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A CROSS-SECTIONAL STUDY TO ASSESS THE PERSPECTIVE OF ALLOPATHIC PRIVATE PROVIDERS FOR THEIR ENGAGEMENT IN TUBERCULOSIS CASE NOTIFICATION UNDER RNTCP

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Abstract

Background: In India 80% of patient first seek private health sector for treatment. This necessitates their engagement in TB eradication programme. Private providers engagement remains a challenging area from decades. Appropriate activities are needed to engage large and unorganized private sector to achieve different milestone in TB case notification and identification.

Objective: Study to assess the perspective of allopathic private providers for their engagement in tuberculosis case notification under RNTCP.

Methods: Cross-sectional mixed method study among allopathic private providers in Palwal District of Haryana. Conveniently 187 allopathic private providers were approached to assess those factors which can increase their involvement in TB case notification. Private providers were interviewed to check their perspective on mandatory TB case notification

Results: This study found that providers are well aware about the RNTCP programme. Overall 59 percent of practitioners favoured the incentives and p-value of 0.014 shows incentive is one factors which can increase their involvement in the programme. Continuing Medical Education (55%) and Notification through hard copy (57%) are preferred ways for engagement. Lack of notification knowledge and complicate process are challenging issues for notification. It was observed stigma, government support and coordination, jurisdiction, and inadequate trainings are remained as barrier from years.

Conclusion: There is need to address these issues on priority. Capacity building and educational programmes are required to strengthen the private providers. Simplified notification process and addition of incentives can increase involvement from the private sector. Government support and coordination to private sector are required for achieving the aim of TB Free Ind

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INTRODUCTION

Tuberculosis (TB) is a global health challenge affecting approximately one-third of the world's population, with India accounting for a significant portion, around one-fifth (27 percent) of the global TB burden (WHO, 2018). In 2016, an estimated 2.8 million cases were reported, resulting in 450,000 TB-related deaths (Annabel Kanabus, 2018). Globally, 10 million people developed TB disease in 2017, with 1.3 million succumbing to it, and more than 1.6 million individuals diagnosed with multidrug-resistant TB (MDR-TB) (WHO, 2018). Recognizing the severity of the issue, the Government of India has emphasized the importance of containing the spread of TB to safeguard the nation's economic growth.

TB has been a longstanding public health concern due to its profound impact not only on physical health but also on the social, psychological, and economic well-being of affected individuals. The disease predominantly affects those in their most productive age group (Agarwal et al., 2005). A significant challenge in India's fight against TB is the delayed diagnosis of the disease. Crowded and poorly ventilated housing conditions in slums facilitate the rapid transmission of the infection from one individual to another, contributing to the rising number of cases.

The Revised National Tuberculosis Control Programme (RNTCP) is the primary tuberculosis control initiative in India. An important aspect of this program is its strong emphasis on engaging the private sector and extending RNTCP services to patients diagnosed and treated through it (Anand et al., 2017). In 2012, the Government of India took a significant step by making the notification of TB mandatory for both public and private health sectors (Mahasweta Satpati, 2017).

Despite the considerable success of the RNTCP program and the increase in TB notifications, India continues to bear the highest burden of TB in the world. This is primarily due to undiagnosed and improperly treated cases that fuel the epidemic, making TB an enormous public health challenge (Nair et al., 2010). Engaging the private sector is vital because it serves a substantial portion of the population for TB care. In India, around 80 percent of households prefer to seek care from the private sector (Anand et al., 2017). Despite the availability of free TB treatment in the public sector, many individuals initially turn to private providers for healthcare services.

To address this issue, the Government of India has developed the National Strategic Plan (NSP), which aims to systematically involve private healthcare providers in the Indian health system. The NSP sets ambitious targets, seeking to increase the annual number of TB cases notified by private providers from 0.2 to 2 million by 2020 and ultimately achieve TB elimination by 2025 (Central TB Division, Ministry of Health and Family Welfare, 2017).

TB notification has been on the rise, with reported cases increasing from both public and private healthcare sectors. According to NIKSHAY reporting, in 2018, approximately 21.5 lakhs cases were reported, signifying a notable 16 percent increase compared to the previous year (Dutta, 2019). This increase could be attributed to improved TB detection and reporting, possibly due to penalties imposed for non-reporting. However, to achieve the ambitious targets set for 2025, more significant efforts are required. While the private sector has shown progress in reporting, a more vigorous approach is needed from all stakeholders. This positive trend is a promising sign for India's goal of becoming TB-free in the future.

The treatment outcomes of TB patients in the private sector are now being reported under RNTCP. Over the years, there has been a growing trend in TB patient notifications from the private sector. Effectively engaging all healthcare providers, including private practitioners, chemists, laboratories, NGOs, and AYUSH practitioners, on a scale proportionate to their presence is critical to achieving Universal Access to TB Care. To engage private sector providers more effectively, a comprehensive package of interventions has been implemented through the Universal Access to TB Care (UATBC) project. However, reaching the ambitious target of notifying 2 million cases and eliminating TB by 2025 remains a challenging task that requires concerted efforts.

Rationale of study:

Half of the patients are treated in private sector therefore it necessitates the need to engage private providers in TB case notification. This study will provide some factors which can enhance the engagement of private providers in the TB case notification.

Research question:

What are the perspectives of allopathic private providers for their engagement in TB case notification under RNTCP to increase TB notification? What are those factors which can increase their engagement in TB notification and other services?

Objectives:

1. To assess the different perspective of Allopathic private providers for their engagement in TB case notification under RNTCP.
2. To explore factors (financial and non-financial incentives) which are required to facilitate private providers to ensure increased patient notification and providing treatment as per RNTCP guidelines.
3. To assess the perspective of allopathic private providers for increased TB notification and quality TB treatment and care as per RNTCP guidelines.

METHODOLOGY:

Study design: Cross-Sectional, Mixed method study (Quantitative followed by Qualitative Study

Study Setting: Study setting is Palwal. Palwal is a district in Haryana and has more than 10 lakh population. Since it's a rural area and number of private health facilities are available for population. So, it is important to understand the perception of private providers for TB case notification. As none of the study was done earlier, therefore, it will provide a hint on the PPs situation in Haryana.

Study Population: Study population was all Allopathic private providers of Palwal district who are treating TB Patients. Participants are:

- **Inclusion Criteria:** Allopathy Doctors, General Physician, Pulmonologist, Chest Physician, MBBS doctors treating TB, who would provide consent.
- **Exclusion Criteria:** Non-allopathy doctors, Non-consenting allopathic doctors, Allopathic doctors not treating TB cases.

Sample Size: Sample size was calculated by the absolute precision method. According to a study outcome sample size was calculated by taking the proportion as the percentage of TB notification from the private provider in India.

Proportion= 12 percent (WHO, 2015) Confidence interval: 95 percent Precision: Five percent
Non-response- 10 percent
Sample Size for the Study is n= 187

Sampling Method: The Purposive Sampling method was used. A list of private providers was made with the help of key informants and district IMA list. After taking the informed written consent data was collected from the respective PPs. A Sample of PPs was recruited both by inclusion and exclusion criteria. Information by these Allopathic private providers were collected according to the convenience and availability of doctors.

Study Tool:
Quantitative study: Semi-structured questionnaire was used. This questionnaire is developed by the researcher of the study and pre-tested for the validation of the questionnaire. The questionnaire contains the basic information of participants and other questions of TB related to study.

Qualitative study: For the Qualitative part of the study Thematic Guides was used. The guide contained the pre-designed topics on the TB program and other services which were relevant to the study.

Data Collection: Primary Data Collection was done by the researcher.
Quantitative study: Data was collected through the semi-structured, self-administered formbased questionnaire. This questionnaire was administered to allopathic private providers and each completed within 10-15 minutes after the prior consent of the participant. Information was entered in MS-Excel manually.

Qualitative study: Data was collected through 30-45-minute in-depth Interviews. Interviews were taken from 5 allopathic private providers until the saturation of information. These interview process carried out on the basis of thematic guide and recorded after the prior consent of the participant. Field notes were taken when required and data was collected manually.

Ethics Consideration
The study will adhere to strict guidelines that govern research involving human subjects from them. Silent features of the ethical consideration are:

i. Ethical Approval- This study was initiated after obtaining ethical approval from the institutional Ethics Committee of Indian Institute of Public Health, Delhi (IIPH-D).
ii. Informed Consent: Individual who participated in the research is voluntary. The Researcher informed participant about the nature of the study, the level of confidentiality is maintained. Every participant provided by the consent form before the beginning and told about their right to withdraw from the study at any point in time.
iii. Privacy and Confidentiality: Participants were informed about the confidentiality of their shared information. Privacy was maintained by using codes instead of names, data collected will be made available only to the researcher involved in the study or primary research institute. Data will be preserved for 5 years and then it will be destroyed.

a. Permission to record: Permission for the electronic recording of interviews were obtained in writing from the participants at the start of the interview. The Participant was informed that the recordings are only for the research purpose.

Data management and analysis:
Quantitative: Data entry was done in excel sheet and analysis was done by STATA (14.0 version). Data were summarized

in frequencies (percentage) and the chi-square test was used for comparison of two variables. p value of <0.05 was considered statistically significant.
Qualitative: The field audios were transcribed and coded manually by the principal researcher. Themes were created and results are drawn according to themes.

Results:
Quantitative:
The quantitative study survey included 187 private providers from district Palwal. Out of 187 PPs 112(60%) agreed to be part of the study and 75(40%) refused to provide their responses. Finally, the data was collected from N=112 respondents.

Table 1. Descriptive table showing the study variables

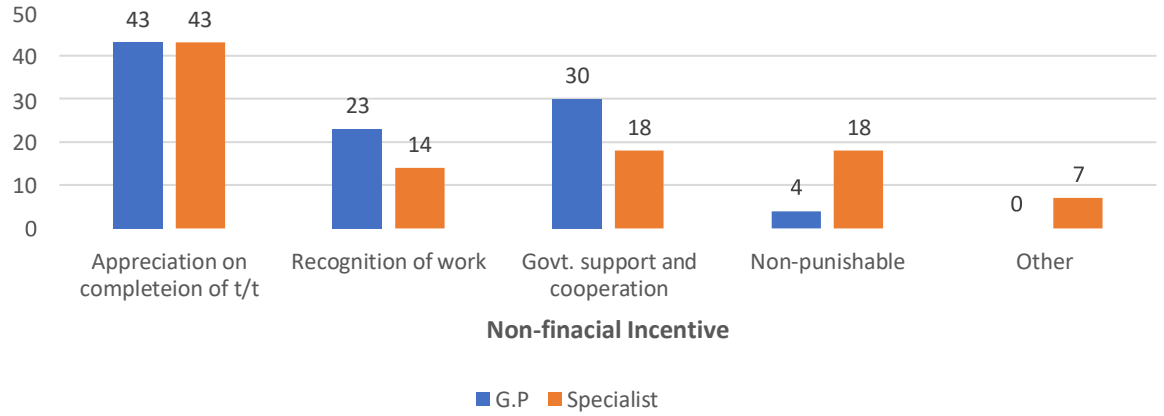
Study Variables	General Physician	Specialist N=52(%)	Total N=60(%) N=112
Gender			
Male	52(87)	42(81)	94
Female	8(13)	10(19)	18
Clinical experience (years)			
less than 10	13(22)	9(17)	22
10-20	19(32)	30(58)	49
20-30	9(15)	9(17)	18
30-40	12(20)	4(8)	16
40-50	7(12)	0(0)	7
Awareness of RNTCP			
Yes	60(54)	52(46)	112
Involved in RNTCP/DOTS			
Yes	22(37)	27(52)	49
No	38(63)	25(48)	63
Treat TB			
Yes	53(88)	50(96)	103
No	7(12)	2(4)	9
PPs Role			
Yes	56(93)	49(94)	105
No	4(7)	3(6)	7
Notification incentivized			
Yes	29(48)	37(71)	66
No	31(52)	15(29)	46
Type of Incentive			
Financial	3(10)	8(22)	11
Non-financial	15(52)	21(57)	36
Both	11(38)	8(22)	19
Ways of notification			
NIKSHAY	17(28)	15(29)	32
E-mail	6(10)	2(4)	8
Hard Copy	28(47)	23(44)	51
Telephonic	1(2)	0(0)	1
None	6(10)	3(6)	9

Others	2(3)	9(17)	11
Periodicity of TB notification			
Daily	0(0)	1(2)	1
Weekly	14(24)	12(23)	26
Monthly	41(68)	34(65)	75
Quarterly	5(8)	5(10)	10

Figure 1. Source of Information For RNTCP/DOTS programme Between Specialist and G.P

Better treatment	5(17)	11(30)	16
Increase motivation	9(31)	13(35)	22
Increase involvement	4(14)	7(19)	22
Increase notification and documentation	11(38)	4(11)	15
Help in eradication	0(0)	2(5)	2

Figure 2. Type of Non-financial Incentives suggested by PPs.



Reasons for Non-response

Total non-respondents are 75 (40%). From these 56 were males and 19 were females. The various reasons reported are busy (33%), Do not treat TB (32%), not interested (23%), meetings (9%) and three percent were absent.

Other Findings

1.

Notification Incentivized	Education	
	General Physician	Specialist
Yes	29(44)	37(56)
No	31(67)	15(33)
Pearson chi2= 5.9941	Pr= 0.014	

Table 3. Comparison in Education and Notification Incentivization with Pearson Chi2 p-value.

Out of 112, 37 specialists said yes for notification incentives from 52 whereas 29 general physicians said yes from 60. This means awareness and proper education regarding TB case notification can be a reason for notification incentives. P value from chi2 test was found to be significant which is <0.05. Therefore, it can state that there is a relation between education and notification incentivization

2.

New Notification way	Education	
	General Physician	Specialist
Hard Copy	37(58)	27(42)
E-mail	6(75)	2(25)
Directly to NIKSHAY	9(69)	4(31)
Mobile to NIKSHAY	8(30)	19(70)

Table 4. Comparison in Education and New ways for Notification

Out of 112, 27 specialists and 37 general physicians preferred for hard copy, 19 specialist and eight general physicians preferred mobile to NIKSHAY. Therefore, education can be a reason for the preferred notification.

QUALITATIVE

The Qualitative study includes five private practitioners and they were interviewed according to thematic guides. Their interviews were recorded and later data was transcribed. The results of present study have been presented in the following broad thematic areas:

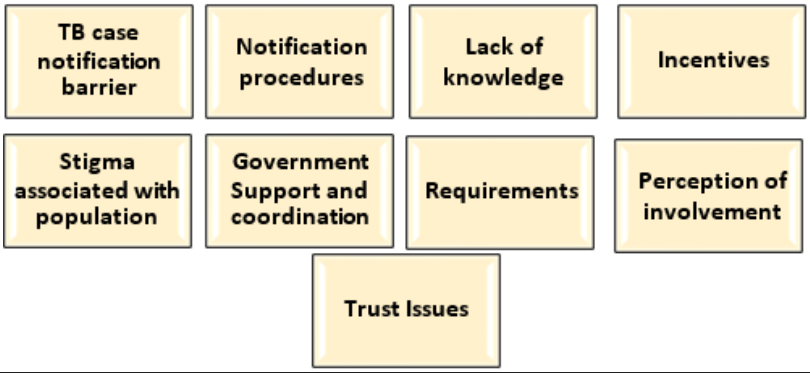


Figure 5. Identified Thematic areas of the study

TB notification barriers are faced due to the wrong interpretation of referrals meaning, complicated procedures, Lack of Knowledge and less trainings. Also, private providers do not get any benefits and support from the government. The don't have any trust and faith on government and therefore are less willing to support. Most of the private provider agreed on incentives and said they must get for their work. But on the other hand, raised their concern on the public stigma. Population is still unaware and reluctant for TB treatment. Practitioners are afraid of from the judicial order for treating TB patient with any information may lead to imprisonment. Therefore, many were reluctant to provide treatment to TB patient.

Discussion:

The involvement of private providers in TB case notification is facing trouble from many years. This study reveals that awareness of RNTCP/DOTS programme among private providers is 100 percent (N=112) but overall 44 percent of practitioners were involved in this programme. So, there is a need for more involvement from private sectors. A significant number of a private practitioner (55%) agreed that their involvement can be increased through more educational programmes and CMEs. They face a lack of knowledge and training in the programme which restricts their involvement. Earlier studies also stated that private providers have a lack of information and inadequate training which creates a barrier for involvement (Anand et al., 2017).

TB notification from PPs has again emerged as a conflict between the perception and practice gap. Some practitioners refer patients to public facilities for further treatment and they thought its means of notification. They do not know the difference between referral and notification (Sairu Philip, 2014). Many of the PPs feel that their duty is only to refer the patient to the public facilities. Sensitization programmes through trainings for importance of notification must be provided.

Notification is reported as complicated and time taking. Therefore, less motivation and interest are seen in private providers towards notification. A quantitative study revealed that overall 59 percent practitioner agreed for incentives because it will increase their motivation (24%), better treatment and management of cases (24%), and increase notification and documentation of cases (22%). Similar studies on TB notification also find that incentives could be a factor for increasing TB notification (Sairu Philip, 2014). It was observed that specialist (71%) were likely to want more incentive and p- value of 0.014 (highly significant) provides evidence that incentives was an important factor for increasing TB notification.

The Notification process remains as complex way and a barrier for TB notification in the private sector (Yeole et al., 2015). NIKSHAY is the current way of TB notification for public and private both sectors. But it was found that only 37 percent are using NIKSHAY portal and the major source for notifying patient was Hard copies (45%). Majority of practitioner did not had knowledge about the portal and about its operating mechanism while some faces problem in filling patient details in NIKSHAY. Fifty eight percent of general physician suggested notification should be through hard copies in comparison

to the specialist (42%). Our finding suggests that there was a difference between the knowledge of general physician and specialist. Overall 57 percent of practitioners want only one way of notification as hard copy because it is more convenient and easier to provide. NIKSHAY portal is yet unrecognized system in the private sectors, so, there is need to popularize the portal as the notification tool (Mahasweta Satpati, 2017).

A new concern was seen in the private sector against jurisdiction. TB comes under judicial law in which people were liable for punishment if they treat a patient without informing the government Private providers were reluctant in providing treatment to the patient because they did not want to face any problem and refuse to treat patients.

Support and coordination by the government in the private sector is missing. There is a need for building a supportive and trustworthy relationship in the private sector by government officials. They should not have a pre-judgemental mind for private practitioners (Mahasweta Satpati, 2017). Timely and proper dissemination of information about updates in programmes was highly required. Treatment regimens were continuously an issue between the two sectors (Udwadia et al., 2010). Lack of diagnostic facilities in government sector results into missing out of patients. Stronger advocacy for treatment regimens and new diagnostic facilities are required.

Also, there is lack of trust on government because neither private practitioner neither patients are getting any earlier proposed benefits of the programme. Which again creates trust issues between PPs and their patients. This clearly shows weak administration within programme and hence, urgent requirement to strengthen the administrative power for smooth circulation of benefits and services for more effective results to programme.

Private providers are lack of accountability and responsibility towards the programme. RNTCP being a government driven programme PPs do not feel any engagement because they are not included during the programme formation and policy planning so they have lack of ownership for the TB programme. Other studies are also stated the evidences against it (Anand et al., 2017). Recognizing the role of PPs and understanding their perspective they can be engaged in the policy planning which will provide more vision to improve and enhance more area to involve private providers.

Beyond the private sectors, social stigma is also prevalent in the population which is also a point of concern. People were completely unaware of the disease and its treatment. HIV testing is an addition to the stigma and resistance to treatment. Number of cases remain undiagnosed and untreated therefore TB remains as highest burden disease. There is a call for more awareness programme for the public to make them understand about diseases, its treatment, and its benefits.

Private providers are missing the real purpose of notifications and have several perceptions around it. Notification should be taken as a tool for eradicating and making India TB free. Appreciation, recognition of work, govt support and cooperation, and financial amounts are clearly explored factors in the study which will increase the private provider involvement in TB notification programme.

Earlier studies also showed the same results like lack of knowledge about the TB notification, existence of complicated ways for notification, lack of support and coordination from the government, stigma (Nagaraja et al., 2014) (Salve et al., 2016). More efforts are required for strengthening the private providers and solving these problems otherwise this will remain as a barrier against TB programmes.

Limitation of the Study:
The study has also been affected by social desirability bias and non-response bias. Considering that non-compliance to TB case notification can bring in legal challenges, many of the PPs refused to respond to the questions.

Conclusion:
Public sector cannot treat the TB patients alone therefore, involvement of private sector has prioritized by Government of India. But the issues with the involvement remains unsolved from the decades. There is urgent need to provide the educational and capacity building programmes to enhance the knowledge of private practitioners. Procedures for notification can be revised and one simplest way can be suggested as means for notification with the proper trainings to PPs. Addition of incentives will be a motivating factor to engage the private sector. Proper dissemination of information and involvement of private practitioners at policy formation is needed for enhancing their roles and effective working. The aim of "TB Free India" is a long way to go but the government support and coordination is the most important key to achieve the milestone.

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