for TB care and (2) data and treatment outcomes related to TB patients reaching the private sector. Literature search was done in MEDLINE and EMBASE using the key words (TB OR Tuberculosis) AND (Private hospital OR Private facility OR Private Partnership OR Private Practice OR Private Sector OR Public Private Partnership) AND Delhi. The search, carried out on 21st September 2024, included all descriptive and analytical studies. Studies published since 2014–2024 were included as our interest was in the recent situation. Reference lists of papers identified in the searches were scanned.

Private health sector was defined as “the individuals and organizations that are neither owned nor directly controlled by governments and are involved in the provision of health services.”^[7] We focused on “for-profit” healthcare providers because of their volume and difficulty in engagement. We included only healthcare service delivery providers. All identified articles were screened for full-text review. Articles not focusing on the “for-profit” health sector and “quality of TB care” were excluded.

IDs

Post desk review, we conducted 23 IDs to validate the observations from the literature and to fill in gaps in the information.

IDs were conducted with two persons involved in policy formulation and implementation in TB control and private sector in the state for more than 10 years, three technical consultants in global partner organizations in TB elimination and responsible for guidance in state TB policy formulation, nine private practitioners dealing in routine TB care, three leaders of professional medical associations, three private hospital management representatives, two NTEP district program managers, and four NTEP field staff.

Private providers and hospital representatives were selected from the program database with equal representation from lowest, middle, and highest percentile providers based on the number of TB cases notified in a quarter. Out of the nine private practitioners, five were attached to at least one private hospital with inpatient care whereas the rest were individual practitioners or attached to nursing homes. Conscious efforts were taken to ensure the geographical representation of participants from different districts. Interviews were conducted till inductive thematic saturation. High-performing and low-performing district was chosen based on the percentage of target private notification achieved, and program managers and relevant field staff of those districts were interviewed.

A guide for the interview was developed. Participants were contacted over the phone; the purpose of the IDs was explained. Time was fixed based on the convenience of participants. One team member recorded the proceedings including the verbal and non-verbal interactions. The details of the study were explained at the start of the interview. Confidentiality was ensured. Nineteen interviews were conducted in English by PS (male, public health expert) and the rest by MS (male, public health expert), both having relevant experience in conducting qualitative studies. All participants who were contacted, except three private providers, participated. Major themes discussed included initiatives taken

by the NTEP to engage the private sector, outcomes of such initiatives, challenges in the engagement, and potential solutions. Each interview lasted for approximately 40 min (range: 30–55). IDs were later transcribed verbatim and translated into English (PS/MS) and manually coded. Themes and subthemes were pre-identified as per our previous systematic review and meta-synthesis, and additional emerging themes and codes were added. Citations with similar coding were grouped according to the predetermined themes. Recurrent themes were marked as important. The team went through the transcripts and notes and reached a consensus. Important quotations which evoked spontaneous discussion involving significant time and had some emotional cues attached were earmarked. The grounded theory approach was used to develop theory. We focused on generating the single theory of the case itself that explains it.

The study was approved by the Institutional Ethics Committee (AUUP/IEC/JUL/2022/16).

RESULTS

Data from annual reports from 2015 to 2024 of the Department of Health, Government of Delhi, New Delhi TB Centre and Central TB Division and project reports of partner agencies and a total of nine research studies were reviewed.^[6,8-20]

Out of 23 participants interviewed, 16 were males and 14 were above 45 years.

Summary of the synthesis from the review of documents, research studies, and the qualitative interviews was as follows:

Private Sector Landscape in Delhi

With 1040 private nursing homes and hospitals, the number of health institutions in the private sector in Delhi is nine times higher than the number of public institutions.^[8] The percentage of beds in the medical institutions operated by the Delhi Government, Government of India, and Local bodies constituted 24.7%, 22.8%, and 6.3%, respectively, while beds in private nursing homes/hospitals/voluntary organizations constituted 46.2%.^[9] The number of registered modern medicine doctors possessing recognized medical qualifications (Under NMC Act) and registered with the state medical council is 21394. Ratio of traditional medicine and AYUSH (Ayurveda, Yoga, Unani, Siddha, Homeopathy) to modern medicine practitioners is 0.6 in Delhi.^[8,9]

Public-Private Partnership for Health Initiatives in Delhi

Delhi has implemented a range of public-private partnership schemes including contracting in of specialists and services such as advanced radiology procedures. Agencies have been hired for providing reproductive, maternal, and child health services in urban slums. The Apex Kidney program has been implemented on Public Private Partnership (PPP) Mode in three districts with five centers deploying 60 machines. The government is also running a free surgery scheme through empaneled private hospitals following referrals from Delhi government hospitals. Delhi Arogya Kosh has empaneled private healthcare facilities for various surgical procedures and 133 diagnostic tests free of cost for its citizens.^[10] Delhi NTEP had a PPSA agency working for engaging the private sector from 2018 to 2020.^[11] PPSA has been re-engaged since August 2024. A technical support unit by an NGO is supporting

NTEP in contracting and strategic purchase of services as per the partnership guidelines of NTEP.

Quality of TB Care Indicators from the Private Sector based on the NTEP Program Data

So far, 4024 private providers/institutions, 457 laboratories, and 53 chemists have been registered in N-kshay, the management information system of NTEP, in the state of Delhi. Out of them, those notified of at least one case in 2023 were 740 private providers/institutions and 71 laboratories. The trend of the notifications over the years from both the sectors in Delhi is shown in Figure 1. In terms of numbers, the number of cases being notified from the private sector shows a declining trend in Delhi. In the years 2020 and 2021, more than 30% of the total notifications were from the private sector which dropped to 25% in 2023.^[6,8]

Also in 2023, nearly 40% private notifications in Delhi were from laboratories (9335/25873). Further, in 2023, a total of 25883 TB cases were notified from the private sector while only 11702 (45%) received further care from the institutions in Delhi.^[6,8] This indicates that a large number of cases from the neighboring states are getting their diagnosis in Delhi.

Out of the total rapid molecular tests done in public laboratories in Delhi, only around 1% were referred from the private sector.^[6,8] This indicates poor extension of public services for the clients reaching the private sector.

The proportion of people with TB who knew their HIV status (reported to NTEP) were 81%, 88%, 89%, 90% in the public sector for the year 2020–2024, whereas the corresponding figures from the private sector were 66%, 65%, 62%, 37%. Treatment outcomes of people initiated on TB treatment were 73%, 75%, 78%, 79% in the public sector for the year 2019–2022, whereas the corresponding figures were 54%, 63%, 60%, and 51% from the private sector. Whereas 82% of the bacteriologically confirmed TB in the public sector received a test to know their drug resistance, the corresponding figure was 50% for those who were diagnosed in the private sector in Delhi. Only 41% of the rifampicin-resistant cases notified from the private sector were reported to have been initiated on treatment.^[6,8] This indicates that the quality of TB care or its reporting from the private sector is low when compared to the public sector, with a downward trend in recent years.

TB patient pathway analysis by a previous study indicated that informal providers and retail chemists were the first point of contact and source of clinical advice for two-thirds of the people with TB.^[9] A significant delay from symptom onset to a diagnosis

of TB has been observed in Delhi by various studies.^[12–14] Further, studies showed that the major delay in this entire cascade is at the health system level. Delay was more among people reaching the private sector, particularly the informal health sector.^[12–14]

Insights from the Qualitative Interviews

Insights from the qualitative interviews were summarized below.

Context in which the engagement occurs

Political and economic factors

The stakeholder interest in Delhi for strengthening the public-private partnership appears poor. NTEP has sanctioned 25 public-private mix coordinator positions for Delhi to engage the private sector. However, these positions were not filled. There is a sanctioned fund from the National Health Mission for engaging a PPSA in Delhi, however other than for a brief period (2018–2020), no agency has been engaged for the past many years, until recently. Competing priorities for spending the health budget are cited as an important reason for not engaging the private sector for TB care.

The interest from the private sector to engage with NTEP also varies with corporate hospital managements having a good interest, whereas individual nursing homes/practitioners and chemists consider it as a “burden” for them. Reasons for “poor” interest from the private sector are mainly because of the poor understanding/lack of clarity regarding the partnerships, fear of losing their business, as at times NTEP “pulls” their clients, poor interest in public health and apprehensions about their investments in terms of time and resources. They were also worried that their “autonomy” to diagnose and treat would be lost if there is too much engagement with the government sector. The presence of huge “informal providers” adds to the complexity of the challenge.

“our state health administrators are not convinced about the need for additional staff or hiring an agency for private sector engagement” – NTEP staff

Internal environment of the organizations

For administrative convenience, Delhi is divided into 25 NTEP districts called “chest clinics” and has District TB Officers (DTO) at these Chest Clinics. All DTOs are physicians and are mostly involved in the provision of clinical care to the people reaching the “chest clinics.” While DTOs in all other states have financial powers, DTOs in Delhi do not have much financial power for program management. Program management of NTEP is poorly integrated at the field level and key NTEP program staff are working in silos.

Sociocultural factors

Private providers cited patient confidentiality as an important reason not collaborate with the public sector. There were instances reported by the private providers where the people with TB, notified from the private sector, were contacted by the public sector/PPSA which was considered as a “breach of confidentiality” by the patient and has led to loss of trust between the treating physician and the patient. Many clients reaching the private sector, especially to hospitals, explicitly express their disinterest

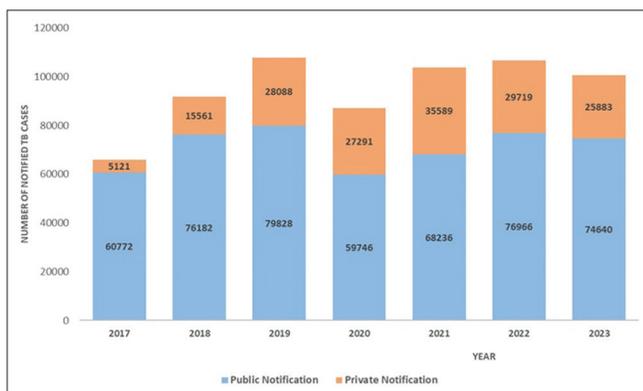


Figure 1: Trend in TB Notification from Delhi (2017–2023)

in obtaining services from NTEP to protect their privacy and confidentiality.

"Patients are generally worried about their confidentiality. Many used to get phone calls from Government and then they even stop coming to us fearing about their confidentiality"- a private practitioner (56 years, M)

"We ask patients whether to inform the Government. It is usually a big no from their side. They are even scared to give their bank details thinking that their information will be in public"- a private practitioner (45 years, M)

Factors that Defines the Architecture of the Engagement and its Implementation

Strategies of engagement

Regulatory approach

The state has tried to enforce mandatory TB Notification and Schedule H1 regulation, but not at a scale that is required. There are many private providers who are still not aware of mandatory TB notification.

"Many providers are not even aware of mandatory TB notification even after these many years. Nobody told them till this time"- staff of a partner organization (36, F)

"Private sector is huge. We don't even know all of them to reach out. Regular sensitization and meetings through professional associations would have helped. There were a few attempts in this line a few years back, but in my knowledge, there was no such attempt in the recent years"- NTEP staff

Incentives

NTEP provides incentives for information exchange to private providers. However, timely disbursements of such incentives were again of a lower priority for the state.

"Why should we provide money to private providers for information- asked by a state health official? So itself incentives to private providers were not provided for a long time"- NTEP staff

Information exchange

Lack of awareness among the private providers on how to notify TB and the perceived complexity of the information system were the major barriers for information exchange. A significant proportion of notifications in Delhi used to come from the private laboratories. There was no sustained effort to get notifications from other private providers.

"Even after many years of TB made a notifiable disease, some of the private practitioners in Delhi still are not aware that TB is a notifiable disease. Many of the doctors who are aware that TB is a notifiable disease, don't not know how to notify"- staff of a partner organization (40 years, M)

"Many of us are not tech savvy. We don't have time too. Make the process simple, we will notify"- a private provider (57 years, M)

Public provision of services (Drugs, diagnostics, training, public health actions)

When there was a PPSA, attempts were made to train private providers and extend public provisions of services to the private.

However, after the agency withdrew, there were no systematic efforts to extend any public provision of services.

"Even if we send the samples to a public laboratory, we are getting the results very late, maybe after 10 days. Sometimes they will not even accept the samples saying consumables are of short supply. We don't know whom to talk to"- Private Practitioner (46 years, M)

Financing

Although national guidelines on partnerships were available, there were no attempts for any strategic purchase through partnership schemes.

Mode of engagement

Active state-level initiatives have led to an increase in TB case notification; however, such activities were not sustained. Engagement of private providers in TB in the state has been plagued by numerous small projects coming and going. There were many Corporate Social Responsibility initiatives to engage private health facilities, setting up mhealth-enabled platforms and call centers and offering Nucleic Acid Amplification Tests to private sector patients.^[15,16] All such initiatives have proven to be useful in the project mode in terms of an increase in notification and treatment outcomes; however, none of these initiatives were scaled up or sustained. Attempts were done to engage pharmacists; however, it could not be scaled up.^[17] There is no plan to engage informal health providers who are the first point of contact for a significant proportion of people with TB. PPSA was in place from 2018 to 2020 who tried to help in engaging the private sector and collect information on TB notifications and extend the services to the clients through a network of project staff. However, when the PPSA withdrew, there was nobody responsible to engage the private sector.

"Exit plan is important while we implement any projects, so that the interventions will sustain when the external support is withdrawn. There was no such exit plan or scale up plan or a vision behind. This is not only the story of Delhi, but true in general"- Representative of developmental partner agency (50 years, M)

"Many of them (Private Providers) are willing to treat if the medicine is provided to them by the government freely. They are not happy in an external agency tracking cases. However some bigger hospitals don't want to admit TB patients and they simply refer"- representative of PPSA (43 years, M)

Resources for engagement

NTEP has sanctioned 25 public-private mix coordinator positions for Delhi to engage the private sector. However, these positions were not filled. There is already a sanctioned fund from the National Health Mission for engaging a PPSA in Delhi; however, no agency was engaged, until recently. Existing staff have a huge workload to provide care to people with TB diagnosed in the public sector.

Translation of policies to practice

There exists an understanding gap regarding the need for and the vision of private sector engagement at the level of state and district health administration. Policies of NTEP regarding private sector engagement have not been translated well into practice.

“There is no PPSA or PPM coordinator. Private sector is huge and we cannot reach out to all of them. Even if they (private providers) notify, we cannot even ensure that all the patients are contacted and offered contact investigations and adherence management support due to our workload. Many times we are not sure that such patients even exist because we could not even contact them due to various reasons. This significantly affects our key performance indicators including poor treatment success rate”- NTEP staff

Majority of the private practitioners indicated that they had not been trained on the latest updates on TB management. Some practitioners indicated that once they suspected TB, they referred the clients to the public sector, however they did not know if they reached, since there was no linkage with the NTEP and there was no feedback. Private providers felt that the clients whom they referred to the NTEP are generally not happy.

“The patients whom I referred there (NTEP) came back to me with much unhappiness regarding the way they were treated. They insisted on treatment from here” (52 years, M)

Factors Related to the Actors Implicated in the Engagement and their Action

Relationship dynamics

There appears to be a lack of trust and mutual understanding among individual private practitioners and the public health system. Public sector considered the private sector as purely “profit driven” and not adhering to any standard treatment protocols. Private sector felt that the public system always had an authoritarian attitude and they never considered the private sector as partners. Many private providers also felt that the public system never offered what they have committed including drugs, diagnostics or incentives.

“I had very bad experiences with NTEP. I don’t want to get involved anymore”- a chest physician (44 years, M)

Capacities to engage

NTEP field staff lacked the managerial capacity to engage the private sector. They find it difficult to get an appointment with a private doctor or the hospital representatives. Furthermore, they felt that private doctors ask too many technical queries which they were unable to answer.

“We generally don’t have time to visit private doctors. Even if we visit, they don’t have time to talk to us. Even if they talk, they ask too many clinical questions, which we won’t be able to answer”- NTEP staff

Interaction of actors

Stakeholders felt that there were no clear communication channels or any coordination mechanism. Some private providers opined that they found PPSA good as they were knowing whom to contact for any support.

“PPSA was good. We knew whom to contact for any services. Now we don’t know whom to contact”- Private Provider (47, M)

Summary of challenges in engaging the private sector is provided in Table 1.

DISCUSSION

The current case study tried to document the approach and efforts taken by the Delhi state to partner with “for profit” formal private health care providers for ensuring quality TB care and documenting the challenges in engaging the private sector. Delhi has implemented a lot of PPP initiatives; however, when it comes to TB care and prevention, there appears to be a lack of public sector

Table 1: Summary of challenges in engaging the private sector for TB care and prevention in Delhi state

<i>Context in which the engagement occurs</i>	<i>Factors that define the architecture of engagement and its implementation</i>	<i>Factors related to actors implicated in the engagement and their actions</i>
Private sector – System factors • Fragmented nature • Diverse ranging from informal providers to corporate hospitals • Huge in numbers • For profit motive • Poor public health perspective • Lack of coordination among various departments within a hospital Poor interest to collaborate • Concerns over patient confidentiality and patient choices • Apprehensions of losing their clients • Concern regarding lack of autonomy for patient management • Doctors not interested in investing time for recording and reporting • Previous bad experiences related to the partnership	Public sector – System factors • Limited Financial Resources • Limited human resource and high workload of available human resources. • Bureaucratic and procedural hurdles related to financial transactions and inability to provide timely incentives/services Poor interest to engage private sector • Competing priority	• Lack of proper strategy and plan • Poor Governance structure • Lack of knowledge about the relevant programmatic aspects among the private sector providers • Lack of uniform understanding regarding private sector engagement among NTEP officials and staff • Poor sustainability beyond project duration • No platform for dialogue between sectors • No system for cohesion and coordination • No mechanism for knowledge sharing • Poor recognition and incentives for private providers • No trust-building efforts
		• Lack of capacity of staff to deal with the private sector • Engaging private sector perceived as a burden by the public system staff • “Authoritarian” approach of some NTEP officials led to inequality in public- private partnerships • Lack of sustained interaction

NTEP: National TB Elimination Program

stewardship. Quality of TB care indicators improved when a PPSA was engaged; however, it started declining when the engagement with the agency was stopped. There are limited proactive efforts from the public sector to engage the private sector. Private sector has concerns while partnering with the program and that needs to be addressed.

The pursuit of Universal Health Care requires Governments to take ownership of healthcare, irrespective of where a person seeks care. WHO Advisory Group on the Governance of the Private Sector for Universal Health Coverage also emphasizes a fundamental shift in the Governance behaviors to do business in a new way.^[21] Government need to steward a mixed health system, not just the public sector. For meaningful inclusion of private providers for health service delivery in mixed health systems, governments should focus on governance of the whole health system – both private and public – to ensure quality of care and financial protection for citizens, irrespective of where they seek care. Health systems governance includes strategic policy frameworks that are combined with effective oversight, coalition-building, provision of appropriate regulations and incentives, attention to system design, and accountability. In Delhi, there have been limited efforts in aligning the private sector with a common goal and making them commit to work to support the agenda.

A strategic policy direction for private sector engagement is essential. This will enable the stakeholders to execute their roles better. It should clearly define the goals and objectives of private sector engagement and describe the institutional arrangements for engagement and its monitoring. Health system decision makers need to be clear about “where they are going” to be able to make efficient use of finite resources.

Several models implemented in India that have successfully increased private case notifications were difficult to expand due to lesser emphasis on creating lasting partnerships.^[22,23] As the intermediary agency who interacts with the private sector withdraws, the model collapses. What Delhi has witnessed is also not different. Intermediary agencies or the projects need to carve out a sustainable model of intervention before their own exit plan. Emphasis in private sector engagement should be on creating sustainable partnerships. One such example is the System for TB Elimination in Private Sector (STEPS) model implemented in the cities of Kerala and Karnataka, where a PPSA supported its implementation.^[24] STEPS focused on organizing the private sector, influencing their behavior and making them accountable for ensuring STCI and even after the PPSA withdrew, the model did not collapse.^[25]

Private sector in health care is huge, fragmented, complex, and diverse and includes informal practitioners, chemists, laboratories, AYUSH practitioners, modern medicine practitioners, nursing homes and clinics, specialist hospitals, and big Corporate hospitals. NTEP or even the PPSA lacks the resources and capacity to reach out to the vast majority of the private providers. Organizing private health sector and strengthening the private health system might be helpful for ensuring uniform high standards of TB care. This may lead to a sustainable solution for quality-assured service delivery, leading to meeting the public health goals beyond TB. Organized industry bodies or hospital owners’ associations such as Association of Health Care Providers of India or Consortium of Accredited Healthcare Organizations or Hospital Board of the Indian Medical Association and insurance companies can be important stakeholders in the organization of the healthcare

sector. STEPS model tried to organize the private sector which made the effort of NTEP to engage with the private sector easier.

There were no institutional mechanisms for periodic interaction between the public health system and the private sector in Delhi. Mechanisms are essential for dialogs and coordination between the sectors. The Medical College Task Force is an example of a structured mechanism where NTEP interacts with all medical colleges. Similarly, a “Private Health Sector Task Force” or a consortium of private providers can help in organizing the private sector and facilitate coordination between the sectors.

The private sector has many concerns while engaging with the public sector. The concerns identified in the study are very similar to the results of many studies done in Delhi.^[18-20,26] A recent systematic review on challenges in engaging the private sector for TB care and prevention in India also reported similar challenges.^[27] Understanding the behavior of stakeholders and involving them from the planning phase is important before developing any strategy to ensure that it is successful.

NTEP staff also lack the capacity to deal with the private sector. Similar challenges have been documented previously.^[18-20,26,27] The state needs to undertake a behavior change strategy for the NTEP staff to have a uniform outlook with regard to private sector engagement. The capacity of program managers and peripheral staff needs to be built to deal with the private sector in a more efficient way.

One of the major limitations of the study is non-inclusion of informal health care provider’s perspectives. As the NTEP does not maintain a database and there is no formal mechanism of engagement of informal healthcare providers, we did not attempt to explore the same through this study. However, their engagement would be crucial if we need to minimize the delay. Directions for future research include co-creating and piloting mechanisms for engaging informal healthcare providers.

CONCLUSION

Challenges for private sector engagement for TB in Delhi span across the context in which the engagement occurs, factors related to the architecture of the engagement and factors related to the actors implicated in the engagement. Focus should also be on creating self-sustainable systems and lasting partnerships. Proactive efforts by the public sector are essential to engage the private sector with the aim of improving the population’s health outcomes.

AUTHORS CONTRIBUTIONS

PSR, MS conceived the study, PSR, MS, KM, KSS were involved in the design of the work, PS, MS acquired the data, PSR, MS, KM and KSS analyzed and interpreted the data. PSR drafted, KM edited, and MS and KSS reviewed the manuscript. All authors approve the final version of the manuscript and are accountable for the accuracy and integrity of the work.

ACKNOWLEDGMENT

None.

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