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Study of Barriers in Obtaining Benefits of Nikshay Poshana Yojana in Notified TB patients in Five Districts of Telangana State

Sumalata C[1*], Rajesham A[2], Subba Rao V[3], Sahithi[4], Kalyan Chakravarthy[5], Joshi Rao G[6], Madhu Sree[7] and Dinesh L[8]

*[*1]Epidemiologist, State TB Training and Demonstration Centre, Hyderabad, Telangana, India*

[2]Director, STDC, India

[3]DTCO, Khammam, India

[4]PO-TB, Suryapet, India

[5]DTCO, Nalgonda, India

[6]DPC, Wanaparthy India

[7]DPC, Janagaon, India

[8]PFMS Consultant, India

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ABSTRACT

Introduction: Nikshay Poshana Yojana (NPY) is scheme developed by Government of India for all notified Tuberculosis (TB) patients towards nutrition and the amount is credited in installments of Rs. 500/- every month in their respective bank accounts till course completion. The implementation of scheme has operational obstacles at various levels which needs to be studied.

Aims & Objectives: To identify the barriers and identifying sustainable solutions in obtaining Nikshay Poshana Yojana for notified TB patient in five districts of Telangana State.

Methodology: There was a structured interview questionnaire to notified TB patients (public and private) from Khammam, Nalgonda, Wananparthy, Suryapet and Janagaon districts of Telangana from April 2019 to June 2019.

Results: A structured questionnaire was developed based on demographics, knowledge about disease, diagnosis of TB, socio-economic impacts, diagnosis of TB, knowledge of NPY, receipt of first incentive. The inputs were received from 210 cases (134 public and 76 private). There was at least one earning member in family in 70% cases. The information of NPY was known to patients mostly from field health staff in 84% cases. There were valid bank accounts for 92% patients (195 out of 210), but details were given by 80% patients at the time of diagnosis. The first installment was received within a month for 11%. The amount credited in bank account were Rs. 500/- (50% cases) and Rs. 1000/- (39% cases). NPY in Bank deposit was comfortable in 32% of cases rather preferred voucher or ration of goods. Immediate seeding of bank details in Nikshay, an online portal for TB and processing in Public Finance Management System at earliest were possible solutions obtained. Certain administrative decisions involving general health staff helped to improve Nikshay Poshana Yojana to notified TB patients.

Conclusion: Knowledge of NPY, prompt collection of bank details and seeding data in Nikshay resolves barriers and improves adherence and outcomes.

Keywords: NPY, Incentive, Obstacles, DBT

INTRODUCTION

Nikshay Poshan Yojana introduced by government of India and it started to implement from April 2018. The amount of Rs. 500/- (Five hundred rupees) is credited in bank account of notified TB patient in the Direct Beneficiary transfer mode. This scheme was intended to improve adherence to treatment and give better outcomes. Many TB patients suffered from loss of pay during initial period and even may not be able attend minimum daily chores. If the patient is the only earning person, socio-economic impacts were more severe. This scheme helps to prevent treatment interruption and improve treatment adherence.

The scheme implementation had many challenges at different levels. Despite much awareness, prompt testing for TB and diagnosis is delayed. Visiting to various health providers

Corresponding author: Sumalata C, Epidemiologist, State TB Training and Demonstration Center, Irramnuma, Hyderabad, Telangana, India 500038, Tel: 09866469294; Email: drsumachittiboyina@gmail.com

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before diagnosis not only delays initiation of treatment but also incurs lot of expenditure.

An overall study is essential to understand the gaps in expenditure in getting TB diagnosis, treatment initiation, having bank details getting DBT for Nikshay Poshana Yojana.

METHODOLOGY

Five districts of Telangana were selected for Study - Khammam, Nalgonda, Suryapet, Wanaparthy and Janagaon. These districts were selected after getting data of TB notification of both public and private of previous year. A nodal person from each district who are actually part of National Tb program staff were selected for data collection from each of these districts.

A structured questionnaire comprising of basic demographics, knowledge of TB, social status, basis of diagnosis, duration of symptoms, knowledge about Nikshay Poshana Yojana, and inputs from patients were received. All the participants were questioned by identified nodal person coming to DOT center or peripheral health institution covering all sub district units of districts.

The participants were well informed about the study and valid informed consent was obtained. The interview for each participant took approximately 15-20 min.

The questionnaires were collected and analyzed qualitatively with maximum number of responses in different heads.

RESULTS

A total of 210 patients were interviewed from all the 5 districts of Nalgonda, Khammam, Janagaon, Suryapet and Wanaparthy. Of them 142(68%) were male and 68(32%) were female. The public cases interviewed were 134 and private cases were 76. Most of the patients suffered from disease before diagnosis of TB was made ranging from 7-65 days **(Table 1)**.

Table 1. The knowledge of TB before diagnosis was made.

		Did the patient know about Tuberculosis disease before he/she was diagnosed with TB? (Yes/No)				
		NO		YES		
		PRIVATE	PUBLIC	PRIVATE	PUBLIC	Total
DISTRICT	JANGAON	21	15	0	4	40
	KHAMMAM	1	19	0	3	23
	NALGONDA	3	14	6	22	45
	SURYAPET	17	25	0	6	48
	WANAPARTHY	24	22	4	4	54
	Total	66	95	10	39	210

The knowledge about TB disease was known in only 39 cases (18.6%) in public sector patients and in 10(4.8%) cases in private sector patients.

Number of earning members in family was also considered as an indicator to understand socioeconomic constraints **(Table 2, Figures 1 and 2)**.

In one private cases from Janagaon, there were no earning members from the family **(Tables 3-5)**.

A structured questionnaire was developed based on demographics, knowledge about disease, diagnosis of TB, socio-economic impacts, diagnosis of TB, knowledge of NPY, receipt of first incentive and inputs from 210 cases (134 public and 76 private). There was only one earning member in family in 70% cases. The information of NPY was known to patients from field health staff in 84% cases. There were valid bank accounts for 92% patients (195 out of 210), but details were given by 80% patients at the time of diagnosis. The first installment was received within a month for 11%. The amount credited in bank account were Rs.500/- (50% cases) and Rs.1000/- (39% cases). NPY in bank deposit was

comfortable in 32% of cases rather preferred voucher or ration of goods.

Table 2. The earning members of the family.

District	PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC	
JANGAON	13	3	8	14	0	1	39
KHAMMAM	1	18	0	4	0	0	23
NALGONDA	7	32	0	4	2	0	45
SURYAPET	12	25	5	6	0	0	48
WANAPARTHY	21	15	6	10	1	1	54
	54	93	19	38	3	2	209

Table 3. Showing basis of diagnosis for TB.

		Basis of Diagnosis				
		CLINICAL		MICROBIOLOGICAL		
		PRIVATE	PUBLIC	PRIVATE	PUBLIC	
DISTRICT	JANGAON	11	2	10	17	40
	KHAMMAM	1	9	0	13	23
	NALGONDA	2	7	7	29	45
	SURYAPET	17	15	0	16	48
	WANAPARTHY	25	8	3	18	54
		56	41	20	93	210

DISCUSSION

Nikshay Poshana Yojana is scheme started by Government of India, where all notified TB patients will be getting Rs.500 (five hundred only) per month as nutritional support. The scheme not only benefits the patient from nutrition but also improves treatment adherence, eliminating catastrophic expenditures thus improving outcomes of TB patients [1].

The food insecurity in TB patients can hamper the outcome of patient [2]. To overcome this issue, Government

Table 4. Knowledge of NPY to TB patients.

Does the patient know that Government of India is offering an incentive by NPY (Nikshay Poshana Yojana) (Yes/No?)						
		NO		**YES**		
		PRIVATE	**PUBLIC**	**PRIVATE**	**PUBLIC**	
DISTRICT	JANGAON	0	1	21	18	40
	KHAMMAM	0	5	1	17	23
	NALGONDA	2	0	7	36	45
	SURYAPET	0	2	17	29	48
	WANAPARTHY	0	0	28	26	54
		2	8	74	126	210

Table 5. Information of NPY to patients.

DISTRICT	**HEALTH STAFF**		**MEDICAL DOCTOR**		**OTHER**		**WORD OF MOUTH**	
	PRIVATE	**PUBLIC**	**PRIVATE**	**PUBLIC**	**PRIVATE**	**PUBLIC**	**PUBLIC**	
JANGAON	5	19	14	0	2	0	0	40
KHAMMAM	1	11	0	6	0	5	0	23
NALGONDA	9	34	0	1	0	0	1	45
SURYAPET	0	25	5	6	12	0	0	48
WANAPARTHY	23	24	5	2	0	0	0	54
	38	113	24	15	14	5	1	210

implemented this scheme to all patients irrespective of their drug resistance status and care they are seeking from.

Most of the times there are visits to multiple health facilities before actual diagnosis can be made. In our study, the time taken for diagnosing TB was ranging from 15 days to 65 days. This was even more high in diagnosing extra pulmonary TB cases. In our study there was one extra pulmonary TB case which took four months for diagnosis due to reasons like availability of radiological tests, other supportive evidences and lacking enough money for spending on travel and getting the adequate investigations done. This patient experienced higher direct costs due to atypical presenting symptoms similar to the study by Narayana et al. [3].

Qualitative interviews in our study revealed that a lack of awareness of TB care service available in the public sector combined with a lack of awareness about TB symptoms, in the underlying milieu of general preference for private facility, the factors including timings of service availability, perception of quality, etc., could have led to this phenomenon

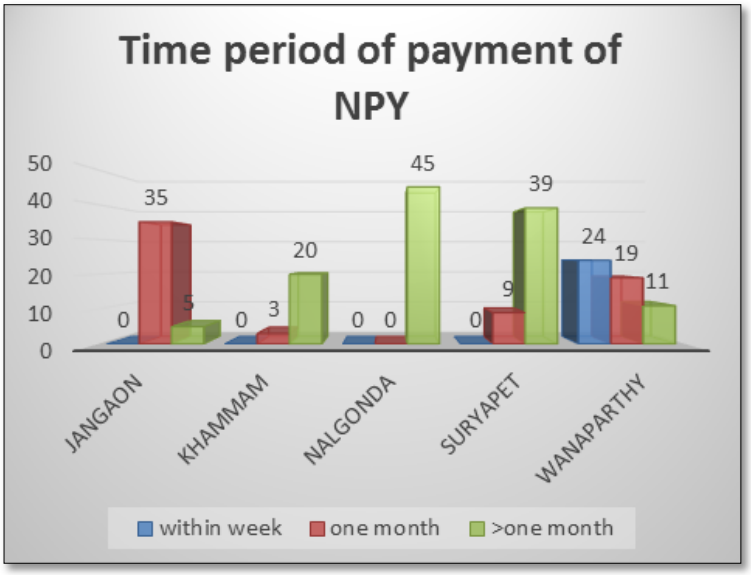

Figure 1. Bar graphs showing the time taken for first payment of NPY.

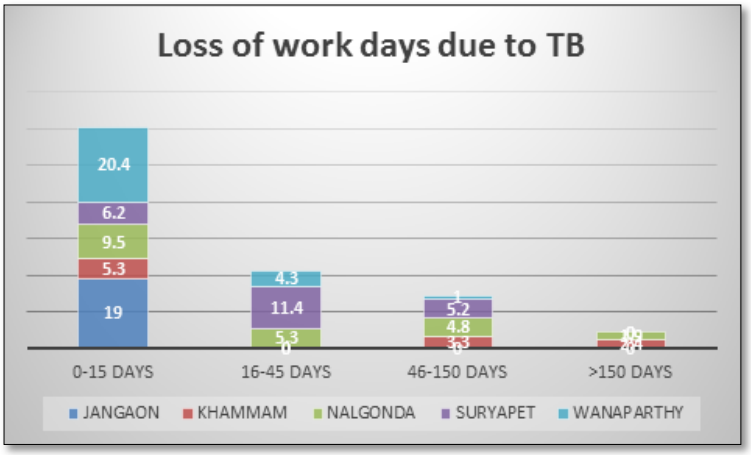

Figure 2. Bar diagram showing number of loss of working days due to TB disease.

of a higher proportion of participants seeking private-sector care at first instance. Further, non-adherence to the TB diagnostic algorithm is common among private practitioners.

Unnecessary investigations and symptomatic treatment could have increased the direct costs on TB care [4].

The study captured the data regarding number of earning individuals in that particular household. There was only family where there was no earning member in the family.

A study conducted by Faudy et al. examined fourteen patient variables were examined as potential determinants of catastrophic total costs: (i) district (urban, suburban, rural), (ii) household income (poor and non-poor), (iii) sex, (iv) age group, (v) educational level (primary school as "low," junior school and senior high school as "intermediate"; and college and university as "high"), (vi) being a family breadwinner, (vii) having had an income-earning job before diagnosis, (viii) having insurance before being diagnosed, (ix) having had previous TB treatment, (x) HIV status, (xi) hospitalization for the current TB treatment, (xii) first contact with the facility after having symptoms of TB, (xiii) taking Food supplementation, and (xiv) experiencing adverse effects [5].

The WHO has introduced a new term "catastrophic total costs" as the TB-specific indicator that differs in essence from CHE (Catastrophic Health Expenditure). CHE is defined as the share of the population spending more than a given threshold and focuses on direct cash spending or out-of-pocket (OOP) payments made by household to improve or restore health of household members. The TB-specific indicator of "catastrophic total costs" incorporates direct medical costs, direct non-medical costs and overall indirect costs and helps to capture the economic burden specific for TB. It is therefore crucial for TB elimination programs to

identify the main cost drivers, monitor financial hardship, and establish which further health and social policy measures should be taken [5,6].

The above-mentioned catastrophic cost in our study was as high as Sixty thousand rupees in one case who seek care in private sector initially for diagnosis of extra pulmonary TB.

Knowledge of Nishkay Poshana Yovanna to all diagnosed TB patients were seen mainly through the peripheral health workers and medical personnel. For addressing this issue in study preparation of pamphlets and some IEC to be displayed at peripheral health centers, private hospitals and sub centers were few solutions sought.

Only 11% of participants in the study received incentive in first month of their disease. Rest of the participants received the first incentive as late as 4 months. As initial days of treatment are crucial, there will loss of work, no payments from jobs, loss of work hours, expenditure on medical test for addressing adverse drug reactions will be very high. If the first incentive is delayed, the expenditure might rise and in turn lead to treatment interruption.

Most of the participants when interviewed were desiring the incentive in form of goods and cash by hand. Many studies suggested for incentives during the treatment of Tuberculosis. Sripad et al. studied on monetary incentive program in Ecuador which directly addresses treatment barriers, psychological distress and side effects [7].

Barriers for effective implementation of Niche Posh Ana Yovanna are identified at various levels in our study:

1. Awareness about schemes
2. Having validated bank accounts
3. Seeding of Bank accounts into TB Surveillance System i.e. NIKSHAY.
4. Public Finance Management system and Validation of Accounts, Time Taken by Different banks
5. Administrative- DTCO to prioritize the NPY processes, displaying appropriate IEC material, collection of bank account while notifying disease in NIKSHAY.

1. Awareness about Schemes

This can be done by displaying IEC material on Niche Poshana Yojana at all places where TB services are given. The material is preferred in Local Language. The IEC should include displays of TB symptoms, diagnostics available along with DBT services. The Pamphlets can be handed over to patients at the time of notification, enabling collection and seeding of Bank details in NIKSHAY.

2. Having Validated Bank Accounts

The important challenge faced was patients having valid bank account and seeding them in Nikshay [8]. Detailed information should be taken at the time of notification about validated bank accounts. This was many a times hampered due to confidentiality and trust related issues especially in private sector. If the notified TB patient does not hold a valid bank account, field staff should handhold in reactivating accounts or opening new bank accounts.

For the same purpose, the District TB Officers should contact and take support from lead bank managers in their districts. In doing such way, accounts can be opened or reactivated.

3. Seeding of Bank accounts into NIKSHAY

The field staff who are enrolling patient details into NIKSHAY should also enter Valid Bank account at the time notification, thus decreasing the delay in DBT process.

In our study we noticed that time between notification of TB and seeding of bank details into Nikshay ranges from 15 days to 25 days. This process actually hampered the process of DBT in initial months. The initial period adherence is crucial one as most of the patients are sick and cannot cope with the ongoing expenses. If there is delay in seeding bank data into Nikshay, the beneficiary getting benefit will also be delayed, not serving the actual purpose of Nikshay poshan Yojana.

4. Public Finance Management system and Validation of Accounts, Time Taken by Different banks

Validation of active bank account is different for different banks. It has been observed that nationalized banks take lesser time validation, while other banks like co-operative banks take more time.

Torrens *et al.* also reported one-fifth of the patients receiving cash transfers only after the end of treatment [9].

5. Administrative- DTCO to prioritize the NPY processes, displaying appropriate IEC material, collection of bank account while notifying disease in NIKSHAY

a) While pushing bulk patients' benefits to PFMS, it was unable to generate single Print Payment Advice (PPA). When multiple PPAs are generated, the signature from administrator is another challenge. If PPA are not signature in time, the PPA s may lapse which will delay the payment to beneficiary.

b) The duplicate entries in Nikshay will not be filtered after a bank account is seeded.

c) For example, one case transferred from one TU to another TU automatically that case is adding to that TU without any notification.

d) If the first installment generated with Rs.1000 and from second installment to sixth installment generated with Rs. 500 every month, the cumulative amount will be Rs. 3500. There was no clarity whether to have sixth installment.

e) Nikshay will calculate 28 days as one installment then if outcome delay 10 days than new benefit will generate in this case we should push/remove this benefit.

f) Private patients were not ready to share details, in this case, what is the solution, due to this more no of patient's benefits are reflecting in pending (DBT pending list).

Our study correlated with many findings conducted in a study by Patel et al. [1] in Western India at Vadodara.

After the initial part of study few solutions were suggested, to overcome barriers at various levels **(Table 6)**.

Table 6. Suggested solutions to overcome barriers at various levels.

S. No	Barriers identified	Solutions identified
1	Improve awareness of TB and Nikshay Poshana Yojana	Distributing Pamphlets Creating awareness by displaying TB information material in all Public and Private institutions Community level programs conducted in Khammam where the awareness With Patient TB ID card was given information on TB.
2	No. of patients Having No bank accounts	DTCO made the line list of all patients having no bank account. Programme mangers spoke to Lead Bank managers in district and enhanced opening of New bank account and reactivate existing inactivated bank accounts.
3	Timely seeding of Bank details in Nikshay	All field health staff are instructed to collect the bank account at the time of notification and seed them into Nikshay in real time. This above activity is closely monitored by program managers so that DBT processing is hastened.
4	Delayed Reporting of Private cases to authorities	The State has decided to take support of NGO in linking the private providers to public. This will not only benefit the patient seeking care in private sector but also will boost the confidence in private providers on health systems.
5	Duplicates entry in Nikshay can lead to double payment for same beneficiary	There is option of duplicate register in Nikshay which shall give the list of repeated entries. Program managers can scrutinize the list and ensure correct payment to the actual beneficiary.
6	Delay in Validation of bank accounts by PFMS in Nikshay. Lack of having Nikshay ID in PFMS generated list initially	Manual preparation of beneficiaries list Updates in Nikshay portal actually linked PFMS and Nikshay
7	The number of Print payment advices needed to be signature with the district level administrator	The number of PPAs generated in a day will be divided to ease the signatures with Administrators. The Digital signature and central level payment in pipeline.
8	Other issues in PFMS like 28-day payment for Nikshay treatment.	Field staff are instructed to update all outcomes in real time.

As observed in other studies, cash incentive in form of DBT towards nutrition is a very useful to adhering to treatment giving better outcomes. This scheme is transparent as the amount is credited in bank account minimizing wrong practices. The scheme has to be we'll monitored to enable beneficiaries receive benefits in real time which would really help them to complete the treatment in time.

CONCLUSION

Getting bank details of all notified TB patients and seeding them in Niche in real time helps to minimize the delay in initial payment which is crucial. The software related to Niche and PFMS should be streamlined so that the implementation of scheme goes smoothly and fruitfully. Digital signatures and centralized payments are to be advocated from superior officials decreasing delay in payments. The NGOs and Professional bodies like IMA need to work together to enable the private patients get the NPY benefit.

RECOMMENDATIONS

1. PFMS should be able to validate the inactivated accounts.
2. More synchronization is needed in Niche and PFMS benefitting the notified TB patient.

3. More awareness and display of IEC material is needed for spreading about TB and incentive schemes related to TB

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