

## Original Research Article

# Utilization of Nikshay Poshan Yojna in tuberculosis patients in two tuberculosis units of North India

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### ABSTRACT

**Background:** Nikshay Poshan Yojana (NPY) was launched in 2018 aiming to provide nutritional incentive of INR 500 per month to all tuberculosis (TB) patients till they complete their treatment. Aim of present study is to determine the number (proportion) of patients being treated for tuberculosis who received the benefits of NPY and to explore the ways incentives were utilized by the patients.

**Methods:** This cross-sectional study was conducted in two tuberculosis units of North India from June 2022 to Dec 2022. All newly diagnosed TB patients registered and receiving treatment in these two Units were included in the study. Defaulters, relapse, failure and multidrug-resistant TB cases were excluded. Data was collected from Nikshay portal. All the patients were contacted telephonically to know whether the incentive was utilized for nutrition.

**Results:** Total 189 patients were included in the study. All patients received benefit under NPY. But only 26 (13.7%) received incentive in scheduled time. Out of 189 patients 56 refused to give telephonic interview about the utilization of incentives. Out of 133 patients who gave interview 85 (64%) patients utilized incentive entirely for nutrition.

**Conclusions:** Government should assure timely availability of funds so that patients can be benefitted timely particularly during initial months of their treatment. Also, there is a need of counselling of patients receiving treatment for tuberculosis about the importance of nutrition in their treatment so that they can utilize financial incentive for nutrition.

**Keywords:** Direct benefit transfer, Tuberculosis, Nutrition, Financial incentive

### INTRODUCTION

Tuberculosis (TB) is an important cause of mortality and morbidity in many developing countries.<sup>1</sup>As per Global TB report 2018, there were an estimated 10 million patients with TB in 2017 and 1.3 million died due to it. The estimated incidence of TB in India was approximately 2.8 million with 1400 deaths per day.<sup>2</sup> Burden of tuberculosis in India is very high. Nutrition has very important role in both etiology and outcome of tuberculosis. Under nutrition attributes to 55% of TB incidence in India which is much greater than those of

other risk factors like smoking (11%), diabetes (9%) and Human Immunodeficiency Virus (HIV) (5%).<sup>3,4</sup> In 2013, World Health Organization (WHO) recommended nutritional support as an integral part of TB management.<sup>5</sup> Even, the End TB strategy endorses nutritional support to TB patients as an important component of patient-centered care.<sup>6</sup> Nutritional interventions have shown to improve outcomes of TB.<sup>7-9,11</sup> The Government of India (GoI) has made a strong commitment to end TB by 2025, which would require concerted efforts and holistic management of factors influencing the prevention and control of TB.<sup>12</sup>

Government of India (GoI) has launched a scheme called "Nikshay Poshan Yojana" (NPY) which provides monthly financial incentive to improve the nutritional practices of TB patients.<sup>13</sup> The scheme was launched in April 2018 and it aims to provide INR 500 per month to all the TB patients till they complete their treatment. The incentive is debited directly to their Aadhar linked bank accounts through Direct Benefit Transfer (DBT).<sup>13</sup> Aim of present study is to determine the number (proportion) of patients being treated for tuberculosis who received the benefits of NPY and to explore the ways incentives were utilized by the patients.

## METHODS

This cross-sectional study was conducted in Two Tuberculosis Units of District Reasi located in District Hospital Reasi and Sub District Hospital Katra respectively of J and K State. All newly diagnosed TB patients registered and receiving treatment in these two Units from June 2022 to December 2022 were included in the study. Defaulters, relapse, failure and multidrug-resistant TB (MDR TB) cases were excluded. Data was collected from NIKSHAY portal which has been launched by Government of India to create database of all TB patients and to use this database for monitoring and research purposes. Data collected was demographic profile, type of tuberculosis for which patients were registered i.e., pulmonary or extra pulmonary, details about incentive which they got under NPY. All the patients were also contacted telephonically each month to know whether they got incentive and whether the incentive was utilized for nutrition. Structured questionnaires were designed to collect the information on utilization of NPY from patients who had received incentives through DBT.

Process involved in delivering NPY through DBT-Benefit is given to the beneficiaries as per DBT Manual for National Tuberculosis Elimination Programme issued by Central TB Division, MoHFW, Government of India 2020.<sup>13</sup> Senior TB supervisors (STS), Medical officer TB control (MO-TC) and District TB Officer (DTO) are involved in the process of identifying, validating and disbursing the financial incentive through DBT. All patients diagnosed with TB are asked to furnish the bank details which includes the account holders' name, account number, IFSC code and aadhaar number for authentication. The STS ensures the notification of TB patients in NIKSHAY with complete address, mobile number, aadhaar number and bank details. If beneficiary does not possess aadhaar, STS facilitates beneficiary for Aadhaar enrolment at Aadhaar enrolment centre located in the respective block or taluka or tehsil at a convenient location to the beneficiary. However, the beneficiary can't be denied benefit in the absence of an aadhaar card. If a beneficiary does not have a bank account in his/her

own name, he/she may be linked to an account of one of his/her family members. A written consent/ authorisation must be taken from the beneficiary in such cases. The STS along with data entry operator (DEO) at district TB centre check for completeness of the details provided by the beneficiaries and the validated list is submitted to the MO-TC. The MO-TC ensures timely submission of check list of beneficiaries from STS/health staff through DEO. The MO-TC then submits the validated list to the DTO for further processing. The DTO ensures that all the MO-TCs of the district are submitting the validated beneficiaries list on time. At the time of notification, a benefit of Rs.1000 is created as an advance. The second benefit gets generated on completion of 56 days from the date of initiation of treatment, then the subsequent benefit is created at Rs. 500 for every month of treatment at midnight of 28 days from the date of benefit generation for previous incentive. The DTO is responsible for training of the health staff on DBT and ensuring regular electronic payment (e-payment) using DBT through Public Financial Management System (PFMS) of the programme. The State TB Officer is responsible for providing necessary directives, plan, review and ensure timely budget or funds for financial support of TB patients.

## Statistical analysis

The presentation of categorical variables was done in number and percentages. The quantitative data were presented as means $\pm$ SD and as median with 25<sup>th</sup> and 75<sup>th</sup> percentiles. The Data entry was done in Microsoft Excel Spreadsheet and the final analysis was done with the use of Statistical Package for Social Sciences (SPSS) software, IBM manufacturer, Chicago, USA , ver. 25.0.

## RESULTS

Total 189 patients were included in the study, 125 (66.13%) males and 64 (33.86%) females. Number of cases with pulmonary tuberculosis were 130 (68.8%) and number of extra pulmonary TB cases were 59 (31.2%). Majority of the patients belonged to age group 15-44 years i.e., 123 (65%). 2 (1.05%) patients were  $\leq$ 15 yrs of age, 45 (23.8%) belong to 45 to 74 years age group and 19 (10.05%) belong to  $\geq$ 75 years age group as shown in Table 1.

Table 2 shows number of patient registered each month during the study period and details of incentive received. All patients received benefit under NPY. But only 26 (13.7%) received incentive in scheduled time. None of the patients got incentive on monthly basis. Out of 189 patients 56 refused to give telephonic interview about the utilization of incentives. Out of 133 patients who gave interview on 85 (64%) patients utilized incentive entirely for nutrition.

**Table 1: Distribution of demographic characteristics of study subjects.**

Demographic characteristics	Frequency	Percentage
<b>Age(years)</b>		
<15	1	0.93
15-44	64	59.81
45-74	32	29.91
≥75	10	9.35
<b>Mean±SD</b>	42.08±19.8	
<b>Median (25th-75th percentile)</b>	37 (25-56)	
<b>Range</b>	14-96	
<b>Gender</b>		
Female	38	35.51
Male	69	64.49

**Table 2: Number of patients registered and details of nutritional incentive under NPY.**

Month	Number of patients registered	Incentive received (INR) and month of treatment when incentive was given	Treatment status at the end of study
<b>June</b>	23	1000 in 3 <sup>rd</sup> month and 2000 in 6 <sup>th</sup> month	Completed
<b>July</b>	27	1000 in 2 <sup>nd</sup> month and 2000 in 6 <sup>th</sup> month	Completed
<b>August</b>	26	2500 in 5 <sup>th</sup> month	Ongoing
<b>September</b>	31	2000 in 4 <sup>th</sup> month	Ongoing
<b>October</b>	29	1500 in 3 <sup>rd</sup> month	Ongoing
<b>November</b>	27	1000 in 2 <sup>nd</sup> month	Ongoing
<b>December</b>	26	1000 in 1 <sup>st</sup> month	Ongoing

## DISCUSSION

In the present study all the patients registered under NIKSHAY during the study period received incentive. In study conducted by Kumar et al, 52.6% of patients received incentives.<sup>14</sup> Study conducted by Begam et al showed that only 22% patients received incentive.<sup>15</sup> In our study, only the patients registered in December received incentive in 1<sup>st</sup> month of treatment. Rest of the patients instead of receiving the incentive on monthly basis received it in two installments and that too during the later period of treatment. This is not in line with schedule of NPY where patients are supposed to get incentive on monthly basis with 1<sup>st</sup> incentive to be paid on notification of the case. The reason for this delay in our study was lack of timely availability of funds. Due to delay in receiving payment, patients could not utilize it for nutrition support during initial months of treatment, defeating the purpose of the scheme. Further, nutritional support will be more beneficial if received in early stages of treatment. A similar study was conducted in two DOTS center of Delhi in 2020 by Kumar et al.<sup>14</sup> In their study also none of the patient get timely incentive under NPY.<sup>14</sup> The reasons for delay in their study were non availability of bank accounts and unlinked bank accounts with aadhaar. All patients in our study provided their bank details without any delay but lack of timely availability of funds was the problem in our study. Further only 64% of patients who gave interview in our study utilized incentive entirely for nutrition. The possible reason for this is receiving incentives in the later period of treatment, not getting money on monthly basis and unawareness about the value of nutritional support in

TB treatment. In study conducted by Begam et al, 76% of patients who received incentive utilized it in nutritional purposes.<sup>15</sup> There is need of proper counseling of patients receiving treatment of tuberculosis about the importance of nutrition in their treatment.

### Limitations

Present study was conducted only in two tuberculosis units. Larger studies are required for generalization of results.

## CONCLUSION

All the patents received nutritional incentive but most of them didn't get this monitory support in time due to lack of timely availability of funds. Government should assure timely availability of funds so that patients can be benefitted particularly during initial months of their treatment. Only 64% patients utilized entire incentive for nutrition. Thus, there is a need of counseling of patients receiving treatment for tuberculosis about the importance of nutrition in their treatment.

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